CITY OF SEWARD
City Council
Regular Meeting
Agenda

Tuesday, April 1, 2025 **7:00 PM** **Municipal Building Council Chambers**

NOTICE IS HEREBY GIVEN that a meeting of the City Council of the City of Seward, Nebraska will be held at 7:00 PM on Tuesday, April 1, 2025, in the Council Chambers, 142 N 7th Street, Seward, Nebraska in which the meeting will be open to the public. The Mayor and City Council reserve the right to adjourn into Closed Session as per Section 84-1410 of the Nebraska Revised Statutes. An Agenda for such meeting, kept continually current, is available at the Office of the City Clerk, 537 Main Street, Seward, Nebraska, during normal business hours. Individuals requiring physical or sensory accommodations, who desire to attend or participate, please contact the City Clerk's Office at 402.643.2928 no later than 3:30 PM on the Friday preceding the Council Meeting. City financial claims and related invoices will be available for Council member review, audit, and voluntary signatures at the meeting location beginning 30 minutes prior to the scheduled meeting time.

CALL TO ORDER
PLEDGE OF ALLEGIANCE
DISCLOSURE OF OPEN MEETINGS ACT & OTHER NOTIFICATIONS

This is an Open Meeting of the Seward Nebraska Governing Body. The City of Seward abides by the Nebraska Open Meetings Act in conducting business. A copy of the Nebraska Open Meetings Act is displayed on the north wall of this meeting room facility as required. Disclosure of meeting recording processes is posted in the Meeting Room. Any citizen may address the Council regarding items included on the meeting agenda and are asked to complete and hand-in a Speaker Card to the Clerk. Presenters shall approach the podium, state their name & address for the Clerk's record and are asked to limit remarks to five minutes. All remarks shall be directed to the Mayor who shall determine by whom any appropriate response shall be made. The City of Seward reserves the right to adjust the order of items on this Agenda if necessary and may elect to take action on any of the items listed.

ROLL CALL
CONSENT AGENDA

1. Claims & Payables Reports

CLAIMS LIST
4/1/2025
COUNCIL MEETING

Abbreviations: AF-Annual Fee; BE-Benefits; BU-Building Upkeep; CI-Capital Improvements; DF-Diesel Fuel; DO-Donations; EQ-Equipment; ENG-Engineering; EX-Expense; FA-Fixed Asset; GS-Gas; GU-Ground Upkeep; IT-Technology; INS- Insurance; INV-Inventory;LG-Legal; MA-Maintenance; MAT-Materials; MC-Miscellaneous; MH-Merchandise; MI-Mileage; ML-Meals; MS-Memberships; OI-Oil; OP-Operations; PF-Postage; PU-Publications; RE-Repairs; RI-Reimbursement; RS-Restaurant; SA-Salaries; SE-Services; SL-Sales; ST-Sales Tax; SU-Supplies; TE-Testing; TR-Training; TO-Tools; UN-Uniforms; UT-Utilities

AKRS EQUIPMENT INC	OI		1,432.30
AMAZON CAPITAL SERVICES INC	SU/MAT		1332.07
AMG TECHNOLOGY LLC/NEXTLINK	UT		103.35
ANTHONY LUEBBE	RI		19
BARCO MUNICIPAL PRODUCTS	SU		166.3
BIZCO TECHNOLOGIES	IT		1,328.72
BORDER STATES INDUSTRIES INC	SU		688
BOUND TREE MEDICAL LLC	SU		640.69
CALLAWAY GOLF	MH		119.76
CAPITAL BUSINESS SYSTEMS INC-WY			1068.56
CAPITAL BUSINESS SYSTEMS INC-TX			194.83
CASELLE INC			2531
CASH-WA DISTRIBUTING CO			680.96
CHASE CARD SERVICE			677.38
THE WEBSTAURANT STORE	BU	178.13	
GOLF COURSE SUPERINTENDENT	MS	465	
TRACFONE	UT	34.25	
CITY SEWARD BUILDINGS/GROUNDS	OP		4,000.00
CITY SEWARD LIBRARY PETTY CASH	ILL PF		196.92
CLARK ENERSEN PARTNERS	CI		9,932.20
CODR PLUMBING & EXCAVATING	BU		1,570.50
COMFORT INN-LEXINGTON	TR		255
CONSTELLATION NEWENERGY GAS	UT		2078.51
DEREK BARGMANN	RI		86
EAKES OFFICE SOLUTION	RI		4,032.66
ECES INC DBA CAMPBELL CLEANING	SE		1602
ERIKSEN CONSTRUCTION	CI		11,325.00
FARMERS VALLEY FOOTBAL LLC	MC		150
FELD FIRE INC	RE		938
FYR-TEK	SU		380
GALLS LLC	UN		307.15
GERHOLD CONCRETE CO INC	RE		824.16
GLENDA SLOUP	MC		37
GRAINGER INC	SU/RE		2428.98

HERPOLSHEIMER'S INC	OI		104.15
HOBSON AUTOMOTIVE	OI		67.5
HUSKER ELECTRIC SUPPLY CO	SU		796.5
JARED HANS	RI		208
JEO CONSULTING GROUP INC	CI		14,637.50
LACY SAMEK	RI		161
LAST MILE NETWORK CONS GR LLC	UT		75.3
LINCOLN WINWATER WORKS	SU		1,090.74
MARLIN MATULKA DBA MARLIN'S PLUMBING	RE		21
MENARDS NORTH	SU		507
METERING & TECHNOLOGY SOLUTION	INV/SU		9569.42
MEYER AUTOMOTIVE	RE		218.9
MID-AMERICAN BENEFITS LLC	BE		526
MIDWEST AUTOMOTIVE	RE		1,359.28
MIDWEST SERVICE & SALES	SU		1,030.50
MUNICIPAL SUPPLY INC OF OMAHA	INV		1265.02
NE DEPT ENVIRONMENT & ENERGY	MC		40
NEBRASKA D A S ACCT OCIO	SE		1176
NEBRASKA NOTARY ASSOCIATION	SE		109.32
NEBRASKA PUBLIC HEALTH ENV LAB	TE		120
NEBRASKA RURAL WATER ASSOCIATION	MS		550
NEBRASKA STAR BEEF CO LLC	SU		64.8
NICK HANNEMAN	RI		19
NORRIS PUBLIC POWER DISTRICT	UT		1,233.70
OLSSON	CI		3,684.09
OVERHEAD DOOR CO LINCOLN NE	RE		51.25
R & R REFRIGERATION LLC DBA LEE'S	RE		3,528.53
SCHEMMER ARCHITECTS ENGINEERS	CI		30,062.50
SEWARD COUNTY CHAMBER & DEVELOPMENT	RI		259.29
SEWARD COUNTY EMA	SE		21
SHORT ELLIOTT HENDRICKSON INC	CI		19,174.81
SPARETIME LOUNGE & GRILL	ML		638
SPECIALLY FOR YOU INC	SU		266.64
TRANSUNION RISK & ALTERNATIVE	SE		150
U S CELLULAR	UT		143.29
ULINE	SU		114.85
UNION TITLE COMPANY LLC	CI		300
VERIZON FINANCIAL SERVICES LLC	UT		281.64
VISA			30927.77
MAILCHIMP	SE	39.5	
SMTP2GO	IT	75	
ADOBE	AF	257.87	
THE MUSIC BINGO PEOPLE	MC	350	
SP IDENTIFIRE	SU	96.73	
COLLINSEN ENTERPRISES	SU	83.75	
ETSY	SU	1612.5	
FIRE MANUFACTURING	SU	672.79	

CROWNE PLAZA	TR	4824.3	
EMERGENCY SOLUTIONS	SE	155.83	
NEMSA.ORG	MS	225	
USPS	PF	104.98	
QUILL	SU	507.96	
AMERICAN WATER WORKS	TR	118.93	
NWEA	MS	550	
NDEQ	TR	150	
WALMART	SU	612.1	
FBINAA	MS	130	
AMAZON	SU	303.65	
FARMERS CO-OP	RE	28	
DOLLAR GENERAL	SU	52.47	
VALENTINO'S	ML	105.56	
RUNZA	ML	192.67	
SAM'S CLUB	SU	599.21	
DRAGON PALACE	ML	180.25	
HAMILTON EQUIPMENT	RE	409.55	
REAMS SUPPLY	SU	619.81	
HOLIDAY INN-KEARNEY	TR	432.42	
GME SUPPLY	SU	113.45	
CORNHUSKER SQUARE	MC	13.5	
ROD'S POWER SPORTS	RE	288.64	
ASCE	MS	311	
ELDT.COM	TR	77.63	
FOREUP	SE	686.08	
CONSTANT CONTACT	IT	23	
UNL EVENT REGISTRY	TR	95	
UNL MARKETPLACE	TR	64.88	
SPORTS ENGINE	MC	404	
BEST BUY	FA	15359.76	
WESCO DISTRIBUTION INC	SU		509.55
	TOTAL		176,190.84

2. Draft Minutes of March 18, 2025, City Council Meeting

March 18, 2025

The Seward City Council met at 7:00 p.m. on Tuesday, March 18, 2025, with Mayor Joshua Eickmeier presiding and Deputy City Clerk Mattie Hans recording the proceedings. Upon roll call, the following Councilmembers were present: Zane Francescato, Megan Kahler, John Singleton, Tatum Tonniges, Matt Stryson, Rich Wergin, Jessica Kolterman, Karl Miller. Other officials present: City Administrator Greg Butcher, City Attorney Kelly Hoffschneider, Building/Zoning & Code Enf. Director Tim Dworak, City Engineer Mike Oneby, Wellness Center Director Joel Brase and Chief of Police Brian Peters.

Notice of the meeting was given in advance thereof, and Mayor Eickmeier announced that a copy of the Open Meetings Act and tonight's agenda is posted in the meeting room and is accessible to members of the public. Mayor Eickmeier led those in attendance in the Pledge of Allegiance.

CONSENT AGENDA CONSIDERATION ITEMS

The following Consent Agenda items were approved in one single motion made by Councilmember Wergin, seconded by Councilmember Stryson.

1. City Codes Director Report
2. City Treasurer Report
3. Claims & Payables Report (totaling $1,434,116.82)
4. Police Department Report
5. Draft Minutes of March 4, 2025, City Council Meeting

Aye: Francescato, Kahler, Singleton, Stryson, Kolterman, Miller, Tonniges, Wergin.
Nay: None. Absent: None. Motion carried.

PUBLIC HEARING

1. PUBLIC HEARING – 7:00 PM – CONSIDERATION OF AN ORDINANCE TO REVISE THE CITY'S UNIFIED LAND DEVELOPMENT ORDINANCE (ULDO); ARTICLE 4 ZONING DISTRICT REGULATIONS; 410-4.8 VACATION OF STREETS AND ALLEYS

Building/Zoning & Code Enforcement Director Tim Dworak noted this ordinance would allow for designation of the vacation of property to one abutting property owner as opposed to half to each abutting property owner. In addition, zoning for the entire vacated property would be zoned identically, rather than the potential of two zoning districts. This was recommended unanimously by the Planning Commission.

Mayor Eickmeier opened the public hearing at 7:04 p.m. With no public comment received, the public hearing was closed at 7:04 p.m.

Councilmember Singleton introduced Ordinance No. 2025-8**.** Councilmember Stryson moved, seconded by Councilmember Wergin to dispense with the statutory rule.

Aye: Francescato, Kahler, Singleton, Stryson, Kolterman, Miller, Tonniges, Wergin.
Nay: None. Absent: None. Motion carried.

Councilmember Miller moved, seconded by Councilmember Kahler that the minutes of the proceeding of the May and Council of the City of Seward, Seward County, Nebraska in the matter of passing: **Ordinance No. 2025-8**, AN ORDINANCE TO AMEND THE MUNICIPAL CODE OF THE CITY OF SEWARD, CHAPTER 410 ZONING AND SUBDIVISION, ARTICLE 4 ZONING DISTRICT REGULATIONS; TO AMEND THE VACATION OF STREETS AND ALLEYS; TO REPEAL ALL ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT; TO PROVIDE FOR AN EFFECTIVE DATE; TO PROVIDE FOR PUBLICATION OF THIS ORDINANCE IN PAMPHLET FORM.

Aye: Francescato, Kahler, Singleton, Stryson, Kolterman, Miller, Tonniges, Wergin.
Nay: None. Absent: None. Motion carried.

Councilmember Wergin moved, seconded by Councilmember Singleton, that all ordinances be added to the permanent record.

Aye: Francescato, Kahler, Singleton, Stryson, Kolterman, Miller, Tonniges, Wergin.
Nay: None. Absent: None. Motion carried.

2. PUBLIC HEARING – 7:00 PM – CONSIDERATION OF AN APPLICATION FOR THE TRANSFER OF A SPECIAL USE PERMIT, ALLOWING AN OUTDOOR DOG EXERCISE AREA, TO A NEW OWNER FOR THE PROPERTY AT 511 BRADFORD STREET

Mr. Dworak reminded that while an outdoor dog exercise area currently exists it is being sold to a new owner. The current permit is issued to Scott Dinslage, rather than the business, thus the new owner Andy Wiltz will need issuance of a special use permit to continue to offer an outdoor exercise area. No complaints have been noted during the current three-year use of the area. The Planning Commission, by unanimous approval, recommended a two-year permit with a review to follow and a reapplication.

Mayor Eickmeier opened the public hearing at 7:09 p.m. The following comments were heard.

- Nick Bayer, Director of Development, of Wolf Pet Resort read a letter on behalf of Andy Wiltz. Wolf Pet Resort is based in Kansas City, employs over 200 people, and has made reasonable accommodation with neighboring properties at other locations with no complaints.

Mayor Eickmeier closed the public hearing at 7:13 p.m.

One item noted was working with a nearby property owner to continue to work to reduce the outdoor noise. Councilmember Kolterman inquired that if there are too many concerns or complaints, the permit could be rescinded and therefore a two-year permit with a review period is unnecessary. Mr. Dworak confirmed that review and revocation of the special use permit could happen at any time.

Councilmember Miller moved, seconded by Councilmember Singleton to approve the Special Use Permit, for no specified time period, for an outdoor dog exercise area to the new property owner of 511 Bradford Street.

Aye: Francescato, Kahler, Singleton, Stryson, Kolterman, Miller, Tonniges, Wergin.
Nay: None. Absent: None. Motion carried.

3. PUBLIC HEARING – 7:00 PM – PRESENTATION AND DISCUSSION OF FUNCTIONING AND PROGRESS OF THE SEWARD ECONOMIC DEVELOPMENT PLAN

City Administrator Butcher noted the Citizens Advisory Review Committee (CARC) meets every six months to review the activity and funds distributed by the LB 840 Committee. The CARC suggested the following recommendations for improvement to the LB 840 program: applications will be reviewed for completeness and viability by the City Administrator, Finance Director, and LB840 Committee chair before being brought to the Committee; if co-signor(s) are needed on a loan, the applicant will be encouraged to seek a personal loan; and applications should be considered based on the applicant's request, rather than a negotiated amount. Mayor Eickmeier commented that the committee may want to explore the option of implementing an application fee due to the potentially extensive administrative effort it takes to process an application and monitoring of funds distribution.

Mayor Eickmeier opened the public hearing at 7:34 p.m. With no public comment received, the public hearing was closed at 7:34 p.m.

Councilmember Stryson moved, seconded by Councilmember Kahler to accept the report on the Seward Economic Development Plan for the period ending 12/31/24.

Aye: Francescato, Kahler, Singleton, Stryson, Kolterman, Miller, Tonniges, Wergin.
Nay: None. Absent: None. Motion carried.

ADMINISTRATIVE ITEMS

1. CONSIDERATION OF A CONSTRUCTION CONTRACT IN THE AMOUNT OF $110, 291.75 WITH VAN KIRK, BROS. FOR CONSTRUCTION OF 474 FT OF WATER MAIN ALONG WORTHMAN BOULEVARD WEST OF PINE STREET

City Engineer Mike Oneby expressed this would be a 474 foot extension of a 16 inch water main along Worthman Boulevard.

Councilmember Singleton moved, seconded by Councilmember Tonniges to accept the construction contract with Van Kirk, Bros. for Construction of a 474ft of water main along Worthman Boulevard.

Aye: Francescato, Kahler, Singleton, Stryson, Kolterman, Miller, Tonniges, Wergin.
Nay: None. Absent: None. Motion carried.

2. CONSIDERATION OF A LEASE AGREEMENT WITH NEBRASKA GOLF AND TURF FOR A 5-YEAR LEASE ON GOLF CARTS

City Administrator Butcher noted there was a comparison made between three companies with Club Cars determined to be the best option. The carts will be available starting in the 2026 season. Other enhancements to the carts are being researched and considered.

Councilmember Miller moved, seconded by Councilmember Singleton to accept the lease agreement with Nebraska Golf and Turf for a 5-year lease on golf carts.

Aye: Francescato, Kahler, Singleton, Stryson, Kolterman, Miller, Tonniges, Wergin.
Nay: None. Absent: None. Motion carried.

3. CONSIDERATION OF A RESOLUTION DECLARING CITY ITEMS AS SURPLUS

City Administrator Butcher reviewed the items listed on the surplus auction list. Butcher noted the firetruck would best serve a mutual aid department.

Councilmember Francescato introduced **Resolution No. 2025-6**, declaring City items as surplus. Councilmember Tonniges moved, seconded by Councilmember Kahler, to approve the resolution as presented.

Aye: Francescato, Kahler, Singleton, Stryson, Kolterman, Miller, Tonniges, Wergin.
Nay: None. Absent: None. Motion carried.

4. UPDATE ON THE WELLNESS CENTER

Executive Director Brase provided the following Wellness Center updates: punch list inspection is complete for non-pool areas; staff are working on building out programs, scheduling and associated costs; interviews for part-time positions are ongoing; finishing touches and cleaning are being completed throughout the facility. An open house will occur on Sunday, March 30th.

CITY ADMINISTRATOR'S REPORT

Councilmember Wergin moved, seconded by Councilmember Kahler, that the City Administrator's report of March 18, 2025, be accepted.

Aye: Francescato, Kahler, Singleton, Stryson, Kolterman, Miller, Tonniges, Wergin.
Nay: None. Absent: None. Motion carried.

STRATEGY SESSION

1. STRATEGY SESSION WITH CITY ATTORNEY REGARDING REAL ESTATE INTERESTS

Councilmember Francescato moved, seconded by Councilmember Kahler, that the Council enter a closed session with the Mayor, City Administrator, the City Attorney, and Jonathan Jank for the protection of the public interest and to discuss real estate interests for a period not to exceed 30 minutes.

Aye: Francescato, Kahler, Singleton, Stryson, Kolterman, Miller, Tonniges, Wergin.
Nay: None. Absent: None. Motion carried.

Mayor Eickmeier stated the Council has voted to go into closed session at 8:09 p.m. for the protection of public interest and to discuss real estate interests.

At 8:22 p.m., the closed session ended, and the following Councilmembers reconvened to regular session: Francescato, Kahler, Singleton, Stryson, Kolterman, Miller, Tonniges, Wergin. Mayor Eickmeier announced that no formal action was taken during the closed session.

MOTION TO ADJOURN

Councilmember Wergin moved, seconded by Councilmember Singleton, that the March 18, 2025, City Council Meeting be adjourned.

Aye: Francescato, Kahler, Singleton, Stryson, Kolterman, Miller, Tonniges, Wergin.

Nay: None. Absent: None. Motion carried.

Adjourned approximately 8:23 p.m.

THE CITY OF SEWARD, NEBRASKA

_____

Joshua Eickmeier, Mayor

_____

Derek Bargmann, City Clerk

ADMINISTRATIVE ITEMS

1. Presentation and Acceptance of the 2023/2024 Annual Audit - Tracy Cannon, AMGL

CITY OF SEWARD, NEBRASKA

FINANCIAL STATEMENTS AND SUPPLEMENTARY INFORMATION

September 30, 2024

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AMGL
CPAs & Advisors

SHAREHOLDERS:
Marcy J. Luth
Heidi A. Ashby
Christine R. Shenk
Michael E. Hoback
Joseph P. Stump
Kyle R. Overturf
Tracy A. Cannon
Jamie L. Clemans
Travis L. Arnold

INDEPENDENT AUDITOR'S REPORT

To the Honorable Mayor and Members of the City Council
City of Seward, Nebraska

Opinions

We have audited the accompanying financial statements of the governmental activities, the business-type activities, the aggregate discretely presented component units, each major fund, and the aggregate remaining fund information of the City of Seward, Nebraska, as of and for the year ended September 30, 2024, and the related notes to the financial statements, which collectively comprise the City's basic financial statements as listed in the table of contents.

In our opinion, based on our audit and the report of the other auditors, the financial statements referred to above present fairly, in all material respects, the respective financial position of the governmental activities, the business-type activities, the aggregate discretely presented component units, each major fund, and the aggregate remaining fund information of the City of Seward, Nebraska, as of September 30, 2024, and the respective changes in financial position, and, where applicable, cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

We did not audit the financial statements of the Seward Airport Authority, which represent 81.2 percent, 80.4 percent, and 75.3 percent, respectively, of the assets, net position, and revenues of the aggregate discretely presented component units as of September 30, 2024, and the respective changes in financial position, and where applicable, cash flows thereof for the year then ended. Those statements were audited by other auditors whose report has been furnished to us, and our opinion, insofar as it relates to the amounts included for the Seward Airport Authority, is based solely on the report of the other auditors.

Basis for Opinions

We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the City of Seward, Nebraska, and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States

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A PROFESSIONAL CORPORATION

of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the City of Seward, Nebraska's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with generally accepted auditing standards and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with generally accepted auditing standards and *Government Auditing Standards*, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the City of Seward, Nebraska's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the City of Seward, Nebraska's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and budgetary comparison information be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the

basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We and other auditors have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Supplementary Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the City of Seward, Nebraska's basic financial statements. The combining nonmajor governmental funds financial statements and the combining component unit financial statements are presented for purposes of additional analysis and are not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America by us and other auditors. In our opinion, based on our audit and the report of the other auditors, the supplementary information described in the second sentence of this paragraph is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated March 11, 2025, on our consideration of the City of Seward, Nebraska's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the City of Seward's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the City of Seward, Nebraska's internal control over financial reporting and compliance.

AM GL, P.C.

Grand Island, Nebraska
March 11, 2025

MANAGEMENT'S DISCUSSION AND ANALYSIS

As management of the City of Seward, we offer readers of the City of Seward financial statements this narrative overview and analysis of the financial activities of the City of Seward for the fiscal year ended September 30, 2024. For information on the Seward Airport Authority component unit included in these financial statements, please see the separate audit report for the Airport.

Financial Highlights

- The assets of the City of Seward exceeded its liabilities at the close of the most recent fiscal year by $77,671,269 (*net position*). Of this amount, $13,085,720 (*unrestricted net position*) may be used to meet the government's ongoing obligations to citizens and creditors.
- As of the close of the current fiscal year, the City of Seward's governmental funds reported combined ending net position of $37,346,236. Approximately 13.2 percent of this total amount, $4,940,527, is *unrestricted net position*.
- At the end of the current fiscal year, the General Fund had unassigned fund balance of $3,101,963, or 41.3 percent of total General Fund expenditures.

Overview of the Financial Statements

This discussion and analysis is intended to serve as an introduction to the City of Seward's basic financial statements. The City of Seward's basic financial statements comprise three components: 1) government-wide financial statements, 2) fund financial statements, and 3) notes to the financial statements. This report also contains required and supplementary information in addition to the basic financial statements themselves.

Government-wide financial statements. The *government-wide financial statements* are designed to provide readers with a broad overview of the City of Seward's finances in a manner similar to a private-sector business.

The *statement of net position* presents information on all of the City of Seward's assets and liabilities, with the difference between the two reported as *net position*. Over time, increases or decreases in net position may serve as a useful indicator of whether the financial position of the City of Seward is improving or deteriorating.

The *statement of activities* presents information showing how the government's net position changed during the most recent fiscal year. All changes in net position are reported as soon as the underlying event giving rise to the change occurs, *regardless of the timing of related cash flows*. Thus, revenues and expenses are reported in this statement for some items that will only result in cash flows in future fiscal periods (e.g., uncollected taxes and earned but unused vacation leave).

Both of the government-wide financial statements distinguish functions of the City of Seward that are principally supported by taxes and intergovernmental revenues (*governmental activities*) from other functions that are intended to recover all or a significant portion of their costs through user fees and charges (*business-type activities*). The governmental activities of the City of Seward include general government, public safety, highways and streets, economic development, and culture and recreation. The business-type activities of the City of Seward include the Electric, Water, and Sewer Enterprise Funds.

The government-wide financial statements include not only the City of Seward itself (known as the *primary government*), but also legally separate entities, the Seward Airport Authority and the Seward Library Foundation, for which the City of Seward is financially accountable. Financial information for these *component units* is reported separately from the financial information presented for the primary government itself.

The government-wide financial statements can be found on pages 14 and 15 of this report.

Fund financial statements. A *fund* is a grouping of related accounts that is used to maintain control over resources that have been segregated for specific activities or objectives. The City of Seward, like other state and local governments, uses fund accounting to ensure and demonstrate compliance with finance-related legal requirements. All of the funds of the City of Seward can be divided into two categories: governmental funds and proprietary funds.

Governmental funds. *Governmental funds* are used to account for essentially the same functions reported as *governmental activities* in the government-wide financial statements. However, unlike the government-wide financial statements, governmental fund financial statements focus on *near-term inflows and outflows of spendable resources,* as well as on *balances of spendable resources* available at the end of the fiscal year. Such information may be useful in evaluating a government's near-term financing requirements.

Because the focus of governmental funds is narrower than that of the government-wide financial statements, it is useful to compare the information presented for *governmental funds* with similar information presented for *governmental activities* in the government-wide financial statements. By doing so, readers may better understand the long-term impact of the government's near-term financing decisions. Both the governmental fund balance sheet and the governmental fund statement of revenues, expenditures, and changes in fund balances provide a reconciliation to facilitate this comparison between *governmental funds* and *governmental activities*.

The City of Seward maintains eight individual governmental funds. Information is presented separately in the governmental fund balance sheet and in the governmental fund statement of revenues, expenditures, and changes in fund balances for the General Fund, the Street Fund, the Debt Service Fund, and the Capital Projects Fund, all of which are considered to be major funds. Data from the other four governmental funds are combined into a single, aggregated presentation. Individual fund data for each of these nonmajor governmental funds is provided in the form of *combining statements* elsewhere in this report.

The City of Seward adopts an annual appropriated budget for its governmental funds. A budgetary comparison statement has been provided for the General, Street, Debt Service, and Capital Projects Funds to demonstrate compliance with this budget.

The basic governmental fund financial statements can be found on pages 16-19 of this report.

Proprietary funds. The City of Seward maintains one type of proprietary fund. *Enterprise funds* are used to report the same functions presented as *business-type activities* in the government-wide financial statements. The City of Seward uses enterprise funds to account for its Electric, Water, and Sewer Funds.

Proprietary funds provide the same type of information as the government-wide financial statements, only in more detail. The proprietary fund financial statements provide separate information for the Electric, Water, and Sewer Funds, all of which are considered to be major funds of the City of Seward.

The basic proprietary fund financial statements can be found on pages 20-23 of this report.

Notes to the financial statements. The notes provide additional information that is essential to a full understanding of the data provided in the government-wide and fund financial statements. The notes to the financial statements can be found on pages 24-63 of this report.

Other information. In addition to the basic financial statements and accompanying notes, this report also presents certain *required supplementary information* concerning the City of Seward's budgetary comparison schedules. Required supplementary information can be found on pages 64-68 of this report.

The combining statements referred to earlier in connection with nonmajor governmental funds and the component units are presented immediately following the required supplementary information. Combining and individual fund statements and schedules can be found on pages 69-72 of this report.

Government-wide Financial Analysis

As noted earlier, net position may serve over time as a useful indicator of a government's financial position. In the case of the City of Seward, assets exceeded liabilities by $77,671,269 at the close of the most recent fiscal year.

Summary Statements of Net Position

	September 30, 2024			September 30, 2023		
	Governmental Activities	Business-type Activities	Total	Governmental Activities	Business-type Activities	Total
Current and Other Assets	$ 8,178,985	$ 12,727,567	$ 20,906,552	$ 11,149,427	$ 14,859,814	$ 26,009,241
Capital Assets	34,810,719	35,197,429	70,008,148	28,329,046	31,487,334	59,816,380
Total Assets	42,989,704	47,924,996	90,914,700	39,478,473	46,347,148	85,825,621
Long-term Liabilities	3,673,776	5,217,885	8,891,661	3,602,813	6,231,955	9,834,768
Other Liabilities	1,969,692	2,382,078	4,351,770	1,748,493	3,034,409	4,782,902
Total Liabilities	5,643,468	7,599,963	13,243,431	5,351,306	9,266,364	14,617,670
Net Position:						
Net Investment in Capital Assets	30,748,922	29,152,429	59,901,351	24,126,773	24,427,334	48,554,107
Restricted	1,656,787	3,027,411	4,684,198	3,767,854	2,470,010	6,237,864
Unrestricted	4,940,527	8,145,193	13,085,720	6,232,540	10,183,440	16,415,980
Total Net Position	$ 37,346,236	$ 40,325,033	$ 77,671,269	$ 34,127,167	$ 37,080,784	$ 71,207,951

By far the largest portion of the City of Seward's net position (77.1 percent) reflects its investment in capital assets (land, infrastructure, buildings, machinery, vehicles, and equipment), net of any related debt used to acquire those assets that is still outstanding. The City of Seward uses these capital assets to provide services to citizens; consequently, these assets are *not* available for future spending. Although the City of Seward's investment in its capital assets is reported net of related debt, it should be noted that the resources needed to repay this debt must be provided from other sources, since the capital assets themselves cannot be used to liquidate these liabilities.

An additional portion of the City of Seward's net position (6.0 percent) represents resources that are subject to external restrictions on how they may be used. The remaining balance of *unrestricted net position* ($13,085,720) may be used to meet the government's ongoing obligations to citizens and creditors.

At the end of the current fiscal year, the City of Seward is able to report positive balances in all three categories of net position, for the government as a whole as well as for its separate governmental and business-type activities.

Expenses and Program Revenues - Governmental Activities

Function	Year Ended September 30, 2024 Program Revenues	Year Ended September 30, 2024 Program Expenses	Year Ended September 30, 2023 Program Revenues	Year Ended September 30, 2023 Program Expenses
General Government	$ 174,035	$ 438,925	$ 249,623	$ 448,515
Economic Development	-	805,172	45,953	691,209
Public Safety	240,268	1,809,541	266,045	1,634,604
Public Works	820,180	1,363,344	603,424	1,439,309
Environment and Leisure	1,949,511	3,093,380	1,046,982	2,766,851
Interest	-	74,899	-	88,639
Depreciation	-	1,511,382	-	1,527,605
Total	$ 3,183,994	$ 9,096,643	$ 2,212,027	$ 8,596,732

Revenues by Source - Governmental Activities

SOURCES OF REVENUE

	Year Ended September 30, 2024		Year Ended September 30, 2023	
Charges for Services	$ 1,574,408	12.78 %	$ 1,415,536	12.81 %
Operating Grants and Contributions	171,665	1.39	474,469	4.29
Capital Grants and Contributions	1,437,921	11.68	322,022	2.91
Property Taxes	2,003,502	16.27	1,825,447	16.52
Motor Vehicle Taxes	191,893	1.56	184,725	1.67
Sales Tax	3,118,504	25.32	3,407,416	30.84
Franchise Tax	1,403,486	11.40	1,308,947	11.85
Occupation Tax	261,772	2.13	285,523	2.58
TIF Proceeds	691,112	5.61	596,172	5.40
State Allocation	1,136,560	9.23	1,082,206	9.80
Insurance Proceeds	122,238	0.99	-	-
Miscellaneous	65,255	0.53	702	0.01
Interest	175,078	1.42	148,223	1.34
Loss on Sale of Assets	(37,682)	(0.31)	(2,676)	(0.02)
Total	$ 12,315,712	100.00 %	$ 11,048,712	100.00 %

Net position increased $3,219,069 in the governmental funds during the year ended September 30, 2024.

Business-type activities. Business-type activities increased the City of Seward's net position by $3,244,249 for the year ended September 30, 2024. Key elements of this increase are as follows:

Expenses and Program Revenues - Business-type Activities

Function	Year Ended September 30, 2024 Program Revenues	Year Ended September 30, 2024 Program Expenses	Year Ended September 30, 2023 Program Revenues	Year Ended September 30, 2023 Program Expenses
Electric	$ 12,525,955	$ 11,646,630	$ 11,643,864	$ 10,799,565
Water	2,359,838	1,818,364	2,407,206	1,768,398
Sewer	2,535,531	1,497,458	2,139,005	1,448,453
Total	$ 17,421,324	$ 14,962,452	$ 16,190,075	$ 14,016,416

Revenues by Source - Business-type Activities

SOURCES OF REVENUE	Year Ended September 30, 2024		Year Ended September 30, 2023	
Charges for Services	$ 17,416,892	95.66 %	$ 16,180,075	98.25 %
Capital Grants and Contributions	4,432	0.02	10,000	0.06
Interest	262,236	1.44	233,346	1.42
Gain on Sale of Assets	433,561	2.38	16,586	0.10
Miscellaneous	89,580	0.49	28,126	0.17
Total	$ 18,206,701	99.99 %	$ 16,468,133	100.00 %

Financial Analysis of the Government's Funds

As noted earlier, the City of Seward used fund accounting to ensure and demonstrate compliance with finance-related legal requirements.

Governmental Funds. The focus of the City of Seward's *governmental* funds is to provide information on near-term inflows, outflows, and balances of *spendable* resources. Such information is useful in assessing the City of Seward's financing requirements. In particular, *unassigned fund balance* may serve as a useful measure of a government's net resources available for spending at the end of the fiscal year.

As of the end of the current fiscal year, the City of Seward's governmental funds reported combined ending fund balances of $6,006,074. Approximately 51.6 percent of this total amount ($3,101,963) constitutes *unassigned fund balance*, which is available for spending at the government's discretion. The remainder of fund balances is not available for new spending because it has already been 1) restricted to pay debt service ($184,947), 2) restricted for street projects ($360,096), 3) restricted for Federal programs ($17,511), 4) restricted for economic development ($634,781), 5) restricted for capital projects ($217,419), 6) placed in a nonspendable endowment for cemetery perpetual care ($242,033), 7) committed for public safety ($608,123), 8) committed for sports complex lights ($32,138), 9) assigned for parks ($51,628), 10) assigned for cemetery ($157,004), 11) assigned for unemployment compensation ($145), 12) assigned for the Wellness Center ($7,942) or 13) assigned for budgetary stabilization ($390,344).

The General Fund is the chief operating fund of the City of Seward. At the end of the current fiscal year, unassigned fund balance of the General Fund was $3,101,963, while total fund balance reached $4,349,287. As a measure of the General Fund's liquidity, it may be useful to compare both unassigned fund balance and total fund balance to total fund expenditures. Unassigned fund balance represents 41.3 percent of total General Fund expenditures, while total fund balance represents 58.0 percent of that same amount.

The fund balance of the City of Seward's General Fund decreased by $1,418,512, due primarily to a $1,685,000 transfer to the Street Fund.

Proprietary funds. The City of Seward's proprietary funds provide the same type of information found in the government-wide financial statements, but in more detail.

Unrestricted net position of the proprietary funds at the end of the year were as follows: Electric Fund - $7,133,061, Water Fund - $(515,501), and Sewer Fund - $1,527,633. The change in net position for the proprietary funds was as follows: Electric Fund – increase of $1,521,308, Water Fund – increase of $614,792, and Sewer Fund – increase of $1,108,149. Other factors concerning the finances of these three funds have already been addressed in the discussion of the City of Seward's business-type activities.

Budgetary Highlights

There was no difference between the original budget and the final adopted budget for the City of Seward.

Capital Asset and Debt Administration

Capital Assets. The City of Seward's investment in capital assets for its governmental and business-type activities as of September 30, 2024, amounts to $70,008,148 (net of accumulated depreciation). This investment in capital assets includes land, construction in progress, building and system improvements, machinery and equipment, park facilities, roads, highways, and bridges.

Major capital asset events during the current fiscal year included the following:

- Wellness center improvements - $1,969,778
- Fitness equipment - $234,494
- Senior Center roof and gutters - $64,854
- Various street improvement projects - $6,567,829
- 2025 Yellow Freightliner - $137,000
- Dump truck - $60,700
- Civic Center ADV project - $791,229
- Greenmaster Triflex 3300 mower - $59,810
- Karol Kay box culvert improvements - $74,584
- New water tower project - $1,711,610
- 6th Street water main improvement project - $1,848,747
- WWTF improvement project - $341,555

- Bradford storm sewer improvement project - $80,952
- Electrical service - $310,684
- 2023 Ford F150 - $53,709
- 2024 Chevy Silverado - $82,618
- AMI meter reading system - $129,782
- 2024 VMLP SD trailer - $115,147
- Shop building - $487,438

City of Seward's Capital Assets
(net of depreciation)

	Year Ended September 30, 2024			Year Ended September 30, 2023		
	Governmental Activities	Business-type Activities	Total	Governmental Activities	Business-type Activities	Total
Land	$ 852,951	$ 1,883,771	$ 2,736,722	$ 852,951	$ 1,965,201	$ 2,818,152
Construction in progress	9,473,340	8,480,810	17,954,150	2,538,299	3,662,907	6,201,206
Infrastructure	14,489,385	-	14,489,385	15,232,042	-	15,232,042
Buildings	7,875,048	1,272,972	9,148,020	7,898,199	768,735	8,666,934
Equipment	2,119,995	2,041,304	4,161,299	1,807,555	2,079,108	3,886,663
Distribution systems	-	21,518,572	21,518,572	-	23,011,383	23,011,383
Total	$ 34,810,719	$ 35,197,429	$ 70,008,148	$ 28,329,046	$ 31,487,334	$ 59,816,380

Additional information on the City of Seward's capital assets can be found in Note C4 on pages 47-50 of this report.

Long-term debt. At the end of the current fiscal year, the City of Seward had total long-term debt outstanding of $10,106,797. Of this amount, $3,265,000 comprises debt backed by the full faith and credit of the government. The remainder of the City of Seward's debt represents bonds and notes secured solely by specified revenue sources (i.e., revenue bonds and notes payable and financing agreements).

City of Seward's Outstanding Debt

	Year Ended September 30, 2024			Year Ended September 30, 2023		
	Governmental Activities	Business-type Activities	Total	Governmental Activities	Business-type Activities	Total
General Obligation Bonds	$ 2,855,000	$ -	$ 2,855,000	$ 3,330,000	$ -	$ 3,330,000
Highway Allocation Bonds	410,000	-	410,000	650,000	-	650,000
Municipal Improvement Bonds	621,494	-	621,494	-	-	-
Public Safety Bonds	-	-	-	44,000	-	44,000
Revenue Bonds	-	6,045,000	6,045,000	-	7,060,000	7,060,000
Note Payable	-	-	-	-	-	-
Financing Agreements	175,303	-	175,303	178,273	-	178,273
Total	$ 4,061,797	$ 6,045,000	$ 10,106,797	$ 4,202,273	$ 7,060,000	$ 11,262,273

The City of Seward's total debt decreased by $1,155,476 (10.3 percent) during the current fiscal year, as the City made scheduled principal payments.

Additional information on the City of Seward's long-term debt can be found in Note C6 on pages 51-56 of this report.

Economic Factors and Next Year's Budgets and Rates

The City's Enterprise Funds maintained strong cash positions and the City has been able to keep up with the increasing costs of operations.

- Property tax asking for the year ending September 30, 2025 of $2,155,605 is $149,148 (7.4 percent) higher than the prior year. The property valuation also increased 7.4 percent over the prior year.
- At September 30, 2024, the City had various contractual commitments included in the budgeted expenditures. See Note D3 on page 59 for detail.
- The City budgeted for a 3% increase in water rates and a 15% increase in sewer rates effective with the October 2024 billing.

All of these factors were considered in preparing the City of Seward's budget for the 2025 fiscal year.

Request for Information

This financial report is designed to provide a general overview of the City of Seward's finances for all those with an interest in the government's finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to the City Treasurer, City of Seward, 537 Main Street, P.O. Box 38, Seward, NE 68434.

CITY OF SEWARD, NEBRASKA
STATEMENT OF NET POSITION
September 30, 2024

	Primary Government			
	Governmental Activities	Business-type Activities	Total	Component Units
ASSETS				
Current assets:				
Cash and cash equivalents	$ 4,032,815	$ 1,451,959	$ 5,484,774	$ 395,308
Certificates of deposit	445,588	3,824,821	4,270,409	93,523
County treasurer cash	51,493	-	51,493	4,398
Investments	-	-	-	781,375
Receivables:				
Property tax	42,729	-	42,729	4,398
Accounts, net of allowance for doubtful accounts	221	1,756,815	1,757,036	3,460
Unbilled revenue	-	506,481	506,481	-
Grants	-	-	-	57,104
Interest	1,224	17,544	18,768	5
Current portion of notes	127,315	-	127,315	-
Due from other governments	626,182	-	626,182	-
Prepaid expense	-	-	-	27,453
Inventory	88,741	2,020,852	2,109,593	-
Total current assets	5,416,308	9,578,472	14,994,780	1,367,024
Noncurrent assets:				
Restricted cash and cash equivalents	2,069,094	1,764,834	3,833,928	-
Restricted certificates of deposit	15,000	1,384,261	1,399,261	-
Permanently restricted investments	-	-	-	85,616
Noncurrent notes receivable	678,583	-	678,583	-
Capital assets:				
Land	852,951	1,883,771	2,736,722	493,936
Construction in progress	9,473,340	8,480,810	17,954,150	-
Other capital assets, net of depreciation	24,484,428	24,832,848	49,317,276	3,452,567
Net capital assets	34,810,719	35,197,429	70,008,148	3,946,503
Total noncurrent assets	37,573,396	38,346,524	75,919,920	4,032,119
Total assets	42,989,704	47,924,996	90,914,700	5,399,143
LIABILITIES				
Current liabilities:				
Accounts payable	1,169,471	1,030,337	2,199,808	-
Accrued interest	23,972	18,478	42,450	5,435
Other accrued expenses	169,733	176,579	346,312	-
Customer deposits	-	121,684	121,684	-
Unavailable property tax	24,382	-	24,382	-
Unearned revenue	46,237	-	46,237	25,376
Current portion of long-term obligations	535,897	1,035,000	1,570,897	192,828
Total current liabilities	1,969,692	2,382,078	4,351,770	223,639
Noncurrent liabilities:				
Compensated absences - noncurrent	147,876	207,885	355,761	-
Noncurrent portion of long-term obligations	3,525,900	5,010,000	8,535,900	-
Total noncurrent liabilities	3,673,776	5,217,885	8,891,661	-
Total liabilities	5,643,468	7,599,963	13,243,431	223,639
NET POSITION				
Net investment in capital assets	30,748,922	29,152,429	59,901,351	3,753,675
Restricted for:				
Capital projects	217,419	-	217,419	-
Debt service	184,947	3,027,411	3,212,358	-
Street projects	360,096	-	360,096	-
Federal programs	17,511	-	17,511	-
Economic development	634,781	-	634,781	-
Cemetery perpetual care	242,033	-	242,033	-
Permanently restricted-Guthal	-	-	-	85,616
Unrestricted	4,940,527	8,145,193	13,085,720	1,336,213
Total net position	$ 37,346,236	$ 40,325,033	$ 77,671,269	$ 5,175,504

See notes to financial statements.

CITY OF SEWARD, NEBRASKA

STATEMENT OF ACTIVITIES

For the year ended September 30, 2024

Functions/Programs	Expenses	Program Revenues: Charges for Services	Program Revenues: Operating Grants and Contributions
Primary government:			
Governmental activities:			
General government	$ 438,925	$ 30,203	$ 143,832
Economic development	805,172	-	-
Public safety	1,809,541	229,727	2,383
Public works	1,363,344	367,706	11,021
Environment and leisure	3,093,380	946,772	14,429
Interest and related expenses	74,899	-	-
Depreciation - unallocated	1,511,382	-	-
Total governmental activities	9,096,643	1,574,408	171,665
Business-type activities:			
Electric	11,646,630	12,524,193	1,762
Water	1,818,364	2,358,076	-
Sewer	1,497,458	2,534,623	-
Total business-type activities	14,962,452	17,416,892	1,762
Total primary government	$ 24,059,095	$ 18,991,300	$ 173,427
Component units:			
Seward Airport Authority	$ 442,321	$ 110,422	$ -
Seward Library Foundation	32,302	-	17,906
Total component units	$ 474,623	$ 110,422	$ 17,906

See notes to financial statements.

Capital Grants and Contributions	Net (Expenses) Revenues and Changes in Net Position			
	Primary Government			
	Governmental Activities	Business-type Activities	Total	Component Units
$ -	$ (264,890)		$ (264,890)	
-	(805,172)		(805,172)	
8,158	(1,569,273)		(1,569,273)	
441,453	(543,164)		(543,164)	
988,310	(1,143,869)		(1,143,869)	
-	(74,899)		(74,899)	
-	(1,511,382)		(1,511,382)	
1,437,921	(5,912,649)	$ -	(5,912,649)	
-	-	879,325	879,325	
1,762	-	541,474	541,474	
908	-	1,038,073	1,038,073	
2,670	-	2,458,872	2,458,872	
$ 1,440,591	(5,912,649)	2,458,872	(3,453,777)	
$ 365,573				$ 33,674
-				(14,396)
$ 365,573				19,278
General revenues:				
Taxes:				
Property	2,003,502	-	2,003,502	233,024
Motor vehicle	191,893	-	191,893	-
Sales tax	3,118,504	-	3,118,504	-
Franchise	1,403,486	-	1,403,486	-
Occupation	261,772	-	261,772	-
TIF proceeds	691,112	-	691,112	-
State allocation	1,136,560	-	1,136,560	-
Insurance proceeds	122,238	-	122,238	
Miscellaneous	65,255	89,580	154,835	15,540
Interest income	175,078	262,236	437,314	10,506
Gain on investments	-	-	-	216,871
Gain (loss) on sale of assets	(37,682)	433,561	395,879	-
Total general revenues	9,131,718	785,377	9,917,095	475,941
Change in net position	3,219,069	3,244,249	6,463,318	495,219
Net position - September 30, 2023	34,127,167	37,080,784	71,207,951	4,680,285
Net position - September 30, 2024	$ 37,346,236	$ 40,325,033	$ 77,671,269	$ 5,175,504

CITY OF SEWARD, NEBRASKA
BALANCE SHEET - GOVERNMENTAL FUNDS
September 30, 2024

	General	Street	Debt Service	Capital Projects	Other Governmental Funds	Total Governmental Funds
ASSETS						
Cash and cash equivalents	$ 4,032,815	$ -	$ -	$ -	$ -	$ 4,032,815
Certificates of deposit	445,588	-	-	-	-	445,588
County treasurer cash	51,493	-	-	-	-	51,493
Receivables:						
Accounts, net of allowance for doubtful accounts	-	221	-	-	-	221
Interest	1,193	-	-	-	31	1,224
Property tax	42,729	-	-	-	-	42,729
Due from other governments	333,938	180,931	-	111,313	-	626,182
Inventory	-	88,741	-	-	-	88,741
Restricted assets:						
Cash	-	896,404	184,947	106,106	881,637	2,069,094
Certificates of deposit	-	-	-	-	15,000	15,000
Total assets	$ 4,907,756	$ 1,166,297	$ 184,947	$ 217,419	$ 896,668	$ 7,373,087
LIABILITIES AND FUND BALANCES						
Liabilities:						
Accounts payable	$ 379,056	$ 788,072	$ -	$ -	$ 2,343	$ 1,169,471
Accrued expenses	108,794	18,129	-	-	-	126,923
Unearned golf revenue	46,237	-	-	-	-	46,237
Unavailable property tax	24,382	-	-	-	-	24,382
Total liabilities	558,469	806,201	-	-	2,343	1,367,013
Fund balances:						
Nonspendable						
Cemetery perpetual care	-	-	-	-	242,033	242,033
Restricted for:						
Capital projects	-	-	-	217,419	-	217,419
Debt service	-	-	184,947	-	-	184,947
Street projects	-	360,096	-	-	-	360,096
Federal programs	-	-	-	-	17,511	17,511
Economic development	-	-	-	-	634,781	634,781
Committed for:						
Public safety	608,123	-	-	-	-	608,123
Sports complex lights	32,138	-	-	-	-	32,138
Assigned for:						
Budgetary stabilization	390,344	-	-	-	-	390,344
Parks	51,628	-	-	-	-	51,628
Cemetery	157,004	-	-	-	-	157,004
Unemployment compensation	145	-	-	-	-	145
Wellness Center	7,942	-	-	-	-	7,942
Unassigned	3,101,963	-	-	-	-	3,101,963
Total fund balances	4,349,287	360,096	184,947	217,419	894,325	6,006,074
Total liabilities and fund balances	$ 4,907,756	$ 1,166,297	$ 184,947	$ 217,419	$ 896,668	$ 7,373,087

See notes to financial statements.

CITY OF SEWARD, NEBRASKA

RECONCILIATION OF THE BALANCE SHEET - GOVERNMENTAL FUNDS TO THE STATEMENT OF NET POSITION

September 30, 2024

Total fund balances - governmental funds		$ 6,006,074
Amounts reported for *governmental activities* in the statement of net position are different because:		
Capital assets used in governmental activities are not financial resources and therefore are not reported as assets in governmental funds. The cost of the assets is $53,739,917, and the accumulated depreciation is $18,929,198.		34,810,719
Notes receivable are not financial resources and therefore are not reported as assets in governmental funds. The notes receivable are reported as assets in the statement of net position.		805,898
Long-term liabilities, including bonds payable, are not due and payable in the current period and therefore are not reported as liabilities in the funds. Long-term liabilities at year end consist of:		
Compensated absences	$ (190,686)	
Accrued interest on long-term debt	(23,972)	
Bonds payable	(3,886,494)	
Financing agreements	(175,303)	(4,276,455)
Total net position - governmental activities		$ 37,346,236

See notes to financial statements.

CITY OF SEWARD, NEBRASKA

STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCES - GOVERNMENTAL FUNDS

For the year ended September 30, 2024

	General	Street	Debt Service	Capital Projects	Other Governmental Funds	Total Governmental Funds
REVENUES						
Taxes:						
Property	$ 2,003,502	$ -	$ -	$ -	$ -	$ 2,003,502
Motor vehicle	191,893	-	-	-	-	191,893
Sales tax	1,227,232	423,325	644,152	673,795	150,000	3,118,504
Franchise	1,403,486	-	-	-	-	1,403,486
Occupation	261,772	-	-	-	-	261,772
TIF proceeds	-	-	-	-	691,112	691,112
Intergovernmental	90,792	1,052,268	-	-	-	1,143,060
Charges for services	1,516,355	57,759	-	-	294	1,574,408
Loan collections	-	-	-	-	161,822	161,822
Interest income	124,280	31	8,546	3,993	21,258	158,108
Grants	28,865	441,453	-	281,000	110,067	861,385
Contributions	732,550	-	-	-	9,150	741,700
Bond/loan proceeds	59,810	-	-	671,495	-	731,305
Insurance proceeds	122,238	-	-	-	-	122,238
Other income	7,512	-	-	-	57,743	65,255
Total revenues	7,770,287	1,974,836	652,698	1,630,283	1,201,446	13,229,550
EXPENDITURES						
General government	329,424	-	-	-	110,067	439,491
Economic development	-	-	-	-	1,066,864	1,066,864
Public safety	1,820,326	-	-	-	-	1,820,326
Public works	475,712	877,731	-	-	2,781	1,356,224
Environment and leisure	3,096,784	-	-	-	-	3,096,784
Capital outlay	1,738,013	4,296,018	-	1,961,529	35,177	8,030,737
Principal payments on debt	39,568	23,212	759,000	50,001	-	871,781
Interest on long-term debt	3,972	1,033	71,392	525	-	76,922
Total expenditures	7,503,799	5,197,994	830,392	2,012,055	1,214,889	16,759,129
Excess (deficiency) of revenues over expenditures	266,488	(3,223,158)	(177,694)	(381,772)	(13,443)	(3,529,579)
OTHER FINANCING SOURCES (USES)						
Transfers in	-	1,685,000	186,841	-	-	1,871,841
Transfers out	(1,685,000)	(186,841)	-	-	-	(1,871,841)
Net transfers	(1,685,000)	1,498,159	186,841	-	-	-
Net change in fund balances	(1,418,512)	(1,724,999)	9,147	(381,772)	(13,443)	(3,529,579)
Fund balances - September 30, 2023	5,767,799	2,085,095	175,800	599,191	907,768	9,535,653
Fund balances - September 30, 2024	$ 4,349,287	$ 360,096	$ 184,947	$ 217,419	$ 894,325	$ 6,006,074

See notes to financial statements.

CITY OF SEWARD, NEBRASKA

RECONCILIATION OF THE STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCES - GOVERNMENTAL FUNDS TO THE STATEMENT OF ACTIVITIES

For the year ended September 30, 2024

Total net change in fund balances - governmental funds	$ (3,529,579)
Amounts reported for *governmental activities* in the statement of activities are different because:	
Capital outlays are reported in governmental funds as expenditures. However, in the statement of activities, the cost of those assets is allocated over their estimated useful lives as depreciation expense. This is the amount by which capitalized capital outlay ($8,030,737) exceeded depreciation expense ($1,511,382) during the period.	6,519,355
Basis remaining of capital asset disposals does not impact the governmental funds, but the remaining basis reduces the gain on sale of capital assets in the statement of activities.	(37,682)
Collection of loan proceeds on economic development loans is reported as revenue in the governmental funds, but reduces assets in the statement of net position.	(144,852)
The issuance of economic development loans is reported as an expense in the governmental funds, but increases assets in the statement of net position.	279,625
Forgiveness of LB840 loans is not reported in the fund financial statements, but is reported as an economic development expense in the statement of activities.	(17,933)
The change in compensated absences is reported as an expense in the statement of net position. Compensated absences are not reported in the governmental funds.	7,636
The change in accrued interest payable is reported as an expense in the statement of net position. Accrued interest payable is not reported in the governmental funds.	2,023
The issuance of debt is reported as revenue in the governmental funds, but the issuance increases long-term liabilities in the statement of net position.	(731,305)
Repayment of debt principal is an expenditure in the governmental funds, but the repayment reduces long-term liabilities in the statement of net position.	871,781
Change in net position of governmental activities	$ 3,219,069

See notes to financial statements.

CITY OF SEWARD, NEBRASKA

STATEMENT OF FUND NET POSITION - PROPRIETARY FUNDS

September 30, 2024

	Enterprise Funds			
	Electric Fund	Water Fund	Sewer Fund	Total
ASSETS				
Current assets:				
Cash and cash equivalents	$ 1,267,568	$ (880,551)	$ 1,064,942	$ 1,451,959
Certificates of deposit	3,367,084	159,003	298,734	3,824,821
Receivables:				
Accounts, net of allowance for doubtful accounts	1,283,543	258,434	214,838	1,756,815
Unbilled revenue	323,356	99,339	83,786	506,481
Interest	12,611	3,326	1,607	17,544
Inventory	1,906,076	114,776	-	2,020,852
Total current assets	8,160,238	(245,673)	1,663,907	9,578,472
Noncurrent assets:				
Restricted cash and cash equivalents	212,362	467,684	1,084,788	1,764,834
Restricted certificates of deposit	470,210	529,673	384,378	1,384,261
Capital assets:				
Land	1,523,056	270,621	90,094	1,883,771
Construction in progress	473,721	5,744,026	2,263,063	8,480,810
Distribution systems	22,133,849	17,866,076	12,832,799	52,832,724
Buildings	1,381,073	144,976	432,769	1,958,818
Equipment	3,798,969	573,938	1,208,406	5,581,313
Less accumulated depreciation	(16,501,772)	(9,450,172)	(9,588,063)	(35,540,007)
Net capital assets	12,808,896	15,149,465	7,239,068	35,197,429
Total noncurrent assets	13,491,468	16,146,822	8,708,234	38,346,524
Total assets	21,651,706	15,901,149	10,372,141	47,924,996
LIABILITIES				
Current liabilities:				
Accounts payable	744,862	200,359	85,116	1,030,337
Customer deposits	121,524	160	-	121,684
Accrued interest payable	8,409	8,245	1,824	18,478
Other accrued expenses	60,181	26,087	25,534	111,802
Sales tax payable	64,777	-	-	64,777
Current portion of long-term obligations	430,000	330,000	275,000	1,035,000
Total current liabilities	1,429,753	564,851	387,474	2,382,078
Noncurrent liabilities:				
Compensated absences - noncurrent	148,948	35,137	23,800	207,885
Noncurrent portion of long-term obligations	2,110,000	1,175,000	1,725,000	5,010,000
Total noncurrent liabilities	2,258,948	1,210,137	1,748,800	5,217,885
Total liabilities	3,688,701	1,774,988	2,136,274	7,599,963
NET POSITION				
Net investment in capital assets	10,268,896	13,644,465	5,239,068	29,152,429
Restricted for:				
Debt service	561,048	997,197	1,469,166	3,027,411
Unrestricted	7,133,061	(515,501)	1,527,633	8,145,193
Total net position	$ 17,963,005	$ 14,126,161	$ 8,235,867	$ 40,325,033

See notes to financial statements.

CITY OF SEWARD, NEBRASKA

STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION - PROPRIETARY FUNDS

For the year ended September 30, 2024

	Enterprise Funds			
	Electric Fund	Water Fund	Sewer Fund	Total
Operating revenues:				
User charges	$ 12,453,470	$ 2,190,977	$ 2,509,616	$ 17,154,063
Customer service charges	44,371	10,080	13,849	68,300
Other revenue	26,352	157,019	11,158	194,529
Total operating revenues	12,524,193	2,358,076	2,534,623	17,416,892
Operating expenses:				
Cost of power	7,001,774	-	-	7,001,774
Personnel	1,306,351	625,538	551,149	2,483,038
Contract services	135,225	20,459	55,820	211,504
Utilities	86,572	171,821	89,964	348,357
Repairs and maintenance	420,727	193,898	85,104	699,729
Supplies	98,170	43,931	22,307	164,408
Professional fees	85,319	61,490	61,843	208,652
Insurance	97,644	58,393	56,215	212,252
Fuel and transportation	18,246	5,810	7,234	31,290
Dues, memberships & training	25,995	15,997	14,910	56,902
Miscellaneous	9,366	3,567	4,201	17,134
Franchise fees	1,283,427	120,059	-	1,403,486
Depreciation	1,006,371	466,622	525,604	1,998,597
Total operating expenses	11,575,187	1,787,585	1,474,351	14,837,123
Operating income	949,006	570,491	1,060,272	2,579,769
Nonoperating revenues (expenses):				
Interest income	151,021	73,318	37,897	262,236
Miscellaneous income	57,401	-	32,179	89,580
Grant revenue	1,762	1,762	908	4,432
Gain on disposal of capital assets	433,561	-	-	433,561
Interest expense	(70,643)	(29,779)	(23,107)	(123,529)
Loan administration fees	(800)	(1,000)	-	(1,800)
Total nonoperating revenues (expenses)	572,302	44,301	47,877	664,480
Change in net position	1,521,308	614,792	1,108,149	3,244,249
Net position - September 30, 2023	16,441,697	13,511,369	7,127,718	37,080,784
Net position - September 30, 2024	$ 17,963,005	$ 14,126,161	$ 8,235,867	$ 40,325,033

See notes to financial statements.

CITY OF SEWARD, NEBRASKA

STATEMENT OF CASH FLOWS - PROPRIETARY FUNDS

For the year ended September 30, 2024

	Enterprise Funds			
	Electric Fund	Water Fund	Sewer Fund	Total
CASH FLOWS FROM OPERATING ACTIVITIES:				
Receipts from customers	$ 12,508,115	$ 2,346,100	$ 2,522,743	$ 17,376,958
Payments to suppliers	(10,668,306)	(714,506)	(365,451)	(11,748,263)
Payments to employees	(1,269,001)	(620,769)	(547,976)	(2,437,746)
Net cash provided by operating activities	570,808	1,010,825	1,609,316	3,190,949
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES:				
Purchase of property and equipment	(1,364,866)	(3,934,220)	(505,261)	(5,804,347)
Proceeds from sale of capital assets	520,253	-	-	520,253
Grant proceeds	1,762	1,762	908	4,432
Principal payments on capital debt	(425,000)	(325,000)	(265,000)	(1,015,000)
Interest paid on capital debt	(71,767)	(31,378)	(23,217)	(126,362)
Loan administration fees	(800)	(1,000)	-	(1,800)
Net cash used by capital and related financing activities	(1,340,418)	(4,289,836)	(792,570)	(6,422,824)
CASH FLOWS FROM INVESTING ACTIVITIES:				
Increase in certificates of deposit	(76,948)	(1,588)	(2,736)	(81,272)
Increase in restricted certificates of deposit	(830)	(4,978)	(2,543)	(8,351)
Interest received	144,472	71,089	37,011	252,572
Net cash provided by investing activities	66,694	64,523	31,732	162,949
Increase (decrease) in cash and cash equivalents	(702,916)	(3,214,488)	848,478	(3,068,926)
Cash and cash equivalents - beginning of the year	2,182,846	2,801,621	1,301,252	6,285,719
Cash and cash equivalents - end of the year	$ 1,479,930	$ (412,867)	$ 2,149,730	$ 3,216,793
Composition of cash and cash equivalents:				
Cash and cash equivalents	$ 1,267,568	$ (880,551)	$ 1,064,942	$ 1,451,959
Restricted cash and cash equivalents	212,362	467,684	1,084,788	1,764,834
Total cash and cash equivalents	$ 1,479,930	$ (412,867)	$ 2,149,730	$ 3,216,793

See notes to financial statements.

CITY OF SEWARD, NEBRASKA

STATEMENT OF CASH FLOWS -
PROPRIETARY FUNDS, Continued

For the year ended September 30, 2024

	Enterprise Funds			
	Electric Fund	Water Fund	Sewer Fund	Total
Reconciliation of operating income to net cash provided by operating activities:				
Operating income	$ 949,006	$ 570,491	$ 1,060,272	$ 2,579,769
Adjustments to reconcile operating income to net cash provided by operating activities:				
Miscellaneous nonoperating revenue	57,401	-	32,179	89,580
Depreciation expense	1,006,371	466,622	525,604	1,998,597
Change in assets and liabilities:				
Accounts receivable	(68,452)	(11,976)	(44,059)	(124,487)
Inventories	(703,735)	(9,172)	-	(712,907)
Accounts payable	(704,031)	(9,909)	32,147	(681,793)
Customer deposits	(5,027)	-	-	(5,027)
Sales tax payable	1,925	-	-	1,925
Accrued expenses	37,350	4,769	3,173	45,292
Net cash provided by operating activities	$ 570,808	$ 1,010,825	$ 1,609,316	$ 3,190,949

See notes to financial statements.

CITY OF SEWARD, NEBRASKA

NOTES TO FINANCIAL STATEMENTS

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CITY OF SEWARD, NEBRASKA

NOTES TO FINANCIAL STATEMENTS

September 30, 2024

NOTE A – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The financial statements of the City of Seward, Nebraska (City) are prepared in accordance with generally accepted accounting principles (GAAP). The City's reporting entity applies all relevant Governmental Accounting Standards Board (GASB) pronouncements.

The accounting and reporting framework and the more significant accounting principles and practices are discussed in subsequent sections of this Note.

1. Financial Reporting Entity

The City of Seward, Nebraska, was incorporated in 1868. The City operates under a Mayor-Council form of government with an elected Mayor, and an elected legislative body, Council, composed of eight members. The Mayor is elected at large for a four-year term, and the eight members of the City Council are elected, two from each of four wards, on alternating four-year terms. The administration of the City government is performed under the direction of the Mayor by the City Administrator. Services provided to residents include public safety, highways and streets, planning and zoning, parks, recreation, development, electric, water, and sanitary sewer systems, transfer station, and general administrative services.

The City's financial reporting entity comprises the following:

Primary Government:	City of Seward
Discretely Presented Component Units:	Seward Airport Authority Seward Library Foundation

In determining the financial reporting entity, the City complies with the provisions of GASB Statement No. 61, and has addressed all potential component units (traditionally separate reporting entities) for which the City may be financially accountable, and, as such, should be included within the City's financial statements. The City (the primary government) is financially accountable if it appoints a voting majority of the organization's governing board and (1) it is able to impose its will on the organization or (2) there is a potential for the organization to provide specific financial benefits to or impose specific financial burdens on the City. Additionally, the primary government is required to consider other organizations for which the nature and significance of their relationship with the primary government are such that exclusion would cause the reporting entity's financial statements to be misleading.

NOTE A – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, continued

1. Financial Reporting Entity, continued

Blended Component Units

Blended component units are separate legal entities that meet the component unit criteria described above and whose governing body is the same or substantially the same as the City Council or the component unit provides services entirely to the City. These component units' funds are blended into those of the City by appropriate activity type to compose the primary government presentation. Currently, the City has no blended component units.

Discretely Presented Component Units

Discretely presented component units are separate legal entities that meet the component unit criteria described above but do not meet the criteria for blending. The following are the discretely presented component units:

	Brief Description of Activities and Relationship to the City:
Seward Airport Authority	Established to provide for the operation of the Seward Airport. The component unit information was obtained from financial statements which can be obtained by contacting the Seward Airport Authority.
Seward Library Foundation	Established to support the Seward library.

2. Basis of Presentation

Government-wide Financial Statements

The Statement of Net Position and Statement of Activities display information about the reporting government as a whole. They include all funds of the reporting entity except for fiduciary funds. The statements distinguish between governmental and business-type activities. Governmental activities generally are financed through taxes, intergovernmental revenues, and other nonexchange revenues. Business-type activities are financed in whole or in part by fees charged to external parties for goods or services.

NOTE A – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, continued

2. Basis of Presentation, continued

Fund Financial Statements

Fund financial statements of the reporting entity are organized into funds, each of which is considered to be a separate accounting entity. Each fund is accounted for by providing a separate set of self-balancing accounts that constitute its assets, liabilities, fund equity, revenues, and expenditures/expenses. Funds are organized into two major categories: governmental and proprietary. An emphasis is placed on major funds within the governmental and proprietary categories. A fund is considered major if it is the primary operating fund of the City or meets the following criteria:

a. Total assets, liabilities, revenues, or expenditures/expenses of that individual governmental or enterprise fund are at least 10 percent of the corresponding total for all funds of that category or type; and

b. Total assets, liabilities, revenues, or expenditures/expenses of the individual governmental fund or enterprise fund are at least five percent of the corresponding total for all governmental and enterprise funds combined.

The funds of the financial reporting entity are described below:

Governmental Funds

General Fund

The General Fund is the primary operating fund of the City and always classified as a major fund. It is used to account for all activities except those legally or administratively required to be accounted for in other funds.

Special Revenue Funds

Special Revenue Funds are used to account for the proceeds of specific revenue sources that are legally restricted to expenditures for certain purposes.

Debt Service Fund

The Debt Service Fund accounts for the accumulation of financial resources for the payment of interest and principal on the general long-term debt of the City other than debt service payments made by enterprise funds. Ad valorem taxes are used for the payment of principal and interest on the City's general obligation bonds.

NOTE A – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, continued

2. Basis of Presentation, continued

Governmental Funds, continued

Capital Projects Fund

The Capital Projects Fund is used to account for resources restricted for the acquisition or construction of specific capital projects.

Permanent Fund

The Permanent Fund accounts for assets held by the City pursuant to a trust agreement. The principal portion of this fund type must remain intact, but the earnings may be used to achieve the objectives of the fund.

Proprietary Funds

Enterprise Funds

Enterprise Funds are used to account for business-like activities provided to the general public. These activities are financed primarily by user charges and the measurement of financial activity focuses on net income measurement similar to the private sector.

Major and Nonmajor Funds

The funds are further classified as major or non-major as follows:

Fund	Brief Description
Major:	
Governmental:	
General	See page 27 for description.
Street	The Street Fund is a special revenue fund that accounts for the City's share of highway allocation from the State of Nebraska.
Debt Service	See page 27 for description.

NOTE A – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, continued

2. Basis of Presentation, continued

Major and Nonmajor Funds, continued

Fund	Brief Description
Major, continued:	
Governmental, continued:	
Capital Projects	See page 28 for description.
Proprietary:	
Enterprise:	
Electric, Water, and Sewer	See page 28 for description.
Nonmajor:	
Special Revenue:	
CDBG	Special revenue fund that accounts for community development grants and related expenses.
LB840	Special revenue fund that accounts for sales tax to be used for economic development under LB840.
TIF	Special revenue fund that accounts for tax increment financing projects used to promote economic development.
Perpetual Care	Permanent fund that accounts for the monies in a permanent care endowment fund for the cemetery.

3. Measurement Focus and Basis of Accounting

Measurement focus is a term used to describe "which" transactions are recorded within the various financial statements. Basis of accounting refers to "when" transactions are recorded regardless of the measurement focus applied.

NOTE A – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, continued

3. Measurement Focus and Basis of Accounting, continued

Measurement Focus

On the government-wide Statement of Net Position and the Statement of Activities, both governmental and business-like activities are presented using the economic resources measurement focus as defined in item b, below.

In the fund financial statements, the "current financial resources" measurement focus or the "economic resources" measurement focus is used as appropriate:

a. All governmental funds utilize a "current financial resources" measurement focus. Only current financial assets and liabilities are generally included on their balance sheets. Their operating statements present sources and uses of available spendable financial resources during a given period. These funds use fund balance as their measure of available spendable financial resources at the end of the period.

b. The proprietary funds utilize an "economic resources" measurement focus. The accounting objectives of this measurement focus are the determination of operating income, changes in net position (or cost recovery), financial position, and cash flows. All assets and liabilities (whether current or noncurrent) associated with their activities are reported. Proprietary fund equity is classified as net position.

Basis of Accounting

In the government-wide Statement of Net Position and Statement of Activities, governmental and business-like activities and the discretely presented component units are presented using the accrual basis of accounting. Under the accrual basis of accounting, revenues are recognized when earned and expenses are recorded when the liability is incurred or economic asset used. Revenues, expenses, gains, losses, assets, and liabilities resulting from exchange and exchange-like transactions are recognized when the exchange takes place.

In the fund financial statements, governmental funds are presented on the modified accrual basis of accounting. Under the modified accrual basis of accounting, revenues are recognized when "measurable and available." Measurable means knowing or being able to reasonably estimate the amount. Available means collectible within the current period or within 60 days after year end. Expenditures (including capital outlay) are recorded when the related fund liability is incurred.

NOTE A – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, continued

3. Measurement Focus and Basis of Accounting, continued

Basis of Accounting, continued

All proprietary funds and discretely presented component units utilize the accrual basis of accounting. Under the accrual basis of accounting, revenues are recognized when earned and expenses are recorded when the liability is incurred or the economic asset is used.

4. Assets, Liabilities, and Equity

Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Cash and Investments

For the purpose of the Statement of Net Position, "cash and cash equivalents" include all demand accounts and savings accounts. For the purpose of the proprietary fund Statement of Cash Flows, "cash and cash equivalents" include all cash on hand, demand accounts, savings accounts, and equity in pooled cash which has an original maturity of three months or less. The County Treasurer's cash represents revenues collected not yet remitted to the City.

Certificates of deposit and investments are carried at fair value. Fair value is based on quoted market price. Additional cash and investment disclosures are presented in Notes B2, C1, and D2.

When both restricted and unrestricted resources are available for use, it is the City's policy to use restricted resources first, then unrestricted resources as they are needed.

NOTE A – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, continued

4. Assets, Liabilities, and Equity, continued

Receivables

In the government-wide statements, receivables consist of all revenues earned at year end and not yet received. Allowances for uncollectible accounts receivable are based upon historical trends and the periodic aging of accounts receivable. Major receivable balances for the governmental activities include special assessments and property taxes. Business-type activities report utility billings and unbilled revenue as their major receivables.

In the fund financial statements, receivables in governmental funds include revenue accruals such as special assessments and property taxes, since they are usually both measurable and available. Proprietary fund receivables consist of all revenues earned at year end and not yet received. Utility accounts receivable and unbilled revenue compose the majority of proprietary fund receivables. Allowances for uncollectible accounts receivable are based upon historical trends and the periodic aging of accounts receivable.

Due from Other Governments

The total due from other governments consists of the following:

Fund	Amount	Service
General	$ 333,938	Sales Tax
Street	79,069	Sales Tax
Street	16,815	Motor Vehicle Fees
Street	85,047	Highway Allocation
Capital Projects	111,313	Sales Tax
	$ 626,182	

Inventory

All inventories are valued at cost using the first-in/first-out (FIFO) method.

Restricted Assets

Restricted assets include cash and investments that are legally restricted as to their use. The primary restricted assets are related to debt service and proceeds of specific revenue sources that are legally restricted to expenditures for certain purposes.

NOTE A – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, continued

4. Assets, Liabilities, and Equity, continued

Capital Assets

The accounting treatment over property, plant, and equipment (capital assets) depends on whether the assets are used in governmental fund operations or proprietary fund operations and whether they are reported in the government-wide or fund financial statements.

Government-wide Statements

In the government-wide financial statements, capital assets that are purchased or acquired with an original cost of $5,000 or more are capitalized and reported on the Statement of Net Position. Capital assets are valued at historical cost or estimated historical cost if actual is unavailable, except for donated capital assets, which are recorded at their estimated fair value at the date of donation. The City has elected the depreciation approach for reporting infrastructure.

Depreciation of general capital assets and all proprietary capital assets is recorded as an allocated expense in the Statement of Activities, with accumulated depreciation reflected in the Statement of Net Position. Depreciation is provided over the assets' estimated useful lives using the straight-line method of depreciation. The ranges of estimated useful lives by type of asset are as follows:

Buildings	25-40 years
Improvements	5-25 years
Machinery and Equipment	5-20 years
Utility System	20-50 years
Infrastructure	20-50 years

Prior to July 1, 1980, governmental funds' infrastructure assets were not capitalized. These assets (back to July 1, 1980) have been valued at estimated historical cost. The cost of normal maintenance, preservation, and repairs that do not add to the value of the assets or materially extend the assets' lives are not capitalized.

NOTE A – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, continued

4. Assets, Liabilities, and Equity, continued

Capital Assets, continued

Fund Financial Statements

In the fund financial statements, capital assets used in governmental fund operations are accounted for as capital outlay expenditures of the governmental fund upon acquisition. Capital assets used in proprietary fund operations are accounted for the same as in the government-wide statements.

Unavailable Revenues

Unavailable revenues consist of property taxes and special assessments expected to be collected after 60 days.

Compensated Absences

The City's policies regarding vacation time permit employees to accumulate earned but unused vacation leave. A portion of the liability for these compensated absences is recorded as long-term debt in the government-wide statements. The current portion of this obligation is estimated based on historical trends. In the fund financial statements, governmental funds report only the current compensated absence liability payable from expendable available financial resources, while the proprietary funds report the total liability.

Employees generally earn sick leave at the rate of one day per month with the total accumulation up to 900 hours. In the event of retirement, an employee is reimbursed 50 percent of the accumulated sick leave if the employee meets certain eligibility requirements.

Long-term Debt

The accounting treatment of long-term debt depends on whether the assets are used in governmental fund operations or proprietary fund operations and whether they are reported in the government-wide or fund financial statements.

NOTE A – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, continued

4. Assets, Liabilities, and Equity, continued

Long-term Debt, continued

Government-wide Statements

All long-term debt to be repaid from governmental and business-type resources is reported as liabilities in the government-wide statements. The long-term debt consists primarily of notes payable and accrued compensated absences.

Fund Financial Statements

Long-term debt for governmental funds is not reported as liabilities in the fund financial statements. The debt proceeds are reported as other financing sources and payment of principal and interest reported as expenditures. The accounting for proprietary funds is the same in the fund financial statements as it is in the government-wide statements.

Equity Classifications

Government-wide Statements

Equity is classified as net position and displayed in three components:

a. Net investment in capital assets – Consists of capital assets including restricted capital assets, net of accumulated depreciation and reduced by the outstanding balances of any bonds, mortgages, notes, or other borrowings that are attributable to the acquisition, construction, or improvement of those assets.

b. Restricted net position – Consists of net position with constraints placed on their use either by (1) external groups such as creditors, grantors, contributors, or laws or regulations of other governments; or (2) law through constitutional provisions or enabling legislation.

c. Unrestricted net position – All other net position that does not meet the definition of "restricted" or "net investment in capital assets."

Fund Financial Statements

Governmental fund equity is classified as fund balance. Proprietary fund equity is classified the same as in the government-wide statements.

NOTE A – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, continued

4. Assets, Liabilities, and Equity, continued

Equity Classifications, continued

Fund Financial Statements, continued

Effective October 1, 2010, the City adopted GASB Statement No. 54, which redefined how fund balances of the governmental funds are presented in the financial statements. Fund balances are classified as follows:

Nonspendable−Amounts that cannot be spent either because they are not in a spendable form or because they are legally or contractually required to be maintained intact.

Restricted−Amounts that can be spent only for specific purposes because of the City Charter, City Code, state or federal laws or externally imposed conditions by grantors or creditors.

Committed−Amounts that can be used only for specific purposes determined by a formal action by City Council ordinance or resolution.

Assigned−Amounts that are designated by the Mayor for a specific purpose but are not spendable until a budget ordinance is passed by the City Council.

Unassigned−All amounts not included in other spendable classifications.

The details of the fund balances are included in the Governmental Funds Balance Sheet (page 16). Restricted funds are used first as appropriate. Assigned Funds are reduced to the extent that expenditure authority has been budgeted by the City Council or the Assignment has been changed by the Mayor. Decreases to fund balance first reduce Unassigned Fund balance; in the event that Unassigned Fund Balance becomes zero, then Assigned and Committed Fund Balances are used in that order.

NOTE A – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, continued

5. Revenues, Expenditures, and Expenses

Sales and Use Tax

The City presently levies a 2.0 cent sales tax on taxable sales within the City. The sales tax is collected by the Nebraska Department of Revenue and remitted to the City in the month following receipt. The Nebraska Department of Revenue receives the sales tax approximately one month after collection by vendors. Sales tax collected on the sale of motor vehicles is restricted for street improvements as required by LB904. Effective January 1, 2023, 0.5 percent is allocated to service debt on the new wellness center. The balance of the sales tax is allocated to the General and Debt Service Funds for property tax relief, with up to $150,000 per year approved for the LB840 Fund to be used for economic development.

Sales taxes collected by the State in September (which represent sales for August) and received by the City in October have been accrued and are included under the caption "Due from other governments."

Property Taxes

The City has the power to levy taxes each year sufficient to pay any judgment existing against the City, the interest on bonded debt, and the principal on bonded debt maturing during the fiscal year or within six months thereafter, as well as taxes authorized by state law.

The tax levies for all political subdivisions in Seward County are certified by the County Board on or before October 20. Real estate taxes are due on December 31 and attach as an enforceable lien and become delinquent in two equal installments on May 1 and September 1. Personal property taxes are due in the same manner as real estate taxes. Delinquent taxes bear 14 percent interest.

NOTE A – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, continued

5. Revenues, Expenditures, and Expenses, continued

Property Taxes, continued

Property taxes levied for 2023-2024 are recorded as revenue when expected to be collected within 60 days after September 30, 2024. Prior-year levies were recorded using these same principles, and remaining receivables are re-evaluated annually. Property taxes expected to be collected after 60 days are recorded as deferred revenue on the fund balance sheets.

The City-owned electric, water, and sewer utilities make payments in lieu of taxes (10 percent of gross revenues for electric and 5 percent of gross revenues for water).

Operating Revenues and Expenses

Operating revenues and expenses for proprietary funds are those that result from providing services and producing and delivering goods and/or services. They also include all revenue and expenses not related to capital and related financing, noncapital financing, or investing activities.

Expenditures/Expenses

In the government-wide financial statements, expenses are classified by function for both governmental and business-type activities.

In the fund financial statements, expenditures are classified as follows:

Governmental Funds – by Character and Function

Proprietary Fund – by Operating and Nonoperating

In the fund financial statements, governmental funds report expenditures of financial resources. Proprietary funds report expenses relating to use of economic resources.

NOTE A – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, continued

5. Revenues, Expenditures, and Expenses, continued

Interfund Transfers

Permanent reallocation of resources between funds of the reporting entity is classified as transfers. For the purposes of the Statement of Activities, all interfund transfers between individual governmental funds have been eliminated.

NOTE B – STEWARDSHIP, COMPLIANCE, AND ACCOUNTABILITY

By its nature as a local government unit, the City and its component units are subject to various federal, state, and local laws and contractual regulations. An analysis of the City's compliance with significant laws and regulations and demonstration of its stewardship over City resources follows:

1. Fund Accounting Requirements

The City complies with all state and local laws and regulations requiring the use of separate funds. The legally required funds used by the City include: Special Revenue, Debt Service, and Permanent Funds.

2. Deposit Laws and Regulations

Custodial credit risk is the risk that, in the event of a bank failure, a government's deposits may not be returned to it. The City's deposit policy for custodial credit risk requires compliance with the provisions of state law.

State law requires collateralization of all deposits with federal depository insurance or with U.S. Treasury and U.S. agency securities having an aggregate value at least equal to the amount of the deposits. The City's demand deposits are insured up to $250,000 and certificates of deposit/savings accounts are insured up to $250,000 by the Federal Deposit Insurance Corporation (FDIC). Any cash deposits or certificates of deposit in excess of the FDIC limits are insured by collateral held by the pledging institution in the City's name.

The Airport Authority had unsecured funds of $97,332 as of September 30, 2024.

NOTE B – STEWARDSHIP, COMPLIANCE, AND ACCOUNTABILITY, continued

3. Revenue Restrictions

The City has various restrictions placed over certain revenue sources from state or local requirements. The primary restricted revenue sources are described in Note A2 for the various funds.

4. Debt Restrictions and Covenants

Bonds Payable

The various bond ordinances relating to the bonds payable contain some restrictions or covenants that are financial-related. These include covenants such as debt service coverage requirements and required reserve account balances. The City is in compliance with the bond restrictions and covenants.

5. Budgetary Data

The City is required by state laws to adopt annual budgets for all fund types. Each budget is presented on the cash basis of accounting, which is consistent with the requirements of the state budget act.

The Nebraska Budget Act provides the prescribed budget practices and procedures that governing bodies are required to follow. The amounts that may be budgeted for certain specific funds are subject to various expenditure and/or tax levy limitations.

The City follows these procedures in establishing the budgetary data reflected in the accompanying financial statements.

a. On or before August 1, the City prepares a budget for the fiscal year commencing October 1. The budget includes proposed expenditures and resources available.

b. The budget is published with subsequent public hearings to obtain taxpayer comments.

NOTE B – STEWARDSHIP, COMPLIANCE, AND ACCOUNTABILITY, continued

5. Budgetary Data, continued

c. Prior to September 30, the City Council adopts the budget, which is then filed with the appropriate state and county officials.

d. Total expenditures may not legally exceed total appropriations. Appropriations lapse at year end and any revisions require board approval.

e. The County Clerk certifies a preliminary property tax levy for each fund of the City which levied property taxes in the county the previous year based on the combined valuation and amount required for the City the prior year. The preliminary levy becomes the final levy unless the governing board passes, by a majority vote, a resolution setting the levy at a different amount.

f. The property tax requirements resulting from the budget process are utilized by the County Assessor to establish the tax levy. Taxes are levied annually on or before October 20. Real property taxes and personal property taxes are due December 31 with the first half delinquent May 1 and the second half delinquent September 1.

g. Appropriations lapse at the end of the fiscal year, except for capital improvement appropriations and certain encumbrances against operating budgets.

h. The City of Seward adopts a budget by resolution for all fund types.

NOTE C – DETAIL NOTES ON TRANSACTION CLASSES/ACCOUNTS

The following notes present detail information to support the amounts reported in the basic financial statements for its various assets, liabilities, equity, revenues, and expenditures/ expenses.

1. Cash and Investments

Deposits

The City's policies regarding deposits of cash are discussed in Note A4. The table presented below is designed to disclose how its deposits were insured or secured with collateral at September 30, 2024. The categories of collateral are defined as follows:

NOTE C – DETAIL NOTES ON TRANSACTION CLASSES/ACCOUNTS, continued

1. Cash and Investments, continued

Deposits, continued

Category 1 – Insured by FDIC or collateralized with securities held by the City (or public trust) or by its agent in its name.

Category 2 – Uninsured but collateralized with securities held by the pledging financial institution's trust department or agent in the City's name.

Category 3 – Uninsured and uncollateralized; or collateralized with securities held by the pledging financial institution, or by its trust department or agent, but not in the City's name; or collateralized with no written or approved collateral agreement.

Types of Deposits	Total Bank Balance	Category 1	Category 2	Category 3	Total Carrying Value
Demand deposits and certificates of deposit	$ 15,575,336	$ 1,624,234	$ 13,853,770	$ 97,332	$ 15,477,203

Reconciliation to Government-wide Statement of Net Position:	
Primary Government –	
Unrestricted cash and cash equivalents	$ 5,484,774
Unrestricted certificates of deposit	4,270,409
Restricted cash and cash equivalents	3,833,928
Restricted certificates of deposit	1,399,261
Component Units –	
Unrestricted cash and cash equivalents	395,308
Unrestricted certificates of deposit	93,523
	$ 15,477,203

Investments

The City's policies and applicable laws regarding investments are discussed in Notes A4 and B2. The table presented below is designed to disclose whether the investments are insured or registered and who holds the security at September 30, 2024. The categories of investments are defined as follows:

NOTE C – DETAIL NOTES ON TRANSACTION CLASSES/ACCOUNTS, continued

1. Cash and Investments, continued

Investments, continued

Category 1 – Insured or registered with securities held by the entity or its agent in the entity's name.

Category 2 – Uninsured and unregistered with securities held by the counterparty's trust department or agent in the entity's name.

Category 3 – Uninsured and unregistered with securities held by the counterparty or by its trust department or agent but not in the City's name.

Type of Investment	Category 1	Category 2	Category 3	Carrying Amount	Fair Value
Publicly Traded Equities	$ -	$ 866,991	$ -	$ 866,991	$ 866,991

Reconciliation to Government-wide Statement of Net Position:

Component Units –	
Unrestricted investments	$ 781,375
Permanently restricted investments	85,616
	$ 866,991

NOTE C – DETAIL NOTES ON TRANSACTION CLASSES/ACCOUNTS, continued

2. Restricted Assets

The restricted assets as of September 30, 2024, are as follows:

	Governmental Activities	Business-type Activities	Total Primary Government	Component Unit
Type of Restricted Assets:				
Cash and cash equivalents	$ 2,069,094	$ 1,764,834	$ 3,833,928	$ -
Certificates of deposit	15,000	1,384,261	1,399,261	-
Investments	-	-	-	85,616
	$ 2,084,094	$ 3,149,095	$ 5,233,189	$ 85,616

Restricted cash and investments for governmental activities consists of $896,404 of Street Fund cash restricted for street projects, $184,947 of Debt Service Fund cash restricted for debt service, $17,511 of CDBG Fund cash restricted for Federal programs, $430,483 of LB840 Fund cash restricted for economic development, $206,641 of TIF Fund cash restricted for economic development, $106,106 of Capital Projects Fund cash restricted for capital projects, and $242,002 of Perpetual Care Fund cash and certificates of deposit restricted for cemetery perpetual care.

Restricted business-type assets consist of debt service reserves of $561,048 for the Electric Fund, $997,197 for the Water Fund, and $1,469,166 for the Sewer Fund. The Electric Fund has $121,524 and the Water Fund has $160 restricted for customer deposits.

The Seward Library Foundation has $85,616 of permanently restricted investments endowed for the income only to be used to support the Seward library.

3. Accounts and Notes Receivable

Accounts receivable of the business-type activities consist of utilities receivable. Accounts receivable for the governmental activities and component units consist of minor receivables. Receivables detail at September 30, 2024, is as follows:

	Governmental Activities	Business-type Activities	Total Primary Government	Component Units
Accounts receivable	$ 221	$ 1,764,990	$ 1,765,211	$ 3,460
Allowance for doubtful accounts	-	(8,175)	(8,175)	-
Net accounts receivable	$ 221	$ 1,756,815	$ 1,757,036	$ 3,460

NOTE C – DETAIL NOTES ON TRANSACTION CLASSES/ACCOUNTS, continued

3. Accounts and Notes Receivable, continued

Notes receivable for the governmental activities consist of the following at September 30, 2024:

Type of Loan	Due From	Note Balance at September 30, 2024	Terms
LB840	Seward Hotel Group	$ 24,439	3.25%; monthly payments over 15 years; final payment due 9/1/27
LB840	ECES, Inc	18,955	2.625%; monthly payments due over 10 years; final payment due 1/1/29
LB840	Barely Legal Distilling, LLC	70,000	2.25%; monthly payments due over 5 years; final payment due 2/1/25
LB840	Green Future Properties	167,146	2.75%; monthly payments due over 15 years; 12% of the loan will be forgiven after 166 payments have been made; final payment due 9/1/34
LB840	Cornerstone Interiors & Design	23,261	2.13%; monthly payments due over 10 years; final payment due 1/1/28
LB840	Gilgorevic	364	5.0%; 20 percent forgivable annually if borrower retains improvements; due 10/16/24
LB840	Turning Point Behavioral Health & Addiction Counseling	6,026	1.75%; monthly payments due over 10 years; final payment due 12/1/26
LB840	Nixon Restaurant and Property, Inc.	25,507	1.625%; monthly payments due over 5 years; final payment due 3/1/27
LB840	14tin, LLC	45,063	1.625%; monthly payments due over 10 years; final payment due 9/1/32
LB840	Kirby Roth Insurance	1,304	5.0%; 20 percent forgivable annually if borrower retains improvements; due 7/23/25

NOTE C – DETAIL NOTES ON TRANSACTION CLASSES/ACCOUNTS, continued

3. Accounts and Notes Receivable, continued

Note Held By	Due From	Note Balance at September 30, 2024	Terms
LB840	Hexagon Properties	54,787	1.875%; monthly payments due over 15 years; final payment due 3/30/32
LB840	Red Path Gallery & Tasting Room	22,843	2.375%; monthly payments due over 10 years; final payment due 8/1/28
LB840	The Alps Dog Retreat	31,543	2.375%; monthly payments due over 72 months; $13,081.50 is forgivable after 64 payments; final payment due 12/1/26
LB840	Fullfield Ag, LLC	105,739	1.875%; monthly payments due over 15 years; final payment due 2/15/32
LB840	I. H. Freary Building, LLC	39,332	3.875%; monthly payments due over 10 years; final payment due 5/1/28
LB840	Buds Flower Shop, LLC	86,963	4.25%; monthly payments due over 120 months; $21,176.09 is forgivable after 96 payments; final payment due 4/1/35
LB840	MC Retail, LLC	100,000	4.25%; monthly payments due over 10 years; final payment due 3/1/35
LB840	H&H Recreation Inc.	50,000	3.875%; 20 percent forgivable annually if borrower retains improvements; due 3/31/29
LB840	Neutral Grounds Coffee Co	2,625	3.875%; 20 percent forgivable annually if borrower retains improvements; due 10/31/28

NOTE C – DETAIL NOTES ON TRANSACTION CLASSES/ACCOUNTS, continued

3. Accounts and Notes Receivable, continued

Allowance for uncollectible note receivable	(70,000)
Total notes receivable	$ 875,898
Current portion	$ 127,315
Noncurrent portion	678,583
	$ 875,898

4. Capital Assets

Capital asset activity for the year ended September 30, 2024, was as follows:

	Balance at October 1, 2023	Additions	Disposals	Balance at September 30, 2024
Governmental Activities:				
Capital assets not being depreciated:				
Land	$ 852,951	$ -	$ -	$ 852,951
Construction in progress	2,538,299	6,935,041	-	9,473,340
Total capital assets not being depreciated	3,391,250	6,935,041	-	10,326,291
Other capital assets being depreciated:				
Infrastructure	23,176,702	74,584	-	23,251,286
Buildings	12,284,642	240,909	(24,456)	12,501,095
Machinery and equipment	7,162,408	780,203	(281,366)	7,661,245
Total other capital assets at historical cost	42,623,752	1,095,696	(305,822)	43,413,626
Less accumulated depreciation for:				
Infrastructure	(7,944,660)	(817,241)	-	(8,761,901)
Buildings	(4,386,443)	(264,060)	24,456	(4,626,047)
Machinery and equipment	(5,354,853)	(430,081)	243,684	(5,541,250)
Total accumulated depreciation	(17,685,956)	(1,511,382) *	268,140	(18,929,198)
Other capital assets, net	24,937,796	(415,686)	(37,682)	24,484,428
Governmental activities capital assets, net	$ 28,329,046	$ 6,519,355	$ (37,682)	$ 34,810,719

* Depreciation expense was charged to governmental activities as follows:

NOTE C – DETAIL NOTES ON TRANSACTION CLASSES/ACCOUNTS, continued

4. Capital Assets, continued

Governmental Activities, continued:

General government	$ 13,604
Public safety	
Fire	66,844
Police	61,726
Total public safety	128,570
Public works:	
Streets and storm sewers	841,711
Cemetery	32,767
Total public works	874,478
Environment and leisure:	
Civic Center	18,447
Golf	72,505
Library	132,628
Parks and recreation	183,504
Senior Center	17,634
Trails	70,012
Total environment and leisure	494,730
Total governmental depreciation expense	$ 1,511,382

Construction in progress at September 30, 2024, consists of $2,047,767 for the East Seward Street project, $62,718 for the Pinewood Avenue project, $69,548 for the Plum Creek bridge project, $2,974,809 for the Park Avenue/Bradford storm drainage project, $791,229 for the Civic Center ADA design project, $1,066,774 for the Izaak Walton and Highway 15 improvement project, $159,078 for the Worthman Blvd project, $51,255 for the E Hillcrest Street project, $268,146 for the levee drainage pump station project, $1,969,778 for the Wellness Center project, and $12,238 for scoreboards. See Note D3 for additional details on these projects.

NOTE C – DETAIL NOTES ON TRANSACTION CLASSES/ACCOUNTS, continued

4. Capital Assets, continued

	Balance at October 1, 2023	Additions	Disposals	Balance at September 30, 2024
Business-type Activities:				
Capital assets not being depreciated:				
Land	$ 1,965,201	$ -	$ (81,430)	$ 1,883,771
Construction in progress	3,662,907	4,817,903	-	8,480,810
Total capital assets not being depreciated	5,628,108	4,817,903	(81,430)	10,364,581
Other capital assets being depreciated:				
Buildings	1,411,180	547,638	-	1,958,818
Distribution systems	52,739,059	93,665	-	52,832,724
Equipment	5,432,432	336,177	(187,296)	5,581,313
Total other capital assets at historical cost	59,582,671	977,480	(187,296)	60,372,855
Less accumulated depreciation for:				
Buildings	(642,445)	(43,401)	-	(685,846)
Distribution systems	(29,727,676)	(1,586,476)	-	(31,314,152)
Equipment	(3,353,324)	(368,720)	182,035	(3,540,009)
Total accumulated depreciation	(33,723,445)	(1,998,597) *	182,035	(35,540,007)
Other capital assets, net	25,859,226	(1,021,117)	(5,261)	24,832,848
Business-type capital assets, net	$ 31,487,334	$ 3,796,786	$ (86,691)	$ 35,197,429

* Depreciation expense was charged to functions as follows:

Electric	$ 1,006,371
Water	466,622
Sewer	525,604
Total business-type activities depreciation expense	$ 1,998,597

Construction in progress at September 30, 2024, consists of $2,912,928 for the water tower project, $243,157 for various electric services, $129,782 for AMI meter reading system, $142,890 for Ash Street SCADA system, $29,113 for recycling center retaining wall, $44,779 for Hillcrest line relocation, $380,299 for the East Seward Street water improvements, $452,312 for the East Seward Street sewer improvements, $1,722,362 for the wastewater treatment plant improvement project, $1,989,325 for the 6th Street water main replacement project, $270,237 for the Park/Bradford Street storm sewer improvement project, and $163,626 for water treatment plant improvements. See Note D3 for additional detail of the construction in progress at September 30, 2024.

NOTE C – DETAIL NOTES ON TRANSACTION CLASSES/ACCOUNTS, continued

4. Capital Assets, continued

	Balance at October 1, 2023	Additions	Disposals	Balance at September 30, 2024
Airport Authority:				
Capital assets not being depreciated:				
Land	$ 105,156	$ -	$ -	$ 105,156
Construction in progress	-	388,780	-	388,780
	105,156	388,780	-	493,936
Other capital assets being depreciated:				
Buildings	4,311,353	-	-	4,311,353
Improvements	2,543,114	-	-	2,543,114
Equipment	266,828	-	-	266,828
Total other capital assets at historical cost	7,121,295	-	-	7,121,295
Less accumulated depreciation for:				
Buildings	(1,621,194)	(116,449)	-	(1,737,643)
Improvements	(1,646,621)	(78,516)	-	(1,725,137)
Equipment	(182,100)	(23,848)	-	(205,948)
Total accumulated depreciation	(3,449,915)	(218,813)	-	(3,668,728)
Other capital assets, net	3,671,380	(218,813)	-	3,452,567
Airport Authority capital assets, net	$ 3,776,536	$ 169,967	$ -	$ 3,946,503

5. Accounts Payable

Payables in the general, capital projects, other governmental, and proprietary funds are primarily composed of payables to vendors.

NOTE C – DETAIL NOTES ON TRANSACTION CLASSES/ACCOUNTS, continued

6. Long-term Debt

The reporting entity's long-term debt is segregated between the amounts to be repaid from governmental activities and amounts to be repaid from business-type activities.

Changes in Long-term Debt

The following is a summary of changes in long-term debt for the year ended September 30, 2024:

Type of Debt	Balance 9/30/2023	Additions	Deductions	Balance 9/30/2024	Due Within One Year
Governmental Activities:					
Bonds payable	$ 4,024,000	$ 671,495	$ (809,001)	$ 3,886,494	$ 480,000
Financing agreements	178,273	59,810	(62,780)	175,303	55,897
Total governmental	$ 4,202,273	$ 731,305	$ (871,781)	$ 4,061,797	$ 535,897
Business-type Activities					
Bonds payable	$ 7,060,000	$ -	$ (1,015,000)	$ 6,045,000	$ 1,035,000
Component Units:					
Airport Authority	$ 175,842	$ 104,467	$ (87,481)	$ 192,828	$ 192,828

Governmental Activities

As of September 30, 2024, the governmental long-term liabilities consisted of the following:

Bonds payable:	
Highway allocation bonds - series 2012, with original issue amount of $190,000. Interest is 2.35 percent with maturity December 15, 2023.	$ -
General obligation refunding bonds - series 2020, with original issue amount of $4,725,000. Interest ranges from 1.15 to 1.80 percent with final maturity April 15, 2030.	2,855,000

NOTE C – DETAIL NOTES ON TRANSACTION CLASSES/ACCOUNTS, continued

6. Long-term Debt, continued

Governmental Activities, continued

Bonds payable, continued:

Public safety tax bonds - series 2014, with original issue amount of $404,000. Interest ranges from 1.15 to 2.55 percent with final maturity April 1, 2024.	-
Highway allocation bonds – series 2016, with original issue amount of $825,000. Interest ranges from 2.0 to 4.0 percent with final maturity October 1, 2031.	410,000
Tax supported municipal improvement bond - series 2023, with original issue amount of up to $9,800,000. Interest of 4.65 percent is due in monthly payments until December 15, 2025 then semi-annual payments of principal and interest will begin June 15, 2026 until final maturity December 15, 2045.	621,494
Total bonds payable	3,886,494

Financing Agreements:

Financing agreement due to Exchange Bank dated September 1, 2020, with original issue amount of $148,882 to finance golf carts. The note bears interest of 3.25 percent and is due in 30 monthly principal and interest payments of $3,300, commencing April 1, 2021 through September 1, 2025 (no note payments are due October through March each year), with a final installment of $64,762 due September 1, 2025.	81,992
Financing agreement due to Jones National Bank dated November 20, 2019, with original issue amount of $63,797 to finance a Kubota tractor and mower. The note bears interest of 3.29 percent and is due in five annual principal and interest payments of $13,760, commencing March 21, 2020 through March 31, 2024.	-

NOTE C – DETAIL NOTES ON TRANSACTION CLASSES/ACCOUNTS, continued

6. Long-term Debt, continued

Governmental Activities, continued

Financing Agreements, continued:

Financing agreement due to Jones National Bank dated April 10, 2024, with original issue amount of $59,811 to finance a Greensmaster mower. The note bears interest of 5.03 percent and is due in ten semi-annual principal and interest payments of $6,871, commencing October 30, 2024 through April 30, 2029.	59,810
Financing agreement due to Cattle National Bank dated October 1, 2020, with original issue amount of $115,700 to finance a 2020 Case 621GXR wheel loader. The note bears interest of 2.20 percent and is due in five annual principal and interest payments of $24,245, commencing November 30, 2020 through November 30, 2024.	23,723
Financing agreement due to Jones National Bank dated December 4, 2020, with original issue amount of $47,459 to finance a Toro Reelmaster 3555-D. The note bears interest of 2.13 percent and is due in five annual principal and interest payments of $9,980, commencing April 30, 2021 through April 30, 2025.	9,778
Total financing agreements	175,303
Total governmental activities long-term obligations	$ 4,061,797
Current portion	$ 535,897
Noncurrent portion	3,525,900
Total	$ 4,061,797

The Debt Service Fund and Capital Improvements Fund are making the bond payments, and the General Fund and Street Fund are making the payments on the financing agreements.

NOTE C – DETAIL NOTES ON TRANSACTION CLASSES/ACCOUNTS, continued

6. Long-term Debt, continued

Business-type Activities

As of September 30, 2024, the long-term debt payable from proprietary fund resources consisted of the following:

Bonds and notes payable:	
Electric revenue refunding bonds - series 2012, with original issue amount of $1,855,000. Interest ranges from 0.40 to 2.55 percent with final maturity February 15, 2025.	$ 75,000
Electric revenue refunding bonds - series 2016, with original issue amount of $4,755,000. Interest ranges from 0.85 to 3.20 percent with final maturity February 15, 2036.	2,465,000
Water revenue refunding bonds - series 2020, with original issue amount of $1,635,000. Interest ranges from 1.20 to 2.15 percent with final maturity February 15, 2036.	1,015,000
Water revenue refunding bonds - series 2016, with original issue amount of $1,205,000. Interest ranges from 0.95 to 1.80 percent with final maturity June 1, 2026.	490,000
Sewer revenue refunding bonds – series 2021, with original issue amount of $3,055,000. Interest ranges from 0.25 to 1.50 percent with final maturity September 1, 2032.	2,000,000
Total business-type activity debt	$ 6,045,000
Current portion	$ 1,035,000
Noncurrent portion	5,010,000
Total	$ 6,045,000

NOTE C – DETAIL NOTES ON TRANSACTION CLASSES/ACCOUNTS, continued

6. Long-term Debt, continued

Component Unit

Airport debt:	
Series 2011 bonds payable with original principal amount of $545,000, bearing interest ranging from 1.20 to 3.55 percent with final maturity January 15, 2024.	$ -
Series 2009 bonds payable with original principal amount of $20,000, bearing interest of 4.75 percent with maturity January 15, 2024.	-
Three lines of credit at a local bank to fund project costs until Federal and state grant money is received, bearing interest of 6.20, 8.10, and 8.10 percent, respectively.	178,286
Nebraska Department of Aeronautics loan with original principal amount of $220,253, due in 120 monthly installments of $1,322, bearing no interest through August 31, 2025.	14,542
Total Airport notes and bonds payable	$ 192,828
Current portion	$ 192,828
Noncurrent portion	-
Total	$ 192,828

NOTE C – DETAIL NOTES ON TRANSACTION CLASSES/ACCOUNTS, continued

6. Long-term Debt, continued

Annual debt service requirements to maturity, including principal and interest, for long-term debt as of September 30, 2024, are as follows:

Year Ending September 30,	Governmental Activities			
	Direct Placement Debt		Other Debt Issues	
	Principal	Interest	Principal	Interest
2025	$ 126,147	$ 6,382	$ 480,000	$ 93,305
2026	11,507	2,235	686,127	74,415
2027	12,273	1,469	857,878	62,524
2028	12,577	1,165	707,489	38,532
2029	12,799	943	510,000	24,640
2030-2032	-	-	645,000	19,790
	$ 175,303	$ 12,194	$ 3,886,494	$ 313,206

Year Ending September 30,	Business-type Activities		Component Unit	
	Other Debt Issues		Other Debt Issues	
	Principal	Interest	Principal	Interest
2025	$ 1,035,000	$ 111,082	$ 192,828	$ -
2026	1,040,000	95,005	-	-
2027	595,000	80,385	-	-
2028	515,000	72,168	-	-
2029	530,000	63,629	-	-
2030-2034	1,950,000	170,045	-	-
2035-2036	380,000	12,320	-	-
	$ 6,045,000	$ 604,634	$ 192,828	$ -

7. Interfund Transactions and Balances

The General Fund transferred $1,685,000 to the Street Fund during the year ended September 30, 2024. Also, the Street Fund transferred $186,841 to the Debt Service Fund during the year ended September 30, 2024.

NOTE D – OTHER NOTES

1. Employee Pension and Other Benefit Plans

Under Nebraska statutes, the City is to maintain a retirement plan for City police officers. This plan is funded through employee and employer contributions. The total contributions under this plan are deposited under a money purchase retirement plan with Ameritas Retirement. This plan requires that covered employees and the City contribute an amount equal to seven percent of the employee's monthly salary until such employee becomes eligible for regular retirement, at which time contributions shall cease. The eligible and covered payroll amounted to $936,273 for the year ended September 30, 2024. Both the City and the covered employees' required contribution of $65,539 was made for the year ended September 30, 2024. The employer contributions vest at the following rate: 0 to 2 years - 0 percent, 2 to 3 years - 40 percent, 4 years - 60 percent, 5 to 6 years - 80 percent, 7 years - fully vested. The employees also have the ability to make voluntary contributions to a deferred compensation plan in accordance with Internal Revenue Code Section 457. Voluntary 457 contributions totaled $0 during the year ended September 30, 2024.

The City maintains a defined contribution plan for the City employees in accordance with Internal Revenue Code Sections 457 and 401(a). The plan is available to all full-time City employees after six months of service. This plan is funded through employee and employer contributions. The total contributions under this plan are deposited with Ameritas Retirement. This plan requires that both covered employees and the City contribute six percent of the employee's salary to the plan. The total payroll amounted to $3,852,117 and the covered payroll amounted to $3,283,319 for the year ended September 30, 2024. The City and the employees contributed $194,115 and $194,115, respectively, for the year ended September 30, 2024. The employees also contributed $24,392 to a deferred compensation plan in accordance with Internal Revenue Code Section 457 during the year ended September 30, 2024.

2. Risk Management

Insurance

The City is exposed to various risks of loss related to torts; thefts of, damage to, or destruction of assets; errors or omissions; injuries to employees; or natural disasters. The City purchases commercial insurance to protect against risks listed above. Insurance is maintained for the various risks of loss related to torts; theft of, damage to, and destruction of assets; errors and omissions; dishonest employees; injuries to employees; and natural disasters. During the year ended September 30, 2024, the City did not reduce insurance coverage from levels in place during the prior year. No settlements have exceeded coverage levels in place during the past three fiscal years.

NOTE D – OTHER NOTES, continued

2. Risk Management, continued

Deposits and Investments

Custodial Credit Risk. For an investment, custodial credit risk is the risk that, in the event of the failure of the counterparty, the City will not be able to recover the value of its investment or collateral securities that are in the possession of an outside party. All of the underlying securities for the City's investments at September 30, 2024, are held by the counterparties not in the name of the City. The underlying securities consist of cash, direct obligations of or guaranteed by the full faith and credit of the U.S. Government, and other similar obligations of the U.S. Government or its agencies.

Interest Rate Risk. As a means of limiting its exposure to fair value losses arising from rising interest rates, the City's investment policy requires that market conditions and investment securities be analyzed to determine the maximum yield to be obtained and to minimize the impact of rising interest rates. The certificate of deposit maturities are as follows:

Maturities by Month	Amount
October 2024	$ 835,826
November 2024	60,111
December 2024	109,554
January 2025	126,910
February 2025	85,663
March 2025	1,527,915
May 2025	1,073,806
June 2025	318,677
September 2025	411,717
October 2025	150,010
January 2026	228,821
September 2026	311,175
March 2027	300,545
May 2027	15,000
December 2028	113,940
	$ 5,669,670

Credit Risk. Credit risk is the risk that the issuer or other counterparty to an investment will not fulfill its obligations. The City's investments consist of certificates of deposit and money market funds, minimizing credit risk associated with the City's investment portfolio.

NOTE D – OTHER NOTES, continued

2. Risk Management, continued

Deposits and Investments, continued

Concentration of Credit Risk. The City's investment policy places no limit on the amount that may be invested in any one issuer. At September 30, 2024, the City's investments in certificates of deposit consisted of the following:

Financial Institution	Amount
Cattle National Bank	$ 3,049,332
Jones National Bank	2,391,518
Union Bank	228,820
	$ 5,669,670

Foreign Currency Risk. This risk relates to adverse effects on the fair value of an investment from changes in exchange rates. The City's investments had no exposure to foreign currency risk and the City held no investments denominated in foreign currency at September 30, 2024.

3. Commitments

Construction/Contractual Commitments

The City has numerous construction projects and other contracts in progress. The City intends to fund the construction through operations or long-term financing.

Project	Contract Amount	Paid Through 9/30/24	Obligation Pending	Expected Completion Date
Civic Center	2,514,199	(781,817)	1,732,382	March 2025
E Seward St improvements	2,728,102	(2,680,744)	47,358	June 2025
Various Storm Sewer Improvements	3,678,527	(3,263,317)	415,210	June 2025
E Hillcrest St improvements	129,450	(103,365)	26,085	June 2026
Worthman Blvd improvements	305,944	(122,246)	183,698	June 2026
Levee drainage pump station	419,780	(219,401)	200,379	Fall 2026
Wellness Center	16,317	(12,238)	4,079	March 2025
GIS mapping updates	302,120	(183,043)	119,077	December 2025
Recycling Center retaining wall	32,348	(29,113)	3,235	Summer 2026
Hillcrest line relocate	42,750	(26,424)	16,326	Fall 2025
WWTP improvements	52,500	(5,382)	47,118	Unknown
SCADA upgrades	247,000	(116,000)	131,000	September 2025
Water tower	4,495,607	(2,656,499)	1,839,108	Summer 2025
6th St water main replacement	1,813,385	(1,088,324)	725,061	Spring 2025

NOTE D – OTHER NOTES, continued

3. Commitments, continued

Power Contract

In December 2015, the City entered into a contract with the Nebraska Public Power District (NPPD) for the purchase of electric power on a wholesale basis for a term of 20 years. The contract stipulates that if the City determines at any time that it wished to obtain power from another source, it must give written notice to NPPD five years prior to the time it proposes to change wholesale providers. Beginning on the date of the change, the City would be obligated to pay each month for an amount of power equal to an average of the maximum amounts of power purchased during the same month in each of the five years prior to the date of change. As of the date of this report, the City plans to continue its contract with NPPD and thus, no liability associated with this commitment has been accruing in the financial statements.

Other Commitments

The City also entered into a 60 month copier lease on February 1, 2020. The lease requires monthly payments of $351 through January 2025.

4. Interlocal Agreements

The City has the following interlocal agreements in effect as of September 30, 2024:

Parties to Agreement	Agreement Period	Descriptions
Civil Defense	1981 - ongoing	Joint City/County Organization
Police Department	1990 – ongoing	Interlocal cooperative "RAP"/Rural Apprehension Program
Nebraska Community Energy Alliance	6/17/14 thru 6/17/2074	Advancement of Natural Gas & Electric Vehicle Infrastructure and Use
Seward County	6/01/2024 thru 5/31/2025	Prosecution Services/Per Year
Seward County	2004 – ongoing	Emergency Management Organization (Joint County-City)
Seward County	1997 – ongoing	EL overhead line-Section 27 & 28, Township N Range 3E
Seward County	1995 – ongoing	Combined Communications Center (Enhanced 911)
Seward County	1999 – ongoing	Police firearms range
Seward County	2011 – ongoing	Wellhead protection/City pays admin & Legal fees

NOTE D – OTHER NOTES, continued

4. Interlocal Agreements, continued

Parties to Agreement	Agreement Period	Descriptions
Seward County Public Power	1980 – ongoing	Joint use of poles/SPPD to pay $1.50/pole
South Crest Subdivision	1982 – ongoing	Sanity Imp Dist #3-WA & SE/City to provide routine maintenance
Staplehurst, Village of	2000 – ongoing	Use of burnsite for brush & untreated wood/Staplehurst pays $1,000/yr
Statewide Communications Alliance	2002 – 2032	Jointly own, operate, regulate, manage and maintain statewide system
Upper Big Blue Natural Resources District	5/02/2017 thru 6/30/2023 (extended)	Construction costs for hiking/bicycle trail $150,000 paid by Upper Big Blue Natural Resource
Seward County Rural Fire Protection District	07/01/2024 thru 06/30/2025	Fire Protection/Equipment
Seward County Chamber & Development Partnership	10/1/2023 thru 9/30/2024	Economic Development
H-GAC	10/1/2022 thru 9/30/2023; auto renews	Cooperative purchasing program #17-5994
Seward County	4/26/2022 – project completion	E Seward St construction
Seward County School District	2/15/22 – 2/15/32	Wellness Center construction and board
Butler, Saline, Seward, York Counties and Cities of Seward and York	01/14/2020 – 01/14/2025	Public safety software, hardware, and services with Zuercher
Statewide Communications Alliance	2002 – 2032	Jointly own, operate, regulate, manage and maintain statewide system
Upper Big Blue Natural Resources District	02/20/2018 – 06/30/2027	Pay up to 50% of Levee accreditation
Seward County, Saline County, Cities of: Seward, Milford, Crete, Friend, Villages of: Goehner, Staplehurst, Bee, Tamora, Pleasant Dale, Beaver Crossing, Dorchester	09/14/1993-09/14/2043	Seward/Saline County Solid Waste Management Agency

NOTE D – OTHER NOTES, continued

5. Tax Abatements/Conduit Debt

The Community Development Agency (CDA), who is authorized by Nebraska statutes to enter into property tax abatement agreements for the purpose of developing properties in blighted areas, has entered into tax increment financing (TIF) agreements with various redevelopers. The TIF program has the stated purpose of increasing valuation, business activity and employment in the community.

Under the TIF program, redevelopers can apply for TIF financing whereby the property tax they pay on the increased valuation of property under a TIF agreement is returned to the redeveloper (in the form of payments on conduit debt) by the CDA to finance the project for a period of up to 15 years.

Information relevant to the abatements granted by the CDA for the year ended September 30, 2024 is as follows:

TIF Project:	Years Remaining on TIF Agreements	2024 TIF Valuation	TIF Proceeds Received during the year 9-30-2024
Progressive Sheet Metal	4	$ 183,594	$ 2,846
Sports Express	4	179,903	2,788
Cobblestone Inn	4	1,883,763	29,198
B & M Seed	4	449,098	6,961
Jones Bank	6	1,035,594	16,051
Jones Insurance	0	-	9,293
Grimes Construction	6	353,931	5,757
CNG, Inc.	7	7,104,291	128,454
Lindner	6	332,463	5,529
Two Creeks Holding	7	370,616	5,744
Bottle Rocket Brewing	7	290,847	4,731
Bradford	8	260,364	4,731
Peek Properties	6	95,061	1,473
Plex Homes (Phase 1)	11	1,566,727	18,062
Project Superior	11	24,305,229	341,213
Green Futures	11	737,832	11,436

NOTE D – OTHER NOTES, continued

5. Tax Abatements/Conduit Debt, continued

TIF Project:	Years Remaining on TIF Agreements	2024 TIF Valuation	TIF Proceeds Received during the year 9-30-2024
Kach 647	12	99,071	2,401
Kach 640/644	12	277,838	1,475
Else & Burger	12	314,315	4,872
Seward Dairy Queen	12	626,025	9,703
Alps Dog Retreat	13	294,814	1,091
GH Coffee	12	261,369	4,051
Levanders Body Shop	12	508,655	7,884
Two Creeks Storage	10	134,362	2,083
Old Town Square	13	194,900	1,618
Ironhide (IHC)	13	772,713	18,440
Plex Homes (Phase 2)	13	1,386,104	15,013
Plex Homes (Phase 3 & 4)	14	2,984,435	16,240
Fast Mart	9	744,665	11,542
14TIN	15	42,755	-
Ironhide (IHC Phase 2)	15	1,737,091	-
SCCDP Daycare	15	197,226	432
			$ 691,112

6. Related Party Transactions

A former council member is the redeveloper on three TIF projects in Note D5 (Bradford, Kach 647, and Kach 640/644).

7. Subsequent Events

Management has evaluated subsequent events through March 11, 2025, the date on which the financial statements were available for issue.

On March 4, 2025, Council approved a contract with Churchich recreation for the purchase of a shade structure for the City of Seward's Municipal Bandshell in the amount $146,574.

REQUIRED SUPPLEMENTARY INFORMATION

CITY OF SEWARD, NEBRASKA

BUDGETARY COMPARISON SCHEDULE - GENERAL FUND

Year ended September 30, 2024

	Budget (Original and Final)	Actual	Variances - Actual Over (Under) Final Budget
RESOURCES (INFLOWS)			
Taxes:			
Property	$ 1,993,416	$ 1,995,732	$ 2,316
Motor vehicle	165,000	191,893	26,893
Sales tax	983,848	1,291,055	307,207
Franchise	1,248,975	1,403,486	154,511
Occupation	268,000	261,772	(6,228)
Intergovernmental	220,761	90,792	(129,969)
Charges for services	1,099,925	1,522,842	422,917
Interest income	20,875	123,474	102,599
Grants	1,924,100	28,865	(1,895,235)
Contributions	417,491	732,550	315,059
Bond/loan proceeds	-	59,810	59,810
Insurance proceeds	75,000	122,238	47,238
Other	300	7,512	7,212
Total resources	8,417,691	7,832,021	(585,670)
CHARGES TO APPROPRIATIONS (OUTFLOWS)			
General government	405,457	314,475	(90,982)
Public safety	2,170,196	1,816,459	(353,737)
Public works	555,078	461,517	(93,561)
Environment and leisure	2,933,492	3,083,547	150,055
Capital outlay	3,047,768	1,472,686	(1,575,082)
Principal payments on debt	19,800	39,568	19,768
Interest expense	2,950	3,972	1,022
Total charges to appropriations	9,134,741	7,192,224	(1,942,517)
Resources over (under) charges to appropriations	(717,050)	639,797	1,356,847
OTHER FINANCING USES			
Transfers out	(1,685,000)	(1,685,000)	-
RESOURCES UNDER CHARGES TO APPROPRIATIONS AND OTHER FINANCING USES	$ (2,402,050)	$ (1,045,203)	$ 1,356,847

CITY OF SEWARD, NEBRASKA

BUDGETARY COMPARISON SCHEDULE - STREET FUND

Year ended September 30, 2024

	Budget (Original and Final)	Actual	Variances - Actual Over (Under) Final Budget
RESOURCES (INFLOWS)			
Taxes:			
Sales tax	$ 275,000	$ 426,119	$ 151,119
Intergovernmental	1,068,858	1,047,110	(21,748)
Charges for services	7,750	59,238	51,488
Interest income	-	31	31
Grants	195,085	441,453	246,368
Total resources	1,546,693	1,973,951	427,258
CHARGES TO APPROPRIATIONS (OUTFLOWS)			
Public works	905,710	880,907	(24,803)
Capital projects	4,426,095	4,074,506	(351,589)
Principal payments on debt	-	23,212	23,212
Interest on long-term debt	-	1,033	1,033
Total charges to appropriations	5,331,805	4,979,658	(352,147)
Resources under charges to appropriations	(3,785,112)	(3,005,707)	779,405
OTHER FINANCING SOURCES (USES)			
Transfers in	1,685,000	1,685,000	-
Transfers out	(186,841)	(186,841)	-
Net transfers	1,498,159	1,498,159	-
RESOURCES AND OTHER FINANCING SOURCES (USES) UNDER CHARGES TO APPROPRIATIONS	$ (2,286,953)	$ (1,507,548)	$ 779,405

CITY OF SEWARD, NEBRASKA

BUDGETARY COMPARISON SCHEDULE - DEBT SERVICE FUND

Year ended September 30, 2024

	Budget (Original and Final)	Actual	Variances - Actual Over (Under) Final Budget
RESOURCES (INFLOWS)			
Sales tax	$ 644,152	$ 644,152	$ -
Interest income	4,000	8,546	4,546
Total resources	648,152	652,698	4,546
CHARGES TO APPROPRIATIONS (OUTFLOWS)			
Principal payments	759,000	759,000	-
Interest and fees	71,993	71,392	(601)
Total charges to appropriations	830,993	830,392	(601)
Resources under charges to appropriations	(182,841)	(177,694)	5,147
OTHER FINANCING SOURCES			
Transfer in	186,841	186,841	-
RESOURCES AND OTHER FINANCING SOURCES OVER CHARGES TO APPROPRIATIONS	$ 4,000	$ 9,147	$ 5,147

CITY OF SEWARD, NEBRASKA

BUDGETARY COMPARISON SCHEDULE - CAPITAL PROJECTS FUND

Year ended September 30, 2024

	Budget (Original and Final)	Actual	Variances - Actual Over (Under) Final Budget
RESOURCES (INFLOWS)			
Sales tax	$ 792,000	$ 695,069	$ (96,931)
Grants	-	281,000	281,000
Bond/loan proceeds	14,000,000	671,495	(13,328,505)
Interest income	-	3,993	3,993
Total resources	14,792,000	1,651,557	(13,140,443)
CHARGES TO APPROPRIATIONS (OUTFLOWS)			
Capital outlay	15,242,000	1,961,529	(13,280,471)
Principal payments	-	50,001	50,001
Interest and fees	-	525	525
Total charges to appropriations	15,242,000	2,012,055	(13,229,945)
RESOURCES UNDER CHARGES TO APPROPRIATIONS	$ (450,000)	$ (360,498)	$ 89,502

CITY OF SEWARD, NEBRASKA

BUDGETARY COMPARISON SCHEDULES - NOTE TO REQUIRED SUPPLEMENTARY INFORMATION

Year ended September 30, 2024

Note A - Explanation of Differences between Budgetary Inflows and Outflows and GAAP Revenue and Expenditures

	General Fund	Street Fund	Debt Service Fund	Capital Projects Fund
Sources/inflows of resources:				
Actual amounts of resources (budgetary basis) from the budgetary comparison schedules	$ 7,832,021	$ 1,973,951	$ 652,698	$ 1,651,557
Differences - budget to GAAP:				
Cash to accrual adjustments	(61,734)	885	-	(21,274)
Total revenues as reported on the statement of revenues, expenditures, and changes in fund balances - governmental funds	$ 7,770,287	$ 1,974,836	$ 652,698	$ 1,630,283
Uses/outflows of resources:				
Actual amounts (budgetary basis) total charges to appropriations from the budgetary comparison schedules	$ 7,192,224	$ 4,979,658	$ 830,392	$ 2,012,055
Differences - budget to GAAP:				
Cash to accrual adjustments	311,575	218,336	-	-
Total expenditures as reported on the statement of revenues, expenditures, and changes in fund balances - governmental funds	$ 7,503,799	$ 5,197,994	$ 830,392	$ 2,012,055

SUPPLEMENTARY INFORMATION

CITY OF SEWARD, NEBRASKA

COMBINING BALANCE SHEET -
NONMAJOR GOVERNMENTAL FUNDS

September 30, 2024

	Special Revenue Funds		
	CDBG	LB840	TIF
ASSETS			
Interest receivable	$ -	$ -	$ -
Restricted assets:			
Cash and cash equivalents	17,511	430,483	206,641
Certificates of deposit	-	-	-
Total assets	$ 17,511	$ 430,483	$ 206,641
LIABILITIES AND FUND BALANCES			
Liabilities:			
Accounts payable	$ -	$ -	$ 2,343
Fund balances:			
Nonspendable:			
Cemetery perpetual care	-	-	-
Restricted for:			
Federal programs	17,511	-	-
Economic development	-	430,483	204,298
Total fund balances	17,511	430,483	204,298
Total liabilities and fund balances	$ 17,511	$ 430,483	$ 206,641

Permanent Fund		Total Nonmajor
Perpetual Care		Governmental Funds
$ 31		$ 31
227,002		881,637
15,000		15,000
$ 242,033		$ 896,668
$ -		$ 2,343
242,033		242,033
-		17,511
-		634,781
242,033		894,325
$ 242,033		$ 896,668

CITY OF SEWARD, NEBRASKA

COMBINING STATEMENT OF REVENUES, EXPENDITURES, AND CHANGES IN FUND BALANCES - NONMAJOR GOVERNMENTAL FUNDS

For the year ended September 30, 2024

	Special Revenue Funds		
	CDBG	LB840	TIF
REVENUES			
Sales tax	$ -	$ 150,000	$ -
TIF proceeds	-	-	691,112
Grant revenue	110,067	-	-
Charges for services	-	-	-
Contributions	-	-	-
Loan collections	-	161,822	-
Interest income	-	10,677	5,805
Miscellaneous income	-	-	57,743
Total revenues	110,067	322,499	754,660
EXPENDITURES			
General government	110,067	-	-
Economic development	-	293,570	773,294
Public works	-	-	-
Capital outlay	-	-	-
Total expenditures	110,067	293,570	773,294
Net change in fund balances	-	28,929	(18,634)
Fund balances - September 30, 2023	17,511	401,554	222,932
Fund balances - September 30, 2024	$ 17,511	$ 430,483	$ 204,298

Permanent Fund	Total Nonmajor
Perpetual Care	Governmental Funds
$ -	$ 150,000
-	691,112
-	110,067
294	294
9,150	9,150
-	161,822
4,776	21,258
-	57,743
14,220	1,201,446
-	110,067
-	1,066,864
2,781	2,781
35,177	35,177
37,958	1,214,889
(23,738)	(13,443)
265,771	907,768
$ 242,033	$ 894,325

CITY OF SEWARD, NEBRASKA

COMBINING STATEMENT OF NET POSITION - COMPONENT UNITS

September 30, 2024

	Seward Airport Authority	Seward Library Foundation	Total Component Units
ASSETS			
Current assets:			
Cash and cash equivalents	$ 313,414	$ 81,894	$ 395,308
Certificates of deposit	30,000	63,523	93,523
County treasurer cash	4,398	-	4,398
Investments	-	781,375	781,375
Receivables:			
Property tax	4,398	-	4,398
Accounts receivable	3,460	-	3,460
Grants receivable	57,104	-	57,104
Interest	5	-	5
Prepaid insurance	27,453	-	27,453
Total current assets	440,232	926,792	1,367,024
Noncurrent assets:			
Permanently restricted investments	-	85,616	85,616
Capital assets:			
Land	105,156	-	105,156
Construction in progress	388,780	-	388,780
Other capital assets, net of depreciation	3,452,567	-	3,452,567
Net capital assets	3,946,503	-	3,946,503
Total noncurrent assets	3,946,503	85,616	4,032,119
Total assets	4,386,735	1,012,408	5,399,143
LIABILITIES			
Current liabilities:			
Accrued interest payable	5,435	-	5,435
Unearned revenue	25,376	-	25,376
Current portion of long-term debt	192,828	-	192,828
Total current liabilities	223,639	-	223,639
NET POSITION			
Net investment in capital assets	3,753,675	-	3,753,675
Permanently restricted-Guthal	-	85,616	85,616
Unrestricted	409,421	926,792	1,336,213
Total net position	$ 4,163,096	$ 1,012,408	$ 5,175,504

CITY OF SEWARD, NEBRASKA

COMBINING STATEMENT OF ACTIVITIES - COMPONENT UNITS

For the year ended September 30, 2024

Functions/Programs	Expenses	Program Revenues: Charges for Services	Program Revenues: Operating Grants and Contributions
Seward Airport Authority:			
Airport	$ 442,321	$ 110,422	$ -
Seward Library Foundation:			
Library support	32,302	-	17,906
Total component units	$ 474,623	$ 110,422	$ 17,906

	Net (Expenses) Revenues and Changes in Net Position		
Capital Grants and Contributions	Airport Authority	Seward Library Foundation	Total Component Units
$ 365,573	$ 33,674	$ -	$ 33,674
-	-	(14,396)	(14,396)
$ 365,573	33,674	(14,396)	19,278
General revenues:			
Taxes:			
Property	233,024	-	233,024
Interest income	6,070	4,092	10,162
Dividends	-	344	344
Gain on investments	-	216,871	216,871
Other income	15,540	-	15,540
Total general revenues	254,634	221,307	475,941
Change in net position	288,308	206,911	495,219
Net position - beginning of year	3,874,788	805,497	4,680,285
Net position - end of year	$ 4,163,096	$ 1,012,408	$ 5,175,504

AMGL
CPAs & Advisors

SHAREHOLDERS:
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Travis L. Arnold

INDEPENDENT AUDITOR'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS*

To the Honorable Mayor and Members of the City Council
City of Seward, Nebraska

We have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States, the financial statements of the governmental activities, the business-type activities, the aggregate discretely presented component units, each major fund, and the aggregate remaining fund information of the City of Seward, Nebraska, as of and for the year ended September 30, 2024, and the related notes to the financial statements, which collectively comprise the City's financial statements, and have issued our report thereon dated March 11, 2025.

Report on Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the City of Seward's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the City's internal control. Accordingly, we do not express an opinion on the effectiveness of the City's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

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A PROFESSIONAL CORPORATION

Our consideration of internal control over financial reporting was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies, and therefore material weaknesses or significant deficiencies may exist that were not identified. Given these limitations, during our audit, we did not identify any deficiencies in internal control that we consider to be material weaknesses. We identified a certain deficiency in internal control, described below, that we consider to be a significant deficiency.

Segregation of Duties

Due to limited number of personnel, there is not adequate segregation of duties to ensure internal control over cash receipts, disbursements, and recording of transactions.

Report on Compliance and Other Matters

As part of obtaining reasonable assurance about whether the City of Seward's financial statements are free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

City of Seward's Response to Findings

Government Auditing Standards requires the auditor to perform limited procedures on the City of Seward's response to the findings identified in our audit and described above. The City of Seward's response to the findings identified in our audit is that due to the small size of the City, it is impractical to further segregate duties. The City's response was not subjected to the auditing procedures applied in the audit of the financial statements and, accordingly, we express no opinion on the response.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

AMGL, P.C.

Grand Island, Nebraska
March 11, 2025

AMGL
CPAs & Advisors

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To the Honorable Mayor and City Council
City of Seward
Seward, Nebraska

In planning and performing our audit of the financial statements of the governmental activities, the business-type activities, the discretely presented component units, each major fund, and the aggregate remaining fund information of the City of Seward as of and for the year ended September 30, 2024, in accordance with auditing standards generally accepted in the United States of America, we considered the City's internal control over financial reporting (internal control) as a basis for designing our auditing procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the City's internal control. Accordingly, we do not express an opinion on the effectiveness of the City's internal control.

Our consideration of internal control was for the limited purpose described in the preceding paragraph and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies and, therefore, material weaknesses or significant deficiencies may exist that were not identified. However, as discussed below, we identified certain deficiencies in internal control that we consider to be significant deficiencies.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. We did not identify any deficiencies in internal control that we consider to be material weaknesses.

A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance. We consider the following deficiency in the City of Seward's internal control to be a significant deficiency:

> The size of the City's accounting and administrative staff precludes certain internal controls that would be preferred if the office staff were large enough to provide optimum segregation of duties. This lack of segregation of duties creates an opportunity for employees to commit fraud that may go undetected. This situation suggests that the City Council remain involved in the financial affairs of the City to provide oversight and independent review functions.

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This communication is intended solely for the information and use of management, the City Council, and others within the City, and is not intended to be and should not be used by anyone other than these specified parties.

AMGL, P.C.

Grand Island, Nebraska
March 11, 2025

AMGL
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To the Honorable Mayor and City Council
City of Seward
Seward, Nebraska

We have audited the financial statements of the governmental activities, the business-type activities, the aggregate discretely presented component units, each major fund, and the aggregate remaining fund information of the City of Seward for the year ended September 30, 2024, and have issued our report thereon dated March 11, 2025. Professional standards require that we provide you with information about our responsibilities under generally accepted auditing standards, as well as certain information related to the planned scope and timing of our audit. We have communicated such information in our letter to you dated September 19, 2024. Professional standards also require that we communicate to you the following information related to our audit.

Significant Audit Findings

Qualitative Aspects of Accounting Practices

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by the City of Seward are described in Note A to the financial statements. No new accounting policies were adopted and the application of existing policies was not changed during the year ended September 30, 2024. We noted no transactions entered into by the City during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The most sensitive estimates affecting the financial statements were:

> Management's estimate of the collectability of accounts receivable is based on historical utility revenues, historical loss levels, and an analysis of the collectability of individual accounts. We evaluated the key factors and assumptions used to develop the collectability of accounts receivable in determining that it is reasonable in relation to the financial statements taken as a whole.

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Management's estimate of the depreciation of capital assets is based on the estimated useful life of the capital asset. We evaluated the key factors and assumptions used to develop the depreciation of capital assets in determining that it is reasonable in relation to the financial statements taken as a whole.

The financial statement disclosures are neutral, consistent, and clear.

Difficulties Encountered in Performing the Audit

We encountered no significant difficulties in dealing with management in performing and completing our audit.

Corrected and Uncorrected Misstatements

Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are trivial, and communicate them to the appropriate level of management. Management has corrected all such misstatements. Nineteen audit adjustments decreased the fund balances of the City's governmental funds by $1,404,148. Sixteen audit adjustments increased the net position of the City's business-type funds by $4,889,953. The following material misstatements detected as a result of audit procedures were corrected by management:

1. Sales tax receivable and revenue were both decreased $85,097 on the governmental funds.

2. General Fund accounts payable was increased $288,267, Street Fund accounts payable was increased $213,189, Electric fund accounts payable was decreased $39,124, Water accounts payable was decreased $13,888, and Sewer accounts payable was decreased $3,312 with corresponding adjustments to various expenses.

3. Capital assets were increased and expenses decreased $5,795,383 on the business-type funds.

4. Depreciation expense of $1,998,597 was recorded on the business-type funds.

5. Electric land and gain on sale of assets were both decreased $81,431 to remove the basis of sold land from capital assets.

6. Long-term debt was decreased $1,015,000 with corresponding decreases to expenses on the business-type funds.

Disagreements with Management

For purposes of this letter, professional standards define a disagreement with management as a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditor's report. We are pleased to report that no such disagreements arose during the course of our audit.

Management Representations

We have requested certain representations from management that are included in the management representation letter dated March 11, 2025.

Management Consultations with Other Independent Accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the City's financial statements or a determination of the type of auditor's opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

Other Audit Findings or Issues

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the City's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

In connection with our audit of the financial statements of the City of Seward as of September 30, 2024, we noted certain matters that we believe you should consider. Our observations were formed as a by-product of our audit procedures, which did not include a comprehensive review for the purpose of submitting detailed recommendations.

1. The size of the City's accounting and administrative staff precludes certain internal controls that would be preferred if the office staff were large enough to provide optimum segregation of duties. This situation suggests that the City Council remain involved in the financial affairs of the City to provide oversight and independent review functions.

2. Currently, the City's chart of accounts is not broken down by funds. Accounts are mixed across funds in one trial balance. This makes it very difficult to budget, audit, and manage revenue and expenses by fund, which governmental entities must do. We recommend changing the accounting system to operate on a fund basis, with each fund being a self-balancing subset of the entire City's chart of accounts.

3. The account numbering system does not discern between assets, liabilities, equity, revenue and expenses. We recommend incorporating an account numbering system that makes it possible to identify what type of account it is by number. (For example, assets could have a 1 as the leading digit, liabilities could have 2, equity could have 3, revenue could have 4, and expenses could have 5.)

Other Matters

We applied certain limited procedures to the Management Discussion and Analysis and the budgetary comparison schedules, which are required supplementary information (RSI) that supplements the basic financial statements. Our procedures consisted of inquiries of management regarding the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We did not audit the RSI and do not express an opinion or provide any assurance on the RSI.

We were engaged to report on the nonmajor governmental combining statements and the component unit combining statements, which accompany the financial statements but are not RSI. With respect to the supplementary information, we made certain inquiries of management and evaluated the form, content, and methods of preparing the information to determine that the information complies with accounting principles generally accepted in the United States of America, the method of preparing it has not changed from the prior period, and the information is appropriate and complete in relation to our audit of the financial statements. We compared and reconciled the supplementary information to the underlying accounting records used to prepare the financial statements or to the financial statements themselves.

Restriction on Use

This information is intended solely for the use of the City Council and management of the City of Seward and is not intended to be and should not be used by anyone other than these specified parties.

AMGL, P.C.

Grand Island, Nebraska
March 11, 2025

2. Items Related to the Worthman Blvd Extension Project - City Engineer Oneby
   A. Consideration of an Agreement in the Amount of $252,050 for Construction Engineering Services Provided by The Schemmer Associates During the Construction of the Project

AGREEMENT BETWEEN
THE CITY OF SEWARD
AND
THE SCHEMMER ASSOCIATES
FOR PROFESSIONAL SERVICES

Worthman Boulevard Extension
CONSTRUCTION ENGINEERING

TABLE OF CONTENTS

Page

AGREEMENT
BETWEEN OWNER AND ENGINEER
FOR
PROFESSIONAL SERVICES

THIS IS AN AGREEMENT effective as of _____ , _____ ("Effective Date") between

The City of Seward ("Owner") and

The Schemmer Associates Inc. ("Engineer").

Owner intends to Contract with Engineer to receive construction engineering services for observation, material sampling, material testing, and management of the paving improvements and associated plan work detailed in the plans entitled "Worthman Boulevard Extension" ("Project").

Owner and Engineer agree as follows:

ARTICLE 1 – SERVICES OF ENGINEER

1.01 *Scope*

A. Engineer shall provide, or cause to be provided, the services set forth herein and in Exhibit A.

ARTICLE 2 – OWNER'S RESPONSIBILITIES

2.01 *General*

A. Owner shall have the responsibilities set forth herein and in Exhibit A.

B. Owner shall pay Engineer as set forth in Exhibit B.

C. Owner shall be responsible for, and Engineer may rely upon, the accuracy and completeness of all requirements, programs, instructions, reports, data, and other information furnished by Owner to Engineer pursuant to this Agreement. Engineer may use such requirements, programs, instructions, reports, data, and information in performing or furnishing services under this Agreement.

ARTICLE 3 – SCHEDULE FOR RENDERING SERVICES

3.01 *Commencement*

A. Engineer shall begin rendering services as of the Effective Date of the Agreement.

3.02 *Time for Completion*

A. Engineer shall complete its obligations within a reasonable time. Specific periods of time for rendering services are set forth or specific dates by which services are to be completed are provided in Exhibit A, and are hereby agreed to be reasonable.

B. If, through no fault of Engineer, such periods of time or dates are changed, or the orderly and continuous progress of Engineer's services is impaired, or Engineer's services are delayed or suspended, then the time for completion of Engineer's services, and the rates and amounts of Engineer's compensation, shall be adjusted equitably.

C. If Owner authorizes changes in the scope, extent, or character of the Project, then the time for completion of Engineer's services, and the rates and amounts of Engineer's compensation, shall be adjusted equitably.

D. Owner shall make decisions and carry out its other responsibilities in a timely manner so as not to delay the Engineer's performance of its services.

E. If Engineer fails, through its own fault, to complete the performance required in this Agreement within the time set forth, as duly adjusted, then Owner shall be entitled to the recovery of direct damages resulting from such failure.

ARTICLE 4 – INVOICES AND PAYMENTS

4.01 *Invoices*

A. *Preparation and Submittal of Invoices.* Engineer shall prepare invoices in accordance with its standard invoicing practices and the terms of Exhibit C. Engineer shall submit its invoices to Owner on a monthly basis. Invoices are due and payable within 30 days of receipt.

4.02 *Payments*

A. *Application to Interest and Principal.* Payment will be credited first to any interest owed to Engineer and then to principal.

B. *Failure to Pay.* If Owner fails to make any payment due Engineer for services and expenses within 30 days after receipt of Engineer's invoice, then:

1. amounts due Engineer will be increased at the rate of 1.0% per month (or the maximum rate of interest permitted by law, if less) from said thirtieth day; and

2. Engineer may, after giving seven days written notice to Owner, suspend services under this Agreement until Owner has paid in full all amounts due for services,

expenses, and other related charges. Owner waives any and all claims against Engineer for any such suspension.

C. *Disputed Invoices.* If Owner contests an invoice, Owner may withhold only that portion so contested, and must pay the undisputed portion.

D. *Legislative Actions.* If after the Effective Date of the Agreement any governmental entity takes a legislative action that imposes taxes, fees, or charges on Engineer's services or compensation under this Agreement, then the Engineer may invoice such new taxes, fees, or charges as a Reimbursable Expense to which a factor of 1.0 shall be applied. Owner shall pay such invoiced new taxes, fees, and charges; such payment shall be in addition to the compensation to which Engineer is entitled under the terms of Exhibit C.

ARTICLE 5 – OPINIONS OF COST

5.01 *Opinions of Probable Construction Cost*

A. Engineer's opinions of probable Construction Cost are to be made on the basis of Engineer's experience and qualifications and represent Engineer's best judgment as an experienced and qualified professional generally familiar with the construction industry. However, since Engineer has no control over the cost of labor, materials, equipment, or services furnished by others, or over contractors' methods of determining prices, or over competitive bidding or market conditions, Engineer cannot and does not guarantee that proposals, bids, or actual Construction Cost will not vary from opinions of probable Construction Cost prepared by Engineer.

5.02 *Opinions of Total Project Costs*

A. The services, if any, of Engineer with respect to Total Project Costs shall be limited to assisting the Owner in collating the various cost categories which comprise Total Project Costs. Engineer assumes no responsibility for the accuracy of any opinions of Total Project Costs.

ARTICLE 6 – GENERAL CONSIDERATIONS

6.01 *Standards of Performance*

A. The standard of care for all professional engineering and related services performed or furnished by Engineer under this Agreement will be the care and skill ordinarily used by members of the subject profession practicing under similar circumstances at the same time and in the same locality. Engineer makes no warranties, express or implied, under this Agreement or otherwise, in connection with Engineer's services.

B. Owner shall not be responsible for discovering deficiencies in the technical accuracy of Engineer's services. Engineer shall correct any such deficiencies in technical accuracy without additional compensation except to the extent such corrective action is directly attributable to deficiencies in Owner-furnished information.

C. Engineer may employ such Consultants as Engineer deems necessary to assist in the performance or furnishing of the services, subject to reasonable, timely, and substantive objections by Owner.

D. Subject to the standard of care set forth in Paragraph 6.01.A, Engineer and its Consultants may use or rely upon design elements and information ordinarily or customarily furnished by others, including, but not limited to, specialty contractors, manufacturers, suppliers, and the publishers of technical standards.

E. Engineer and Owner shall comply with applicable Laws and Regulations and Owner-mandated standards that Owner has provided to Engineer in writing. This Agreement is based on these requirements as of its Effective Date. Changes to these requirements after the Effective Date of this Agreement may be the basis for modifications to Owner's responsibilities or to Engineer's scope of services, times of performance, and compensation.

F. Engineer shall not be required to sign any documents, no matter by whom requested, that would result in the Engineer having to certify, guarantee, or warrant the existence of conditions whose existence the Engineer cannot ascertain. Owner agrees not to make resolution of any dispute with the Engineer or payment of any amount due to the Engineer in any way contingent upon the Engineer signing any such documents.

G. The General Conditions for any construction contract documents prepared hereunder are to be the "Standard General Conditions of the Construction Contract" as prepared by the Engineers Joint Contract Documents Committee (No. C-700, 2002 Edition or newer) unless both parties mutually agree to use other General Conditions by specific reference.

H. Engineer shall not at any time supervise, direct, or have control over Contractor's work, nor shall Engineer have authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected or used by Contractor, for security or safety at the Site, for safety precautions and programs incident to the Contractor's work in progress, nor for any failure of Contractor to comply with Laws and Regulations applicable to Contractor's furnishing and performing the Work.

I. Engineer neither guarantees the performance of any contractor nor assumes responsibility for any contractor's failure to furnish and perform the Work in accordance with the Contract Documents.

J. Engineer shall not be responsible for the acts or omissions of any contractor, subcontractor, or supplier, or of any of their agents or employees or of any other persons (except Engineer's own employees and its Consultants) at the Site or otherwise furnishing or performing any Work; or for any decision made on interpretations or clarifications of the Contract Documents given by Owner without consultation and advice of Engineer.

6.02 *Use of Documents*

A. All Documents are instruments of service in respect to this Project, and Engineer shall retain an ownership and property interest therein (including the copyright and the right of reuse at the discretion of the Engineer) whether or not the Project is completed. Owner shall not rely in any way on any Document unless it is in printed form, signed or sealed by the Engineer or one of its Consultants.

B. A party may rely that data or information set forth on paper (also known as hard copies) that the party receives from the other party by mail, hand delivery, or facsimile, are the items that the other party intended to send. Files in electronic media format of text, data, graphics, or other types that are furnished by one party to the other are furnished only for convenience, not reliance by the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

C. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any transmittal errors detected within the 60-day acceptance period will be corrected by the party delivering the electronic files.

D. When transferring documents in electronic media format, the transferring party makes no representations as to long-term compatibility, usability, or readability of such documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the documents' creator.

E. Owner may make and retain copies of Documents for information and reference in connection with use on the Project by Owner. Engineer grants Owner a license to use the Documents on the Project, extensions of the Project, and other projects of Owner, subject to the following limitations: (1) Owner acknowledges that such Documents are not intended or represented to be suitable for use on the Project unless completed by Engineer, or for use or reuse by Owner or others on extensions of the Project or on any other project without written verification or adaptation by Engineer; (2) any such use or reuse, or any modification of the Documents, without written verification, completion, or adaptation by Engineer, as appropriate for the specific purpose intended, will be at Owner's sole risk and without liability or legal exposure to Engineer or to Engineer's Consultants; (3) Owner shall indemnify and hold harmless Engineer and Engineer's Consultants from all claims, damages, losses, and expenses, including attorneys' fees, arising out of or resulting from any use, reuse, or modification without written verification, completion, or adaptation by Engineer; (4) such limited license to Owner shall not create any rights in third parties.

F. If Engineer at Owner's request verifies or adapts the Documents for extensions of the Project or for any other project, then Owner shall compensate Engineer at rates or in an amount to be agreed upon by Owner and Engineer.

6.03 *Insurance*

A. Engineer shall procure and maintain insurance as set forth in Exhibit D, "Insurance." Engineer shall cause Owner to be listed as an additional insured on any applicable general liability insurance policy carried by Engineer.

B. Owner shall procure and maintain insurance as set forth in Exhibit D, "Insurance." Owner shall cause Engineer and Engineer's Consultants to be listed as additional insureds on any general liability or property insurance policies carried by Owner which are applicable to the Project.

C. Owner shall require Contractor to purchase and maintain general liability and other insurance in accordance with the requirements of Paragraph 5.04 of the "Standard General Conditions of the Construction Contract," (No. C-700, 2002 Edition or newer) as prepared by the Engineers Joint Contract Documents Committee and to cause Engineer and Engineer's Consultants to be listed as additional insureds with respect to such liability and other insurance purchased and maintained by Contractor for the Project.

D. Owner and Engineer shall each deliver to the other certificates of insurance evidencing the coverages indicated in Exhibit D. Such certificates shall be furnished prior to commencement of Engineer's services and at renewals thereafter during the life of the Agreement.

E. All policies of property insurance relating to the Project shall contain provisions to the effect that Engineer's and Engineer's Consultants' interests are covered and that in the event of payment of any loss or damage the insurers will have no rights of recovery against Engineer or its Consultants, or any insureds or additional insureds thereunder.

F. At any time, Owner may request that Engineer or its Consultants, at Owner's sole expense, provide additional insurance coverage, increased limits, or revised deductibles that are more protective than those specified in Exhibit D. If so requested by Owner, and if commercially available, Engineer shall obtain and shall require its Consultants to obtain such additional insurance coverage, different limits, or revised deductibles for such periods of time as requested by Owner, and Exhibit D will be supplemented to incorporate these requirements.

6.04 *Suspension and Termination*

A. Suspension.

By Owner: Owner may suspend the Project upon seven days written notice to Engineer.

By Engineer: If Engineer's services are substantially delayed through no fault of Engineer, Engineer may, after giving seven days written notice to Owner, suspend services under this Agreement.

B. Termination. The obligation to provide further services under this Agreement may be terminated:

1. For cause,

a. By either party upon 30 days written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party.

b. By Engineer:

1) upon seven days written notice if Owner demands that Engineer furnish or perform services contrary to Engineer's responsibilities as a licensed professional; or

2) upon seven days written notice if the Engineer's services for the Project are delayed or suspended for more than 90 days for reasons beyond Engineer's control.

3) Engineer shall have no liability to Owner on account of such termination.

c. Notwithstanding the foregoing, this Agreement will not terminate under Paragraph 6.05.B.1.a if the party receiving such notice begins, within seven days of receipt of such notice, to correct its substantial failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt thereof; provided, however, that if and to the extent such substantial failure cannot be reasonably cured within such 30 day period, and if such party has diligently attempted to cure the same and thereafter continues diligently to cure the same, then the cure period provided for herein shall extend up to, but in no case more than, 60 days after the date of receipt of the notice.

2. For convenience,

a. By Owner effective upon Engineer's receipt of notice from Owner.

C. *Effective Date of Termination*. The terminating party under Paragraph 6.05.B may set the effective date of termination at a time up to 30 days later than otherwise provided to allow Engineer to demobilize personnel and equipment from the Site, to complete tasks whose value would otherwise be lost, to prepare notes as to the status of completed and uncompleted tasks, and to assemble Project materials in orderly files.

D. Payments Upon Termination.

1. In the event of any termination under Paragraph 6.05, Engineer will be entitled to invoice Owner and to receive full payment for all services performed or furnished and all Reimbursable Expenses incurred through the effective date of termination. Upon making such payment, Owner shall have the limited right to the use of Documents, at Owner's sole risk, subject to the provisions of Paragraph 6.03.E.

2. In the event of termination by Owner for convenience or by Engineer for cause, Engineer shall be entitled, in addition to invoicing for those items identified in Paragraph 6.05.D.1, to invoice Owner and to payment of a reasonable amount for

services and expenses directly attributable to termination, both before and after the effective date of termination, such as reassignment of personnel, costs of terminating contracts with Engineer's Consultants, and other related close-out costs, using methods and rates for Additional Services as set forth in Exhibit C.

6.05 *Controlling Law*

A. This Agreement is to be governed by the law of the state in which the Project is located.

6.06 *Successors, Assigns, and Beneficiaries*

A. Owner and Engineer are hereby bound and the partners, successors, executors, administrators and legal representatives of Owner and Engineer (and to the extent permitted by Paragraph 6.07.B the assigns of Owner and Engineer) are hereby bound to the other party to this Agreement and to the partners, successors, executors, administrators and legal representatives (and said assigns) of such other party, in respect of all covenants, agreements, and obligations of this Agreement.

B. Neither Owner nor Engineer may assign, sublet, or transfer any rights under or interest (including, but without limitation, moneys that are due or may become due) in this Agreement without the written consent of the other, except to the extent that any assignment, subletting, or transfer is mandated or restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement.

C. Unless expressly provided otherwise in this Agreement:

1. Nothing in this Agreement shall be construed to create, impose, or give rise to any duty owed by Owner or Engineer to any Contractor, Contractor's subcontractor, supplier, other individual or entity, or to any surety for or employee of any of them.

2. All duties and responsibilities undertaken pursuant to this Agreement will be for the sole and exclusive benefit of Owner and Engineer and not for the benefit of any other party.

3. Owner agrees that the substance of the provisions of this Paragraph 6.07.C shall appear in the Contract Documents.

6.07 *Dispute Resolution*

A. Owner and Engineer agree to negotiate all disputes between them in good faith for a period of 30 days from the date of notice prior to invoking the procedures of Exhibit E or other provisions of this Agreement, or exercising their rights under law.

B. If the parties fail to resolve a dispute through negotiation under Paragraph 6.08.A, then either or both may invoke the procedures of Exhibit E. If Exhibit E is not included, or if no dispute resolution method is specified in Exhibit E, then the parties may exercise their rights under law.

6.08 *Environmental Condition of Site*

A. Owner has disclosed to Engineer in writing the existence of all known and suspected Asbestos, PCBs, Petroleum, Hazardous Waste, Radioactive Material, hazardous substances, and other Constituents of Concern located at or near the Site, including type, quantity, and location.

B. Owner represents to Engineer that to the best of its knowledge no Constituents of Concern, other than those disclosed in writing to Engineer, exist at the Site.

C. If Engineer encounters an undisclosed Constituent of Concern, then Engineer shall notify (1) Owner and (2) appropriate governmental officials if Engineer reasonably concludes that doing so is required by applicable Laws or Regulations.

D. It is acknowledged by both parties that Engineer's scope of services does not include any services related to Constituents of Concern. If Engineer or any other party encounters an undisclosed Constituent of Concern, or if investigative or remedial action, or other professional services, are necessary with respect to disclosed or undisclosed Constituents of Concern, then Engineer may, at its option and without liability for consequential or any other damages, suspend performance of services on the portion of the Project affected thereby until Owner: (1) retains appropriate specialist consultant(s) or contractor(s) to identify and, as appropriate, abate, remediate, or remove the Constituents of Concern; and (2) warrants that the Site is in full compliance with applicable Laws and Regulations.

E. If the presence at the Site of undisclosed Constituents of Concern adversely affects the performance of Engineer's services under this Agreement, then the Engineer shall have the option of (1) accepting an equitable adjustment in its compensation or in the time of completion, or both; or (2) terminating this Agreement for cause on 30 days notice.

F. Owner acknowledges that Engineer is performing professional services for Owner and that Engineer is not and shall not be required to become an "arranger," "operator," "generator," or "transporter" of hazardous substances, as defined in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, which are or may be encountered at or near the Site in connection with Engineer's activities under this Agreement.

6.09 *Indemnification and Mutual Waiver*

A. *Indemnification by Engineer*. To the fullest extent permitted by law, Engineer shall indemnify and hold harmless Owner, and Owner's officers, directors, partners, agents, consultants, and employees from and against any and all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to the Project, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Engineer or Engineer's officers, directors, partners, employees, or Consultants. The indemnification provision of the preceding sentence is subject to and limited by the provisions agreed to by Owner and Engineer in Exhibit F, "Allocation of Risks," if any.

B. *Indemnification by Owner*. To the fullest extent permitted by law, Owner shall indemnify and hold harmless Engineer, Engineer's officers, directors, partners, agents, employees, and Consultants from and against any and all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to the Project, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Owner or Owner's officers, directors, partners, agents, consultants, or employees, or others retained by or under contract to the Owner with respect to this Agreement or to the Project.

C. *Environmental Indemnification.* In addition to the indemnity provided under Paragraph 6.10.B of this Agreement, and to the fullest extent permitted by law, Owner shall indemnify and hold harmless Engineer and its officers, directors, partners, agents, employees, and Consultants from and against any and all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals, and all court, arbitration, or other dispute resolution costs) caused by, arising out of, relating to, or resulting from a Constituent of Concern at, on, or under the Site, provided that (i) any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, and (ii) nothing in this paragraph shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence or willful misconduct.

D. *Percentage Share of Negligence*. To the fullest extent permitted by law, a party's total liability to the other party and anyone claiming by, through, or under the other party for any cost, loss, or damages caused in part by the negligence of the party and in part by the negligence of the other party or any other negligent entity or individual, shall not exceed the percentage share that the party's negligence bears to the total negligence of Owner, Engineer, and all other negligent entities and individuals.

E. *Mutual Waiver*. To the fullest extent permitted by law, Owner and Engineer waive against each other, and the other's employees, officers, directors, agents, insurers, partners, and consultants, any and all claims for or entitlement to special, incidental, indirect, or consequential damages arising out of, resulting from, or in any way related to the Project.

6.10 *Miscellaneous Provisions*

A. *Notices.* Any notice required under this Agreement will be in writing, addressed to the appropriate party at its address on the signature page and given personally, by facsimile, by registered or certified mail postage prepaid, or by a commercial courier service. All notices shall be effective upon the date of receipt.

B. *Survival.* All express representations, waivers, indemnifications, and limitations of liability included in this Agreement will survive its completion or termination for any reason.

C. *Severability.* Any provision or part of the Agreement held to be void or unenforceable under any Laws or Regulations shall be deemed stricken, and all remaining provisions shall

continue to be valid and binding upon Owner and Engineer, who agree that the Agreement shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

D. *Waiver.* A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Agreement.

E. *Accrual of Claims.* To the fullest extent permitted by law, all causes of action arising under this Agreement shall be deemed to have accrued, and all statutory periods of limitation shall commence, no later than the date of Substantial Completion.

ARTICLE 7 – DEFINITIONS

7.01 *Defined Terms*

A. Wherever used in this Agreement (including the Exhibits hereto) terms (including the singular and plural forms) printed with initial capital letters have the meanings indicated in the text above or in the exhibits; in the following provisions; or in the "Standard General Conditions of the Construction Contract," prepared by the Engineers Joint Contract Documents Committee (No. C-700, 2002 Edition):

1. *Additional Services* – The services to be performed for or furnished to Owner by Engineer in accordance with Exhibit A, Part 2, of this Agreement.

2. *Basic Services* – The services to be performed for or furnished to Owner by Engineer in accordance with Exhibit A of this Agreement.

3. *Construction Cost* – The cost to Owner of those portions of the entire Project designed or specified by Engineer. Construction Cost does not include costs of services of Engineer or other design professionals and consultants, cost of land or rights-of-way, or compensation for damages to properties, or Owner's costs for legal, accounting, insurance counseling or auditing services, or interest and financing charges incurred in connection with the Project, or the cost of other services to be provided by others to Owner pursuant to Exhibit B of this Agreement. Construction Cost is one of the items comprising Total Project Costs.

4. *Constituent of Concern* – Any substance, product, waste, or other material of any nature whatsoever (including, but not limited to, Asbestos, Petroleum, Radioactive Material, and PCBs) which is or becomes listed, regulated, or addressed pursuant to [a] the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. ("CERCLA"); [b] the Hazardous Materials Transportation Act, 49 U.S.C. §§1801 et seq.; [c] the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. ("RCRA"); [d] the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; [e] the Clean Water Act, 33 U.S.C. §§1251 et seq.; [f] the Clean Air Act, 42 U.S.C. §§7401 et seq.; and [g] any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

5. *Consultants* – Individuals or entities having a contract with Engineer to furnish services with respect to this Project as Engineer's independent professional associates, consultants, subcontractors, or vendors.

6. *Documents* – Data, reports, Drawings, Specifications, Record Drawings, and other deliverables, whether in printed or electronic media format, provided or furnished in appropriate phases by Engineer to Owner pursuant to this Agreement.

7. *Drawings* – That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings are not Drawings as so defined.

8. *Laws and Regulations; Laws or Regulations* – Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

9. *Reimbursable Expenses* – The expenses incurred directly by Engineer in connection with the performing or furnishing of Basic and Additional Services for the Project.

10. *Resident Project Representative* – The authorized representative of Engineer, if any, assigned to assist Engineer at the Site during the Construction Phase. The Resident Project Representative will be Engineer's agent or employee and under Engineer's supervision. As used herein, the term Resident Project Representative includes any assistants of Resident Project Representative agreed to by Owner. The duties and responsibilities of the Resident Project Representative, if any.

11. *Specifications* – That part of the Contract Documents consisting of written technical descriptions of materials, equipment, systems, standards, and workmanship as applied to the Work and certain administrative details applicable thereto.

12. *Total Project Costs* – The sum of the Construction Cost, allowances for contingencies, and the total costs of services of Engineer or other design professionals and consultants, together with such other Project-related costs that Owner furnishes for inclusion, including but not limited to cost of land, rights-of-way, compensation for damages to properties, Owner's costs for legal, accounting, insurance counseling and auditing services, interest and financing charges incurred in connection with the Project, and the cost of other services to be provided by others to Owner pursuant to Exhibit B of this Agreement.

ARTICLE 8 – EXHIBITS AND SPECIAL PROVISIONS

8.01 *Exhibits Included*

A. Exhibit A, "Engineer's Services," consisting of 3 pages.

B. Exhibit B, "Consultant Estimate of Hours and Expenses," consisting of 3 pages.

C. Exhibit C, "Payments to Engineer for Services and Reimbursable Expenses," consisting of 2 pages.

D. Exhibit D, "Insurance," consisting of 2 pages.

E. Exhibit E, "Dispute Resolution," consisting of 1 pages.

F. Exhibit F, "Allocation of Risks," consisting of 1 pages.

8.02 *Total Agreement*

A. This Agreement (consisting of pages 1 to 14 inclusive, together with the exhibits identified above) constitutes the entire agreement between Owner and Engineer and supersedes all prior written or oral understandings. This Agreement may only be amended, supplemented, modified, or canceled by a duly executed written instrument.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, the Effective Date of which is indicated on page 1.

Owner:	Engineer:
City of Seward	The Schemmer Associates
By:	By: Doug Holle, PE
Title:	Title: Executive Vice President, Engineering
Date:	Date: March 13, 2025
Signed:	Signed: 
Address for giving notices:	Address for giving notices:
	333 S. 21st Street
	Suite 102
	Lincoln, NE 68510

PART 2 – ADDITIONAL SERVICES

A2.01 *Additional Services Requiring Owner's Written Authorization*

A. If authorized in writing by Owner, Engineer shall furnish or obtain from others Additional Services of the types listed below.

1. Preparation of applications and supporting documents (in addition to those furnished under Basic Services) for private or governmental grants, loans, or advances in connection with the Project; preparation or review of environmental assessments and impact statements; review and evaluation of the effects on the design requirements for the Project of any such statements and documents prepared by others; and assistance in obtaining approvals of authorities having jurisdiction over the anticipated environmental impact of the Project.

2. Services to make measured drawings of or to investigate existing conditions or facilities, or to verify the accuracy of drawings or other information furnished by Owner or others.

3. Services resulting from significant changes in the scope, extent, or character of the portions of the Project designed or specified by Engineer or its design requirements including, but not limited to, changes in size, complexity, Owner's schedule, character of construction, or method of financing; and revising previously accepted studies, reports, Drawings, Specifications, or Contract Documents when such revisions are required by changes in Laws and Regulations enacted subsequent to the Effective Date of this Agreement or are due to any other causes beyond Engineer's control.

4. Services required as a result of Owner's providing incomplete or incorrect Project information to Engineer.

5. Furnishing services of Engineer's Consultants for other than Basic Services.

6. Providing construction surveys and staking to enable Contractor to perform its work.

7. Providing Construction Phase services beyond the original date for final completion of the Work.

8. Other services performed or furnished by Engineer not otherwise provided for in this Agreement.

This is **EXHIBIT A,** consisting of 3 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services**

Engineer's Services

Article 1 of the Agreement is amended and supplemented to include the following agreement of the parties. Engineer shall provide Additional Services as set forth below.

PART 1 – SCOPE OF SERVICES

WORTHMAN BOULEVARD EXTENSION

1. INTRODUCTION

The following Scope of Services for Construction Engineering Services shall include Project Management, Construction Observation, Administration, Staking and Materials Testing. The work shall include but are not limited to; the preconstruction phase, construction phase, construction closeout, coordination with the general contractor, construction observation, SWPPP inspections, as-built plans, final documents, staking, and materials testing.

2. ASSUMPTIONS

- Construction duration is anticipated to be 17 weeks.
- Construction inspection is anticipated to average 10 hours per working day (including mobilization) with 80 working days anticipated.

3. PROJECT DESCRIPTION

- Paving improvements are planned for Worthman Blvd from Pine Street to the West terminating at cul-de-sac in Seward, NE.

4. PRE-CONSTRUCTION PHASE

The following pre-construction phase tasks will include but are not limited to:

A. Conduct the pre-construction meeting with the contractor and all stake holders.
B. Preconstruction photos
C. Draft and hand out flyers to residents

5. CONSTRUCTION PHASE

The following construction phase tasks will include, but are not limited to:

A. Establish a procedure for managing, tracking, and storing all relevant documents between the contractor, City, and CE firm.

B. Mobilize a construction inspection team on site for the duration of the construction activities per paragraph 2. ASSUMPTIONS.

C. Maintain project field diaries, accurate quantities, files and records.

D. Construction progress photos

E. Complete daily report for each day.

F. Monitor the contractors' activities for compliance with the plans and specifications.

G. Review work zone traffic control devices each day CE firm is on site.

H. Review and respond to contractor submittals and RFI's.

I. Conduct weekly meetings (Construction Progress Meetings) with the contractor. Seventeen (17) meetings are included in this scope.

J. Draft change orders as needed. Two (2) change orders are included in this scope.

K. Review and recommend contractor's pay applications on a monthly basis. Five (5) pay application reviews are included in this scope.

L. Perform erosion control inspections on a weekly basis. If discrepancies are found, issue non-conformance report to contractor and monitor progress for correction. Sixteen (40) erosion control inspections are included in this scope for a duration from the start of construction through May 2026 when vegetation establishment is anticipated to be complete.

M. Perform materials testing in accordance with NDOT Materials Sampling Guide. The anticipated tests include:
   - 2 Standard Proctor Tests
   - 40 Nuclear Gauge Compaction Tests
   - 20 Concrete Tests (Slump, Air Content, Compressive Strength Cylinders)

N. Perform construction staking as listed below. It is assumed any stakes set and impacted by construction activity requiring re-staking will be viewed as additional effort and may result in added effort invoiced.
   1. Pavement Removals – Layout limits of removals with paint markings
   2. Limits of Construction – Layout angle points and straight aways at 100-foot intervals and 50-foot intervals in curves along the Limits of Construction lines (8,500 LF)
   3. Permanent Easement – Layout angle points and straight aways at 100-foot intervals along the Permanent Easement lines (1,650 LF)
   4. Temporary Easement – Layout angle points and straight aways at 100-foot intervals along the Temporary Easement lines (150 LF)
   5. Utility Easement – Layout angle points and straight aways at 100-foot intervals along the Utility Easement lines (1,200 LF)

6. Right of Way / Property Lines – Layout angle points and straight aways along the ROW and Property Lines at 100-foot intervals (6,500 LF)
7. Grading As-Built – Proved a cut fill report comparing pre-pavement conditions to final grade surface and section view analysis to project representative
8. Sanitary Sewer – Layout and grade on desired offsets each sanitary sewer manhole, and layout offset hubs at 50-foot intervals along the sanitary sewer lines (950 LF)
9. Storm Sewer – Layout and grade on desired offsets each storm sewer manhole or curb inlet structure, and layout offset hubs at 50-foot intervals along the tangent runs (1,650 LF)
10. Paving for Const. – Layout and grade, on desired offsets, the paving at all corner points, ends of returns, radius points, high and low points, curb ramps and at 25-foot intervals in tangent runs and 25-foot intervals in vertical and horizontal curves (does NOT include hubs for change in thickness) (does include staking the centerline of proposed road) (7,000 LF)
11. Headwall and Principal Spillway – Layout and grade on desired offsets the 4 corners of both the proposed headwall and principal spillway structures. Not to exceed 16 offset hubs.
12. Detention Pond Grading – Layout the perimeter toe of slope and top of slope at 50-foot intervals around the proposed detention pond (8,000 LF)
13. Trips to Site – We estimate 35 trips to site for staking the above

6. CONSTRUCTION CLOSEOUT

The following construction phase tasks will include but are not limited to:

A. Conduct a final project walkthrough/inspection.
B. Prepare and provide to the contractor a punch list of repair items that need to be addressed before project acceptance.
C. Verify all project work has been completed, inspected and approved.
D. Prepare as-built plans. As-built plans will be created and submitted in electronic format.

7. PROJECT MANAGEMENT

The following project management tasks will include, but are not limited to:

A. Review work, communication with contractor / client, and invoicing

Exhibit B

SCHEMMER

Design with Purpose. Build with Confidence.

Hour Estimate Form
Construction Engineering Services
Worthman Blvd. Extension

City of Seward
Project Nos. 09336.001-C

March 12, 2025

ITEM NO.	TASK DESCRIPTION	PRIN	SEN ENG	PROJ REP	FIELD TECH II	SEN RLS	CADD TECH	2 MAN SURV CREW	ADMIN SUPP	TOTAL PER TASK		Task Cost
I.	**Preconstruction Phase**											$ 4,000.00
I.a	Preconstruction Meeting	4	6	4						10		
I.b	Preconstruction photos			4						4		
I.c	Hand out flyers		2	4						6		
II.	**Construction Phase**											$ 224,485.00
II.a	Establish procedure for tracking relavent documents		2	2						4		
II.b	Mobilize construction inspection team on site		50	250						300		
II.c	Maintain project diaries, quantities, and records		6	40						46		
II.d	Construction photos			40						40		
II.e	Complete daily reports		10	40						50		
II.f	Monitor contractors' activities for compliance with plans and specs		30	380						410		
II.g	Review traffic control devices each day			20						20		
II.h	Review submittals and RFI's	6	40	6						46		
II.i	Conduct weekly meetings		34	17						51		
II.j	Change orders		6	2						8		
II.k	Pay app reviews		10	3						13		
II.l	Erosion control inspections		2	100						102		
II.m	Materials testing			40	30					70		
II.n	Construction staking					58	73	310		441		
III.	**Construction Closeout**											$ 4,695.00
III.a	Final project walkthrough / inspection		6	6						12		
III.b	Prepare and distribute punch list		2	3						5		
III.c	Verify project work completion and acceptance		2	6								
III.d	As Built Plans		2	6						8		
IV.a	**Project Management**											$ 2,070.00
IV.a	Review work, communication, invoicing	2	8							8		
	Labor Fee											$ 235,250.00
	Direct Expenses											$ 16,800.00
	TOTALS											$ 252,050.00

Construction Engineering Services
Worthman Blvd Paving Improvements
Worthman Blvd. Extension
City of Seward
Project Nos. 09336.001-C

BREAKDOWN OF COSTS

PROJECT TASK & PERSONNEL CLASSIFI	ESTIMATED HOURS	2025 STANDARD RATE	ESTIMATED TOTAL
I. Preconstruction Phase			
PRINCIPAL	4	$275.00	$1,100
SENIOR ENGINEER	8	$190.00	$1,520
PROJECT REPRESENTATIVE	12	$115.00	$1,380
FIELD TECHNICIAN II	0	$90.00	$0
RLS	0	$160.00	$0
CADD TECHNICIAN	0	$85.00	$0
2 MAN SURVEY CREW	0	$195.00	$0
ADMINISTRATIVE SUPPORT	0	$85.00	$0
		TASK TOTAL	$4,000
II. Construction Phase			
PRINCIPAL	6	$275.00	$1,650
SENIOR ENGINEER	190	$190.00	$36,100
PROJECT REPRESENTATIVE	940	$115.00	$108,100
FIELD TECHNICIAN II	30	$90.00	$2,700
RLS	58	$160.00	$9,280
CADD TECHNICIAN	73	$85.00	$6,205
2 MAN SURVEY CREW	310	$195.00	$60,450
ADMINISTRATIVE SUPPORT	0	$85.00	$0
		TASK TOTAL	$224,485
III. Construction Closeout			
PRINCIPAL	0	$275.00	$0
SENIOR ENGINEER	12	$190.00	$2,280
PROJECT REPRESENTATIVE	21	$115.00	$2,415
FIELD TECHNICIAN II	0	$90.00	$0
RLS	0	$160.00	$0
CADD TECHNICIAN	0	$85.00	$0
2 MAN SURVEY CREW	0	$195.00	$0
ADMINISTRATIVE SUPPORT	0	$85.00	$0
		TASK TOTAL	$4,695

Continued Next Page

IV. Project Management

PRINCIPAL	2	$275.00	$550
SENIOR ENGINEER	8	$190.00	$1,520
PROJECT REPRESENTATIVE	0	$115.00	$0
FIELD TECHNICIAN II	0	$90.00	$0
RLS	0	$160.00	$0
CADD TECHNICIAN	0	$85.00	$0
2 MAN SURVEY CREW	0	$195.00	$0
ADMINISTRATIVE SUPPORT	0	$85.00	$0
		TASK TOTAL	$2,070

Sub-Total $235,250

REIMBURSABLES	No.		Rate ($)		
Plan Sets	4		$20.00	$	80.00
Mileage	24000	$	0.700	$	16,800.00
Other				$	-
Other				$	-
Sub-Total				**$**	**16,800.00**

TOTAL ESTIMATED FEE **$ 252,050.00**

This is **EXHIBIT C**, consisting of 2 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services**.

Payments to Engineer for Services and Reimbursable Expenses

Article 2 of the Agreement is amended and supplemented to include the following agreement of the parties:

ARTICLE 2 – OWNER'S RESPONSIBILITIES

C2.01 *Compensation For Basic Services (other than Resident Project Representative and Post-Construction) – Standard Hourly Rates Method of Payment*

A. Owner shall pay Engineer for Basic Services set forth in Exhibit A, except for services of Engineer's Resident Project Representative and Post-Construction Phase services, if any, as follows:

1. An amount equal to the cumulative hours charged to the Project by each class of Engineer's employees times Standard Hourly Rates for each applicable billing class for all services performed on the Project, plus Reimbursable Expenses and Engineer's Consultant's charges, if any.

2. Engineer's Reimbursable Expenses Schedule and Standard Hourly Rates included in Exhibit B.

3. The total compensation for services under Paragraph C2.01 is estimated to be $252,050.00

4. Engineer may alter the distribution of compensation between individual phases of the work noted herein to be consistent with services actually rendered, but shall not exceed the total estimated compensation amount unless approved in writing by Owner.

5. The total estimated compensation for Engineer's services included Paragraph C2.01.B.3 incorporates all labor, overhead, profit, Reimbursable Expenses and Engineer's Consultant's charges.

6. The amounts billed for Engineer's services under Paragraph C2.01 will be based on the cumulative hours charged to the Project during the billing period by each class of Engineer's employees times Standard Hourly Rates for each applicable billing class, plus Reimbursable Expenses and Engineer's Consultant's charges.

7. The Standard Hourly Rates and Reimbursable Expenses Schedule will be adjusted annually (as of January 1) to reflect equitable changes in the compensation payable to Engineer.

C2.02 *Compensation For Reimbursable Expenses*

A. Owner shall pay Engineer for all Reimbursable Expenses at the rates set forth in Exhibit B.

B. Reimbursable Expenses include the following categories: transportation and subsistence incidental thereto; obtaining bids or proposals from Contractor(s); providing and maintaining field office facilities including furnishings and utilities; toll telephone calls and mobile phone charges; reproduction of reports, Drawings, Specifications, Bidding Documents, and similar Project-related items in addition to those required under Exhibit A, and, if authorized in advance by Owner, overtime work requiring higher than regular rates. In addition, if authorized in advance by Owner, Reimbursable Expenses will also include expenses incurred for computer time and the use of other highly specialized equipment.

C. The amounts payable to Engineer for Reimbursable Expenses will be the Project-related internal expenses actually incurred or allocated by Engineer, plus all invoiced external Reimbursable Expenses allocable to the Project, the latter multiplied by a factor of 1.0.

C2.03 *Other Provisions Concerning Payment*

A. Whenever Engineer is entitled to compensation for the charges of Engineer's Consultants, those charges shall be the amounts billed by Engineer's Consultants to Engineer times a factor of 1.0.

B. Factors. The external Reimbursable Expenses and Engineer's Consultant's factors include Engineer's overhead and profit associated with Engineer's responsibility for the administration of such services and costs.

C. Estimated Compensation Amounts

1. Engineer's estimate of the amounts that will become payable for specified services are only estimates for planning purposes, are not binding on the parties, and are not the minimum or maximum amounts payable to Engineer under the Agreement.

2. When estimated compensation amounts have been stated herein and it subsequently becomes apparent to Engineer that a compensation amount thus estimated will be exceeded, Engineer shall give Owner written notice thereof. Promptly thereafter Owner and Engineer shall review the matter of services remaining to be performed and compensation for such services. Owner shall either agree to such compensation exceeding said estimated amount or Owner and Engineer shall agree to a reduction in the remaining services to be rendered by Engineer, so that total compensation for such services will not exceed said estimated amount when such services are completed. If Engineer exceeds the estimated amount before Owner and Engineer have agreed to an increase in the compensation due Engineer or a reduction in the remaining services, the Engineer shall be paid for all services rendered hereunder.

D. To the extent necessary to verify Engineer's charges and upon Owner's timely request, Engineer shall make copies of such records available to Owner at cost.

This is **EXHIBIT D**, consisting of 2 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services**.

Insurance

Paragraph 6.04 of the Agreement is amended and supplemented to include the following agreement of the parties.

Engineers Certificate of Liability insurance is attached to this Exhibit D.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 12/30/2024

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
FNIC
P.O. Box 45279
Omaha NE 68145-0279

CONTACT NAME: Deanne Beltz-Sund
PHONE (A/C, No, Ext): 402-861-7000 **FAX (A/C, No):**
E-MAIL ADDRESS: deanne.beltz@fnicgroup.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Continental Casualty Co.	20443
INSURER B : Continental Insurance Company	35289
INSURER C : Valley Forge Insurance Co.	20508
INSURER D :	
INSURER E :	
INSURER F :	

INSURED THESCHE-01
The Schemmer Associates Inc.
1044 North 115th Street
Omaha NE 68154

COVERAGES **CERTIFICATE NUMBER:** 550758686 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X **COMMERCIAL GENERAL LIABILITY** CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT X LOC OTHER:			6023928716	12/31/2024	12/31/2025	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG 	$ 1,000,000 $ 100,000 $ 15,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
C	**AUTOMOBILE LIABILITY** X ANY AUTO OWNED AUTOS ONLY HIRED AUTOS ONLY SCHEDULED AUTOS NON-OWNED AUTOS ONLY			6023928747	12/31/2024	12/31/2025	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) 	$ 1,000,000 $ $ $ $
B	X **UMBRELLA LIAB** X OCCUR **EXCESS LIAB** CLAIMS-MADE DED X RETENTION $ 10,000			6023928702	12/31/2024	12/31/2025	EACH OCCURRENCE AGGREGATE 	$ 6,000,000 $ 6,000,000 $
B	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N: N **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		6023928733	12/31/2024	12/31/2025	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
A	Professional Liability Claims-Made Basis Pollution Legal Liability			AEH288365469	12/31/2024	12/31/2025	Each Claim Aggregate	$5,000,000 $5,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

City of Seward Nebraska
142 N. 7th St.
Seward NE 68434

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

This is **EXHIBIT E**, consisting of 1 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services**.

Dispute Resolution

Paragraph 6.08 of the Agreement is amended and supplemented to include the following agreement of the parties:

H6.09 *Dispute Resolution*

A. Mediation. Owner and Engineer agree that they shall first submit any and all unsettled claims, counterclaims, disputes, and other matters in question between them arising out of or relating to this Agreement or the breach thereof ("Disputes") to mediation in accordance with Construction Industry Mediation Rules of the American Arbitration Association currently in effect. If such mediation is unsuccessful in resolving a Dispute, then (a) the parties may mutually agree to a dispute resolution of their choice, or (b) either party may seek to have the Dispute resolved by a court of competent jurisdiction.

This is **EXHIBIT F**, consisting of 1 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services**.

Allocation of Risks

Paragraph 6.10 of the Agreement is amended and supplemented to include the following agreement of the parties:

I6.10.B *Limitation of Engineer's Liability*

1. *Engineer's Liability Limited to Amount of Engineer's Compensation.* To the fullest extent permitted by law, and notwithstanding any other provision of this Agreement, the total liability, in the aggregate, of Engineer and Engineer's officers, directors, partners, employees, agents, and Engineer's Consultants, and any of them, to Owner and anyone claiming by, through, or under Owner for any and all claims, losses, costs, or damages whatsoever arising out of, resulting from or in any way related to the Project or the Agreement from any cause or causes, including but not limited to the negligence, professional errors or omissions, strict liability or breach of contract, or warranty express or implied of Engineer or Engineer's officers, directors, partners, employees, agents, or Engineer's Consultants, or any of them, shall not exceed the total compensation received by Engineer under this Agreement.

B. Consideration to Accept the Bid Documents and Authorization to Advertise for Public Bid

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333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
SCHEMMER NO. 09336.001-C	A1

PLANS FOR CONSTRUCTION

WORTHMAN BOULEVARD EXTENSION

CITY OF SEWARD

THE 2017 ENGLISH EDITION OF THE NEBRASKA STANDARD SPECIFICATIONS AND THE SPECIAL PROVISIONS APPLY TO THIS PROJECT.

ALL SANITARY SEWER CONSTRUCTION SHALL ADHERE TO THE SPECIAL PROVISIONS

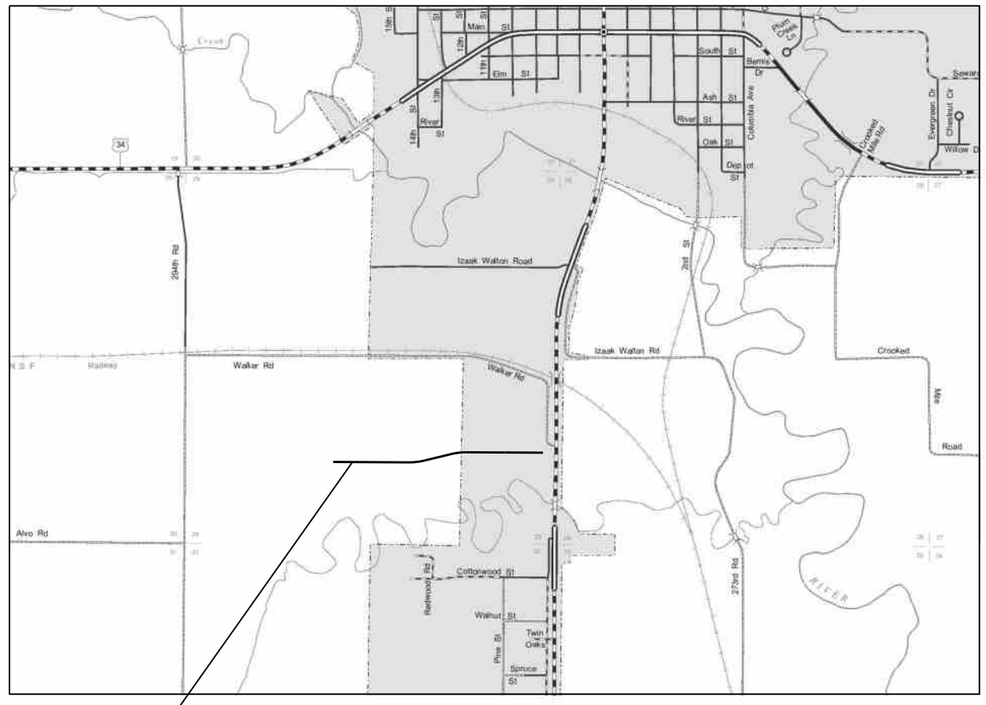
THE WORK ON THIS PROJECT CONSISTS OF GROUPS
1-GRADING, 3-SURFACING, 4-DRAINAGE,
7-PAVEMENT MARKING & SIGNING, A-STREET LIGHTING,
L-EROSION CONTROL

◣ GROUPS 1, 3, 4, 7, A, L ARE INCLUDED IN THE LETTING OF _____

▲ GROUPS _____ ARE INCLUDED IN THE LETTING OF _____

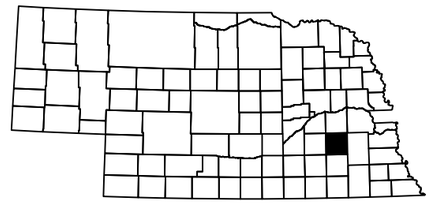
■ GROUPS _____ ARE INCLUDED IN THE LETTING OF _____

INDEX OF SHEETS



PROJECT LOCATION

PLANS PREPARED BY:
THE SCHEMMER ASSOCIATES, INC.
333 S. 21ST STREET, SUITE 102
LINCOLN, NE 68510



CONVENTIONAL SIGNS

- FENCE R.O.W. OR WIRE
- GUARDRAIL
- TRAVELED WAY
- DIKE
- CULVERT
- POWER POLE
- TELEPHONE POLE
- MAILBOX
- RAILROAD TRACKS
- MARSH
- TREE - CONIFEROUS
- TREE - DECIDUOUS

R.O.W. LEGEND

- NEW CONTROLLED ACCESS
- PREVIOUS CONTROLLED ACCESS
- LIMITS OF CONSTRUCTION
- PREVIOUS R.O.W.
- NEW R.O.W.
- EXISTING PERMANENT EASEMENT
- TEMPORARY EASEMENT
- EXCESS TAKING
- PERMANENT EASEMENT
- EXISTING RAILROAD EASEMENT
- NEW RAILROAD PERMANENT EASEMENT
- NEW RAILROAD TEMPORARY EASEMENT

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

SEWARD CITY
APPROVED:
DATE

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CERTIFICATE OF AUTHORIZATION: CA-0666

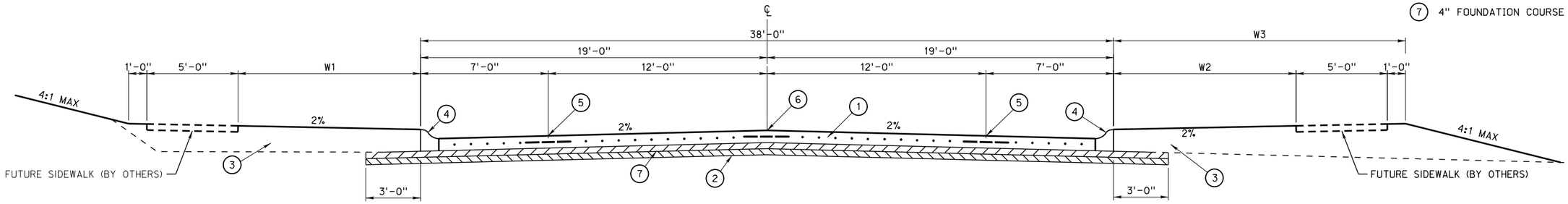
PROJECT NO.	SHEET NO.
09336.001-C	B1

ROADWAY DESIGN DIVISION.

TYPICAL CROSS SECTIONS

LEGEND

1. 8'' DOWELED CONCRETE PAVEMENT
2. SUBGRADE PREPARATION
3. EARTH SHOULDER CONSTRUCTION
4. 6'' INTEGRAL CURB
5. LONGITUDINAL JOINT
6. PROFILE GRADE
7. 4'' FOUNDATION COURSE



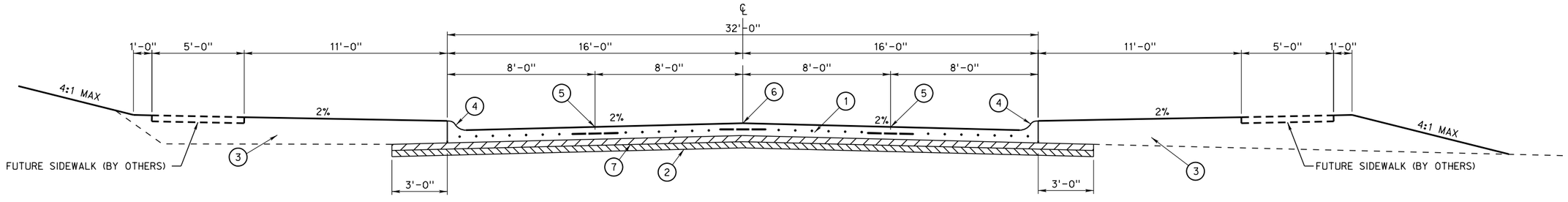
WORTHMAN BOULEVARD

STATION TO STATION

STA 105+21 - STA 106+93 (SEE SHEET J5)
STA 106+93 - STA 123+70

STATION	TO	STATION	W1
105+71	-	111+03	8'-6"
111+03	-	113+49	VARIES 8'-6" TO 15'-0"
113+49	-	114+60	15'-0"
114+60	-	123+70	12'-0"

STATION	TO	STATION	W2	W3
106+93	-	114+00	0'-0"	4'-0"
114+00	-	114+55	0' to 15'-0"	4' to 18'-0"
114+55	-	123+70	12'-0"	18'-0"



PINE STREET

STATION TO STATION

STA 501+41 - STA 502+78
STA 503+22 - STA 503+97

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

File: 09336001 Typical Sections.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Scale: 1:1 Date: 12-MAR-2025 10:04 Computer: LINMEGANS

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CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	C1

SUMMARY OF QUANTITIES

ROADWAY DESIGN DIVISION.

GRADING
GROUP I

ITEM	QUANTITY	UNITS
TRAFFIC CONTROL	1	LUMP SUM
MOBILIZATION	1	LUMP SUM
GENERAL CLEARING AND GRUBBING	1	LUMP SUM
EARTHWORK MEASURED IN EMBANKMENT	13,045	CUBIC YARDS
WATER	174	MGALLON
ROCK RIPRAP, TYPE B	149	TONS
SALVAGING AND PLACING TOPSOIL	52,525	SQUARE YARDS
RIPRAP FILTER FABRIC	189	SQUARE YARDS
REMOVE PAVEMENT	775	SQUARE YARDS
SAWING PAVEMENT	314	LINEAL FEET
REMOVE BRICK SURFACE	78	SQUARE YARDS
REMOVE MANHOLE	2	EACH
REMOVE INLET	2	EACH
ADJUST WATER VALVE BOX TO GRADE	3	EACH
ADJUST MANHOLE TO GRADE	1	EACH
STABLIZED CONSTRUCTION EXIT	1	EACH
FOUNDATION COURSE	11,103	SQUARE YARDS
EARTH SHOULDER CONSTRUCTION	42.4	STA
SUBGRADE PREPARATION	11,103	SQUARE YARDS
SWPPP SIGN	1	EACH

SURFACING
GROUP 3

ITEM	QUANTITY	UNITS
DETECTABLE WARNING PANEL	100	SQUARE FEET
4" CONCRETE CLASS 47B-3500 SIDEWALKS	160	SQUARE YARDS
8" DOWELED CONCRETE PAVEMENT CLASS 47B-3500	9,721	SQUARE YARDS

STORM SEWER
GROUP 4A

ITEM	QUANTITY	UNITS
CURB INLET	18	EACH
MANHOLE	12	EACH
REMOVE CULVERT PIPE	55	LINEAL FEET
REMOVE STORM SEWER PIPE	154	LINEAL FEET
CLASS 47B-3000 CONCRETE FOR CONCRETE COLLARS	1.30	CUBIC YARDS
REINFORCING STEEL FOR COLLARS	116	POUNDS
36" CONCRETE FLARED-END SECTION	2	EACH
48" CONCRETE FLARED-END SECTION	4	EACH
15" STORM SEWER PIPE, TYPE 1, 7 OR 8	388	LINEAL FEET
18" STORM SEWER PIPE, TYPE 1, 7 OR 8	805	LINEAL FEET
36" STORM SEWER PIPE, TYPE 1, 7 OR 8	44	LINEAL FEET
48" STORM SEWER PIPE, TYPE 1, 7 OR 8	373	LINEAL FEET
BUILD HEADWALL	1	EACH
BUILD PRINCIPAL SPILLWAY STRUCTURE	1	EACH

SANITARY SEWER
GROUP 4B

ITEM	QUANTITY	UNITS
12" P.V.C. SANITARY SEWER PIPE	934	LINEAL FEET
SANITARY MANHOLE	3	EACH

PAVEMENT MARKING & SIGNING
GROUP 7

ITEM	QUANTITY	UNITS
REMOVE SIGN	3	EACH
TYPE A SIGN	45	SQUARE FEET
4" YELLOW POLYUREA PAVEMENT MARKING, GROVED	3,685	LINEAL FEET
12" WHITE POLYUREA PAVEMENT MARKING, GROOVED	154	LINEAL FEET
24" WHITE POLYUREA PAVEMENT MARKING, GROOVED	282	LINEAL FEET
PERMANENT BARRICADE	2	EACH

ELECTRICAL
GROUP A

ITEM	QUANTITY	UNITS
PULL BOX, TYPE PB-5	4	EACH
INSTALL LIGHT POLE (POLE PROVIDED BY CITY, INSTALLED BY CONTRACTOR)	16	EACH
1½" CONDUIT, IN TRENCH	3,513	LINEAL FEET
1½" CONDUIT, UNDER ROADWAY	103	LINEAL FEET
STREET LIGHTING CABLE, NO. 6 BARE	3,616	LINEAL FEET
STREET LIGHTING CABLE, NO. 6 USE	7,232	LINEAL FEET
SPLICE CONDUIT	1	EACH
REMOVE PULL BOX	2	EACH

EROSION CONTROL
GROUP L

ITEM	QUANTITY	UNITS
SEEDING, TYPE B	5.96	ACRES
SEEDING, TYPE C (FLOODPLAIN MIX)	2.74	ACRES
EROSION CONTROL, CLASS 1D	28,902	SQUARE YARDS
EROSION CONTROL, CLASS 1E	13,265	SQUARE YARDS
CURB INLET PROTECTION	18	EACH
FABRIC SILT FENCE 'LOW POROSITY'	5,310	LINEAL FEET

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

File: 09336001 Summary of Quantities.dgn LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Scale: 1:40 Date: 13-MAR-2025 14:20 Computer: LINMEGANS

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CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	E1

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:04
Computer: LINMEGANS

File: 09336001 Aerial01.dgn
Scale: 1:40

0 20' 40'
SCALE

PROPERTY LINE
EXISTING EASEMENT
EXISTING WATER MAIN
RIGHT-OF-WAY
LIMITS OF CONSTRUCTION
FUTURE SIDEWALK (BY OTHERS)
EXISTING WATER MAIN
PERMANENT BARRICADE
SEE SHEET M1
DO NOT DISTURB PULL BOX
DO NOT DISTURB POWER POLE
DO NOT DISTURB FENCE
TEMPORARY EASEMENT
PROJECT ℄
WORTHMAN BLVD
UTILITY EASEMENT
LIMITS OF CONSTRUCTION
RIGHT-OF-WAY
PERMANENT EASEMENT
PERMANENT EASEMENT
PERMANENT EASEMENT
103
104
105
106
107
108

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

AERIAL

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:04
Computer: LINMEGANS

File: 09336001 Aerial02.dgn
Scale: 1:40

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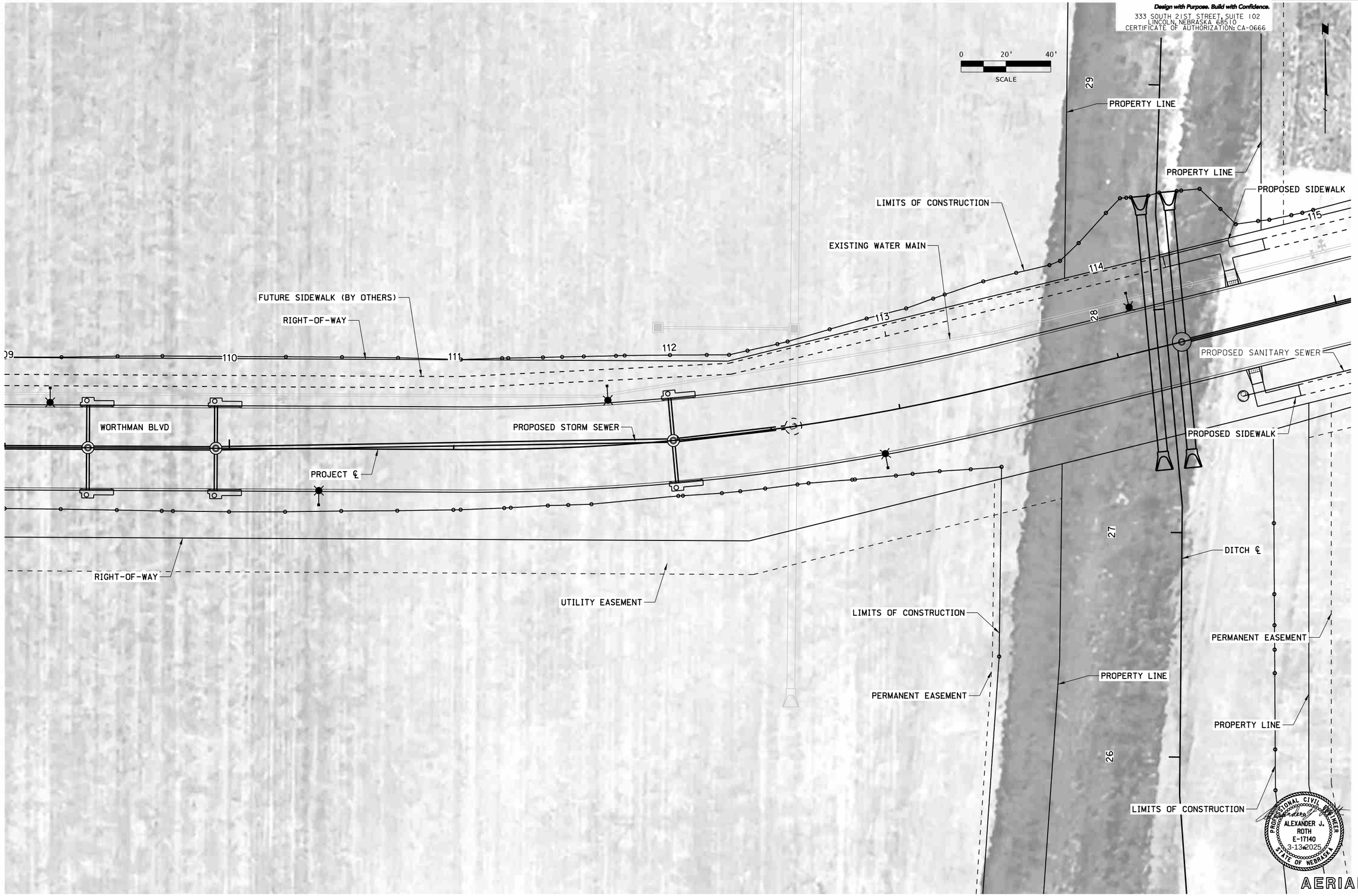
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	E2

0 20' 40'
SCALE



PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

AERIAL

SCHEMMER
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CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	E3

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:05
Computer: LINMEGANS

File: 09336001 Aerial03.dgn
Scale: 1:40

0 20' 40'
SCALE

PROPERTY LINE
EXISTING WATER MAIN
LIMITS OF CONSTRUCTION
FUTURE SIDEWALK (BY OTHERS)
RIGHT-OF-WAY
PROJECT ℄
WORTHMAN BLVD
PROPOSED STORM SEWER
PROPOSED SANITARY SEWER
UTILITY EASEMENT
EXISTING EASEMENT
116
117
118
119
120
121

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

AERIAL

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:05
Computer: LINMEGANS

File: 09336001 Aerial04.dgn
Scale: 1:40

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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	E4

0 20' 40'
SCALE

EXISTING RIGHT-OF-WAY
SECTION LINE
LIMITS OF CONSTRUCTION
FUTURE SIDEWALK (BY OTHERS)
RIGHT-OF-WAY
EXISTING WATER MAIN
PINE ST.
EXISTING RIGHT-OF-WAY
LIMITS OF CONSTRUCTION
PERMANENT EASEMENT
PROJECT ℄
PROPOSED STORM SEWER
WORTHMAN BLVD
RIGHT-OF-WAY
LIMITS OF CONSTRUCTION
UTILITY EASEMENT
PROPOSED SANITARY SEWER
PERMANENT EASEMENT
RIGHT-OF-WAY
UTILITY EASEMENT
RIGHT-OF-WAY
LIMITS OF CONSTRUCTION

504 503 502

121 122 123 124 125 126

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

AERIAL

SCHEMMER
Design with Purpose. Build with Confidence.
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LINCOLN, NEBRASKA 68510
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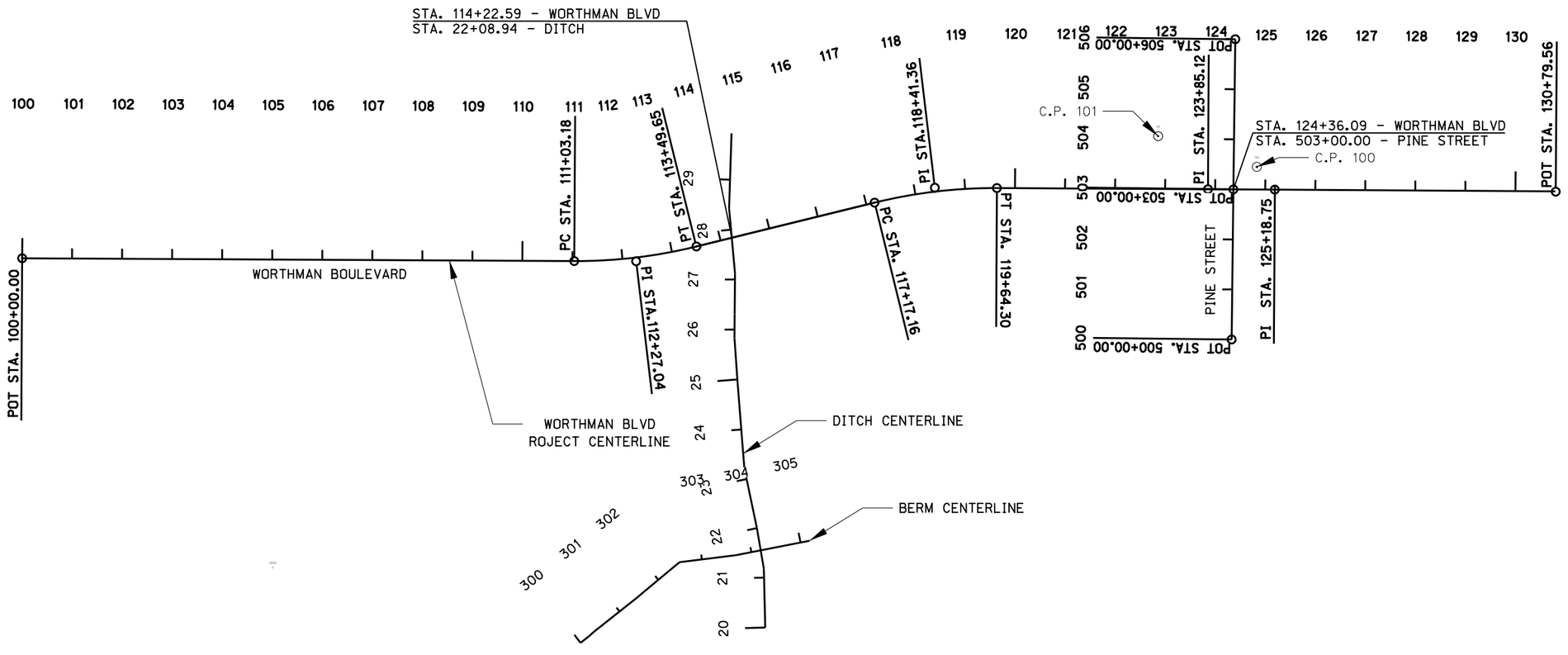
PROJECT NO.	SHEET NO.
09336.001-C	F1

ROADWAY DESIGN DIVISION.

CONTROL POINTS				
NO.	X	Y	Z	DESCRIPTION
100	90159.859	80376.769	1449.460	5/8" REBAR WITH CAP
101	89962.647	80438.198	1454.815	5/8" REBAR WITH CAP

GEOPAK ALIGNMENT INFORMATION		
ALIGNMENT	CHAIN	PROFILE
WORTHMAN BOULEVARD	WORTHMAN	WORTHMAN_PRO
PINE STREET	PINE_ST	PINE_ST_PRO
DITCH ALIGNMENT	DITCH	-
BERM ALIGNMENT	BERM_AL	-



PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

HORIZONTAL ALIGNMENT & CONTROL

File: 09336001 Horz & Vert Control.dgn
Scale: 1:250
PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Computer: LINMEGANS
Date: 12-MAR-2025 10:06

Beginning chain WORTHMAN description
==========

Point 28 N 80,194.376 E 87,692.471 Sta 100+00.00

Course from 28 to PC WORTHMAN1 S 89° 42' 37" E Dist 1,103.184

Curve Data

Curve WORTHMAN1
P.I. Station 112+27.04 N 80,188.172 E 88,919.498
Delta = 14° 07' 16" (LT)
Degree = 5° 43' 46"
Tangent = 123.858
Length = 246.461
Radius = 1,000.000
External = 7.641
Long Chord = 245.838
Mid. Ord. = 7.583
P.C. Station 111+03.18 N 80,188.798 E 88,795.641
P.T. Station 113+49.65 N 80,217.782 E 89,039.765
C.C. N 81,188.785 E 88,800.698
Back = S 89° 42' 37" E
Ahead = N 76° 10' 07" E
Chord Bear = N 83° 13' 45" E

Course from PT WORTHMAN1 to PC WORTHMAN2 N 76° 10' 07" E Dist 367.510

Curve Data

Curve WORTHMAN2
P.I. Station 118+41.36 N 80,335.336 E 89,517.223
Delta = 14° 09' 38" (RT)
Degree = 5° 43' 46"
Tangent = 124.207
Length = 247.148
Radius = 1,000.000
External = 7.684
Long Chord = 246.520
Mid. Ord. = 7.626
P.C. Station 117+17.16 N 80,305.642 E 89,396.618
P.T. Station 119+64.30 N 80,334.622 E 89,641.428
C.C. N 79,334.639 E 89,635.685
Back = N 76° 10' 07" E
Ahead = S 89° 40' 15" E
Chord Bear = N 83° 14' 56" E

Course from PT WORTHMAN2 to 29 S 89° 40' 15" E Dist 420.818

Point 29 N 80,332.205 E 90,062.239 Sta 123+85.12

Course from 29 to 30 S 89° 38' 56" E Dist 133.629

Point 30 N 80,331.386 E 90,195.865 Sta 125+18.75

Course from 30 to 31 S 89° 39' 24" E Dist 560.813

Point 31 N 80,328.026 E 90,756.668 Sta 130+79.56

==========
Ending chain WORTHMAN description

Beginning chain PINE_ST description
==========

Point 14 N 80,031.915 E 90,109.581 Sta 500+00.00

Course from 14 to 15 N 0° 41' 33" E Dist 300.000

Point 15 N 80,331.893 E 90,113.207 Sta 503+00.00

Course from 15 to 16 N 0° 41' 33" E Dist 300.000

Point 16 N 80,631.871 E 90,116.834 Sta 506+00.00

==========
Ending chain PINE_ST description

Beginning chain DITCH description
==========

Point 101 N 79,456.399 E 89,177.276 Sta 20+00.00

Course from 101 to 102 N 1° 11' 49" W Dist 117.660

Point 102 N 79,574.033 E 89,174.818 Sta 21+17.66

Course from 102 to 103 N 9° 44' 28" W Dist 82.239

Point 103 N 79,655.087 E 89,160.904 Sta 21+99.90

Course from 103 to 104 N 11° 57' 00" W Dist 121.869

Point 104 N 79,774.315 E 89,135.669 Sta 23+21.77

Course from 104 to 105 N 4° 28' 53" W Dist 29.928

Point 105 N 79,804.151 E 89,133.331 Sta 23+51.70

Course from 105 to 106 N 4° 29' 26" W Dist 141.379

Point 106 N 79,945.097 E 89,122.262 Sta 24+93.08

Course from 106 to 107 N 4° 00' 44" W Dist 90.091

Point 107 N 80,034.967 E 89,115.959 Sta 25+83.17

Course from 107 to 108 N 0° 31' 19" E Dist 48.290

Point 108 N 80,083.255 E 89,116.398 Sta 26+31.46

Course from 108 to 109 N 0° 31' 19" E Dist 80.712

Point 109 N 80,163.964 E 89,117.134 Sta 27+12.17

Course from 109 to 110 N 5° 14' 36" W Dist 130.497

Point 110 N 80,293.915 E 89,105.208 Sta 28+42.67

Course from 110 to 111 N 1° 50' 20" E Dist 150.000

Point 111 N 80,443.837 E 89,110.022 Sta 29+92.67

==========
Ending chain DITCH description

Beginning chain BERM_AL description
==========

Point 124 N 79,426.161 E 88,808.356 Sta 300+00.00

Course from 124 to 125 N 52° 11' 38" E Dist 21.704

Point 125 N 79,439.465 E 88,825.504 Sta 300+21.70

Course from 125 to 126 N 47° 59' 10" E Dist 12.023

Point 126 N 79,447.512 E 88,834.437 Sta 300+33.73

Course from 126 to 127 N 51° 35' 39" E Dist 110.023

Point 127 N 79,515.862 E 88,920.655 Sta 301+43.75

Course from 127 to 128 N 49° 54' 22" E Dist 18.000

Point 128 N 79,527.455 E 88,934.425 Sta 301+61.75

Course from 128 to 129 N 50° 16' 33" E Dist 65.000

Point 129 N 79,568.996 E 88,984.418 Sta 302+26.75

Course from 129 to 130 N 50° 17' 42" E Dist 28.319

Point 130 N 79,587.087 E 89,006.205 Sta 302+55.07

Course from 130 to 131 N 82° 51' 41" E Dist 113.013

Point 131 N 79,601.131 E 89,118.343 Sta 303+68.08

Course from 131 to 132 N 78° 59' 25" E Dist 150.096

Point 132 N 79,629.796 E 89,265.676 Sta 305+18.18

==========
Ending chain BERM_AL description

HORIZONTAL ALIGNMENT & CONTROL

File: 09336001 Horz & Vert Control.dgn
Scale: 1:250
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Design with Purpose. Build with Confidence.
333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	G1

GENERAL INFORMATION

LEGEND

- GAS LINE
- ELECTRICAL SERVICE
- POWER LINE
- OVERHEAD POWER LINE
- SANITARY SEWER
- STORM SEWER
- TELEPHONE LINE
- FIBER OPTIC TELE. LINE
- OVERHEAD TELEPHONE LINE
- CABLE TV LINE
- OVERHEAD CABLE TV LINE
- WATER LINE
- FENCE - CHAIN LINK
- FENCE - R.O.W. OR WIRE
- FENCE - WOOD
- FLOWLINE
- CENTER LINE DRIVE
- BENCH MARK
- CENTER PIVOT
- CONTROL POINT
- DIKE
- GAS METER
- GAS VALVE
- GRID TICK
- GUARDRAIL
- GUARD POST
- GUY POLE
- GUY WIRE
- LIGHT POLE
- MAILBOX
- MANHOLE
- MARSH
- OIL WELL
- PHOTO CODE POINT
- POWER BOX
- POWER POLE
- POWER PULL BOX
- PROPANE TANK
- R.O.W. MARKER
- ADVANCED R.R. WARNING SIGN
- RAILROAD WARNING
- RAILROAD TRACKS
- RETAINING WALL
- SATELLITE DISH
- SIGN
- TRAFFIC SIGNAL
- TRAFFIC SIGNAL/ST. LIGHT
- TELEPHONE BOX
- TELE. FIBER OPTICS BOX
- TELEPHONE PULL BOX
- TELEPHONE POLE
- TELEVISION BOX
- TREE - CONIFEROUS
- TREE - DECIDUOUS
- TREE STUMP
- WATER (FIRE) HYDRANT
- WATER VALVE
- WATER METER
- WELL
- WINDMILL

CULVERT PIPE LEGEND		
TYPE		DESCRIPTION
1	RCSP	Reinforced Concrete Sewer Pipe
2	RCP	Reinforced Concrete Pipe
3	GCCMP	Galvanized (zinc) Coated Corrugated Metal Pipe
4	ACCMP	Aluminum Coated Corrugated Metal Pipe
5	PCCMP	Polymer Coated Corrugated Metal Pipe
6	HDPE-CI	High Density Polyethylene (corrugated Interior)
7	HDPE-SI	High Density Polyethylene (smooth Interior)
8	PVC	Polyvinyl Chloride Pipe

EARTHWORK QUANTITIES		
STATION TO STATION	EXCAVATION AVAILABLE (CU. YDS.)	EARTHWORK MEASURED IN EMBANKMENT (CU. YDS.)
WORTHMAN BOULEVARD	882	6,476
PINE STREET	403	59
DETENTION POND	11,060	6,510
TOTAL	12,345	13,045

VOLUMES COMPUTED FROM GRADING TERRAIN MODEL
EARTHWORK MEASURED IN EMBANKEMENT IS AN ESTABLISHED QUANTITY
NO BALANCE FACTOR APPLIED

COMPACTION REQUIREMENTS

The following compaction requirements are recommended for the plans.

COMPACTION REQUIREMENTS
Class III (See Specifications)

	SOIL TYPE	DEPTH BELOW FINISH SUBGRADE	PERCENT DENSITY	MOISTURE REQUIREMENTS MINIMUM	MAXIMUM
Embankment / Roadway Grading, including driveways, to receive concrete pavement	Silt-Clay	Upper 3 feet	98 Min.	Opt. -3%	Opt. +2%
	Silt-Clay	At depths greater than 3 feet	95 Min.	Opt. -3%	Opt. +2%
	Granular	All depths	100 Min.	**	**
Embankment / Roadway Grading, including driveways, to receive flexible pavement	Silt-Clay	Upper 3 feet	100 Min.	Opt. -2%	Opt. +1%
	Silt-Clay	At depths greater than 3 feet	95 Min.	Opt. -3%	Opt. +2%
	Granular	All depths	100 Min.	**	**
Embankment / Roadway Grading to receive gravel surfacing / crushed rock embedment	All	All depths	95 Min.	**	**
Embankment / Roadway Grading not to be surfaced	All	All depths	95 Min.	Opt. -3%	Opt. +2%
Subgrade Preparation, Shoulder Subgrade Preparation (Concrete Pavement)	Silt-Clay	The upper 6 inches of subgrade soil	98 Min.	Opt. -3%	Opt. +2%
	Granular	The upper 6 inches of subgrade soil	100 Min.	**	**
Subgrade Preparation, Shoulder Subgrade Preparation (Flexible Pavement)	Silt-Clay	The upper 6 inches of subgrade soil	100 Min.	Opt. -2%	Opt. +1%
	Granular	The upper 6 inches of subgrade soil	100 Min.	**	**
Embankment of driveways which are not to be surfaced	All	All depths	Class I	(See Specifications)	
Bituminous Pavement Patching	All	Underlying Material	100 Min.	(See Specifications)	
Foundation Course / Subgrade Stabilization	--	--	100 Min.	(See Specifications)	
Granular Structural Fill (MSE Walls, Granular Fill for bridges, Culverts, etc)	Granular	All depths	100 Min.	Opt. -3%	Opt. +3%

** Moisture as necessary to obtain density.
(A moisture target value at maximum density shall be established in the field by the Contractor during the compaction process. The acceptable moisture content shall be ± 2% of the target value.)

NOTES

The location of all aerial and underground utility facilities may not be indicated in these plans. Underground utilities, whether indicated or not will be located and flagged by the utilities at the request of the contractor. Utilities are located within the project area. Any utility relocation will be at the contractors expense. Nebraska One Call will be utilized.

No excavation will be permitted in the area of underground utility facilities until all such facilities have been located and identified to the satisfaction of all parties. The excavation must be accomplished with extreme care in order to avoid any possibility of damage to the utility facility.

The Contractor will be required to furnish Borrow on this Project.

The Contractor shall furnish and maintain all necessary barricades, warning signs, lights and flaggers per the MUTCD and NDOT Standard Specifications. The Contractor shall inspect and verify all appropriate barricades and signs are placed accordingly and upright at the end of each construction day, or as directed by the Engineer.

Prior to construction, Contractor shall submit to the City Engineer for approval a traffic control plan and construction schedule for road closure. Contractor must give 48 hours notice prior to pavement or tree removals to the City Engineer.

Contractor to remove, salvage and reset any necessary traffic signs in their original location, unless noted otherwise.

Concrete washout stations shall be constructed as needed during the paving operations. This shall be considered subsidiary to other items receiving direct payment.

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

File: 09336001 General Information.dgn
Scale: 1:200
PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Computer: LINMEGANS
Date: 12-MAR-2025 10:06

ROADWAY DESIGN DIVISION.

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333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	G2

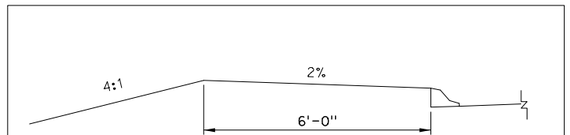
0 20' 40'
SCALE

PROPERTY LINE
EXISTING EASEMENT
RIGHT-OF-WAY
FUTURE SIDEWALK (BY OTHERS)
WORTHMAN BLVD
DO NOT DISTURB PULL BOX
DO NOT DISTURB POWER POLE
PROJECT ℄
30'-0" 3.5:1 FORESLOPE
DO NOT DISTURB FENCE
TEMPORARY EASEMENT
UTILITY EASEMENT
RIGHT-OF-WAY
PERMANENT EASEMENT
PERMANENT EASEMENT
PERMANENT EASEMENT
1455.00

103 104 105 106 107 108

LEGEND

- LIMITS OF CUL-DE-SAC GRADING
- 1450 MAJOR PROPOSED CONTOURS
- MINOR PROPOSED CONTOURS
- EXISTING CONTOURS



CUL-DE-SAC GRADING TYPICAL
NOT TO SCALE

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

CUL-DE-SAC GRADING PLAN

File: 09336001 Cul-de-Sac Grading.dgn
Scale: 1:40
PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Computer: LINMEGANS
Date: 12-MAR-2025 10:06

ROADWAY DESIGN DIVISION.

File: 09336001 Detention Grading.dgn
Scale: 1:100

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 13-MAR-2025 09:24
Computer: LINMEGANS

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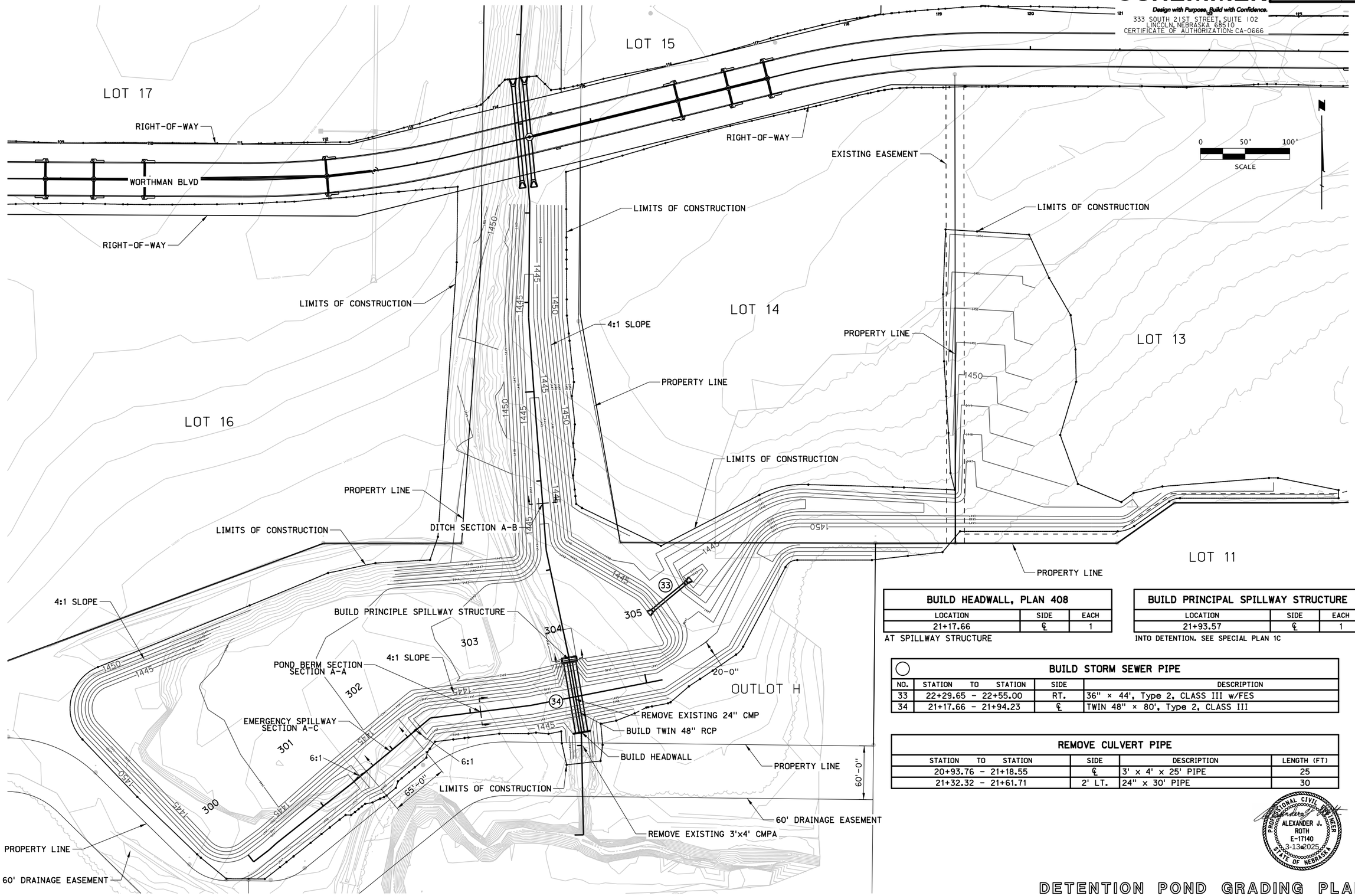
PROJECT NO.	SHEET NO.
09336.001-C	G3



BUILD HEADWALL, PLAN 408		
LOCATION	SIDE	EACH
21+17.66	℄	1

AT SPILLWAY STRUCTURE

BUILD PRINCIPAL SPILLWAY STRUCTURE		
LOCATION	SIDE	EACH
21+93.57	℄	1

INTO DETENTION. SEE SPECIAL PLAN 1C

BUILD STORM SEWER PIPE			
NO.	STATION TO STATION	SIDE	DESCRIPTION
33	22+29.65 - 22+55.00	RT.	36" x 44", Type 2, CLASS III w/FES
34	21+17.66 - 21+94.23	℄	TWIN 48" x 80", Type 2, CLASS III

REMOVE CULVERT PIPE			
STATION TO STATION	SIDE	DESCRIPTION	LENGTH (FT)
20+93.76 - 21+18.55	℄	3' x 4' x 25' PIPE	25
21+32.32 - 21+61.71	2' LT.	24" x 30' PIPE	30

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DETENTION POND GRADING PLAN

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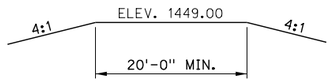
PROJECT NO.	SHEET NO.
09336.001-C	G4

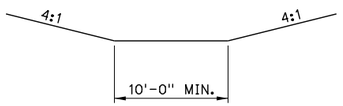
ROADWAY DESIGN DIVISION.

Hyrdologic Information	Drainage Area (acres)	Time of Concentration (minutes)	Curve Number	2-year Discharge (cfs)	10-year Discharge (cfs)	50-year Discharge (cfs)	100-year Discharge (cfs)
Existing Conditions	69.46	20	86	120	215	346	411
Full Build Out Conditions	74.47	21	87	135	236	376	445

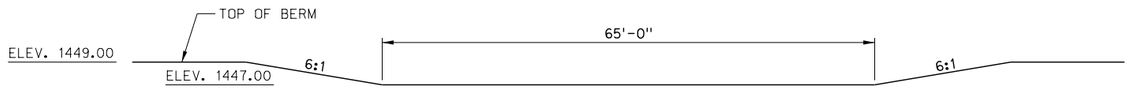
Detention Pond Information	2-year Event	10-year Event	50-year Event	100-year Event
Inflow (cfs)	135	236	376	445
Outflow (cfs)	65	129	197	229
Water Surface Elevation (ft)	1,444.27	1,445.13	1,446.34	1,446.85



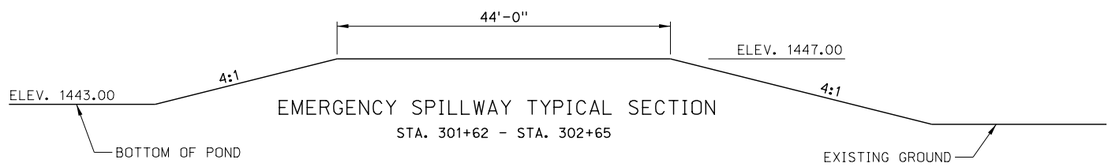
POND BERM TYPICAL SECTION VIEW A-A (SEE SHEET G3)
STA. 300+00 - STA. 301+44
STA. 302+40 - STA. 305+18



DITCH SECTION VIEW A-B (SEE SHEET G3)
STA. 23+25 - STA. 27+00



EMERGENCY SPILLWAY PROFILE VIEW A-C (SEE SHEET G3)



EMERGENCY SPILLWAY TYPICAL SECTION
STA. 301+62 - STA. 302+65

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3-13-2025
STATE OF NEBRASKA

DETENTION POND DETAILS

File: 09336001 Detention Pond Details.dgn
Scale: 1:40
LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:07
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ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:07 Computer: LINNEGANS

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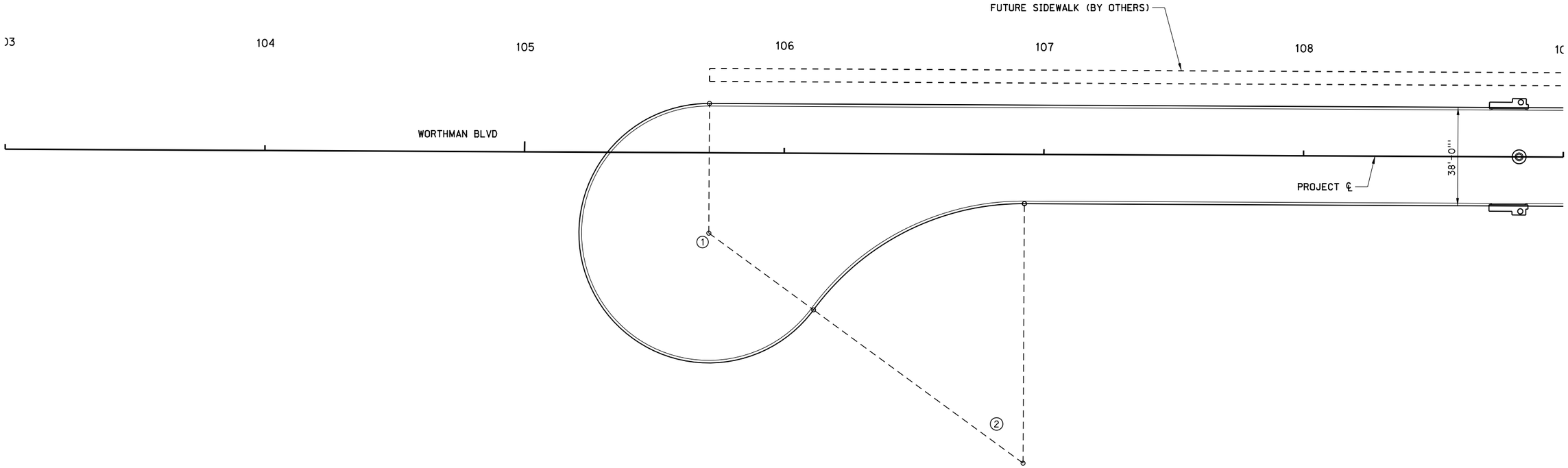
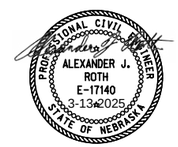
PROJECT NO.	SHEET NO.
09336.001-C	J1

0 20' 40'
SCALE

① 50.00' R.P. 31.00' RT. STA. 105+71.11
X=88263.41 Y=80160.49
P.C. 19.00' LT. STA. 105+71.11
X=88263.67 Y=80210.49
P.T. 60.33' RT. STA. 106+11.60
X=88303.76 Y=80130.95

② 100.00' R.P. 119.00' RT. STA. 106+92.58
X=88384.44 Y=80071.88
P.R.C. 60.33' RT. STA. 106+11.60
X=88303.76 Y=80130.95
P.T. 19.00' RT. STA. 106+92.58
X=88384.95 Y=80171.87





GEOMETRICS

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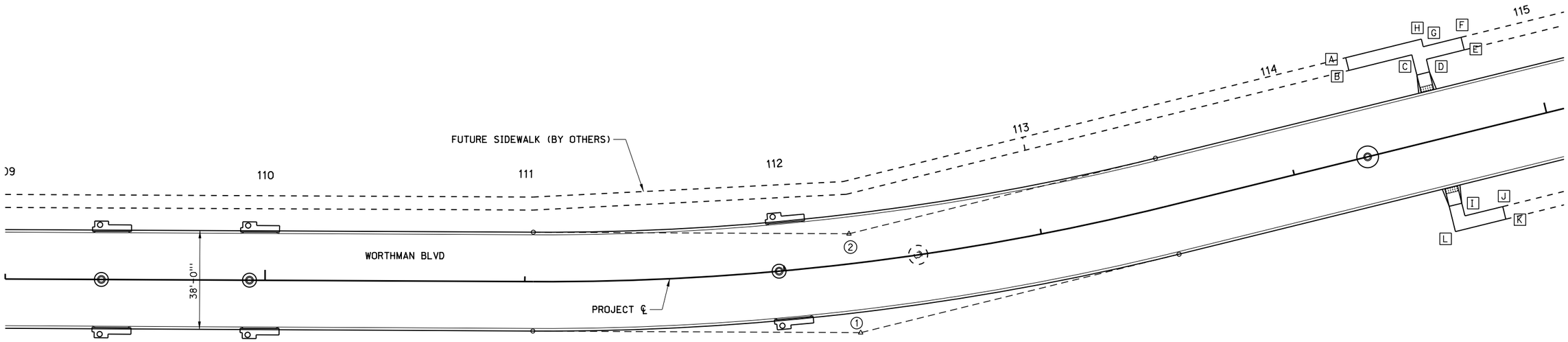
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J2

0 20' 40'
SCALE

① POINT 26.79' RT. STA. 112+26.42
X=88921.76 Y=80169.16
Δ = 14° 7' 16"
D = 5° 50' 26"
T = 121.51'
L = 241.78'
R = 981.00'
P.C. 19.00' RT. STA. 111+03.18
X=88795.55 Y=80169.80
P.T. 19.00' RT. STA. 113+49.65
X=89044.31 Y=80199.33

② POINT 11.50' LT. STA. 112+26.42
X=88917.24 Y=80207.18
Δ = 14° 7' 16"
D = 5° 37' 22"
T = 126.21'
L = 251.14'
R = 1019.00'
P.C. 19.00' LT. STA. 111+03.18
X=88795.74 Y=80207.80
P.T. 19.00' LT. STA. 113+49.65
X=89035.22 Y=80236.23



Ⓐ SIDEWALK POINT 39.00 LT. STA. 114+30.00
X=89108.47 Y=80274.86

Ⓑ SIDEWALK POINT 34.00 LT. STA. 114+30.00
X=89109.66 Y=80270.01

Ⓒ SIDEWALK POINT 34.00 LT. STA. 114+55.00
X=89133.94 Y=80275.98

Ⓓ SIDEWALK POINT 31.00 LT. STA. 114+60.00
X=89139.51 Y=80274.27

Ⓔ SIDEWALK POINT 31.00 LT. STA. 114+75.00
X=89154.07 Y=80272.85

Ⓕ SIDEWALK POINT 36.00 LT. STA. 114+75.00
X=89152.88 Y=80282.71

Ⓖ SIDEWALK POINT 39.00 LT. STA. 114+60.00
X=89138.31 Y=80279.12

Ⓗ SIDEWALK POINT 39.00 LT. STA. 114+60.00
X=89137.60 Y=80282.03

Ⓘ SIDEWALK POINT 31.00 RT. STA. 114+60.00
X=89154.33 Y=80214.06

Ⓙ SIDEWALK POINT 31.00 RT. STA. 114+75.00
X=89168.90 Y=80217.65

Ⓚ SIDEWALK POINT 36.00 RT. STA. 114+75.00
X=89170.09 Y=80212.79

Ⓛ SIDEWALK POINT 36.00 RT. STA. 114+55.00
X=89150.67 Y=80208.01

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

GEOMETRICS

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:07
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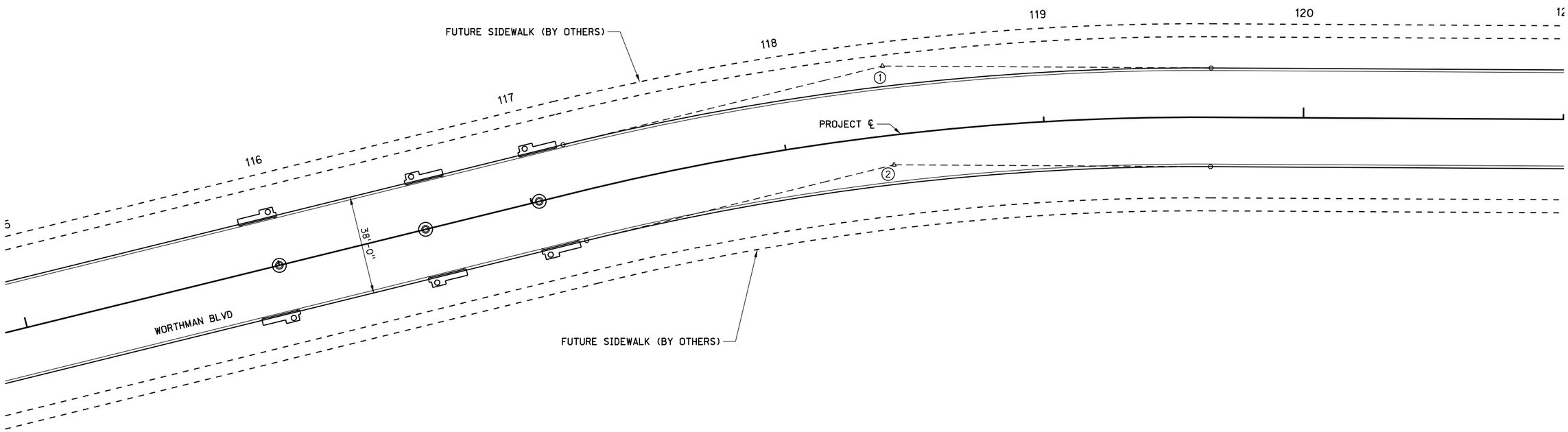
File: 09336001 GE02.dgn
Scale: 1:40

ROADWAY DESIGN DIVISION.

① POINT 26.83' LT. STA. 118+40.73
X=89514.97 Y=80354.35
Δ = 14° 9' 38"
D = 5° 37' 22"
T = 126.57'
L = 251.84'
R = 1019.00'
P.C. 19.00' LT. STA. 117+17.16
X=89392.08 Y=80324.09
P.T. 19.00' LT. STA. 119+64.30
X=89641.54 Y=80353.62

② POINT 11.46' RT. STA. 118+40.73
X=89519.47 Y=80316.32
Δ = 14° 9' 38"
D = 5° 50' 26"
T = 121.85'
L = 242.45'
R = 981.00'
P.C. 19.00' RT. STA. 117+17.16
X=89401.16 Y=80287.19
P.T. 19.00' RT. STA. 119+64.30
X=89641.32 Y=80315.62

0 20' 40'
SCALE



PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:07
Computer: LINMEGANS

File: 09336001 GE03.dgn
Scale: 1:40

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

GEOMETRICS

SCHEMMER
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333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J4

SCALE 0 20' 40'

① 50.00' R.P. 69.00' LT. STA. 123+70.53
X=90048.04 Y=80401.29
P.C. 19.00' LT. STA. 123+70.53
X=90047.76 Y=80351.29
P.T. 68.70' LT. STA. 124+20.50
X=90098.04 Y=80400.69

② 50.00' R.P. 69.00' RT. STA. 123+69.65
X=90046.37 Y=80263.30
P.C. 19.00' RT. STA. 123+69.65
X=90046.66 Y=80313.29
P.T. 69.30' RT. STA. 124+19.68
X=90096.37 Y=80262.69

③ POINT 16.00' LT. STA. 503+96.50
X=90098.37 Y=80428.58

④ POINT 16.00' RT. STA. 503+96.50
X=90130.37 Y=80428.20

⑤ 50.00' R.P. 74.04' LT. STA. 125+02.53
X=90180.10 Y=80405.52
P.C. 74.34' LT. STA. 124+52.53
X=90130.11 Y=80406.13
P.T. 24.04' LT. STA. 125+02.53
X=90179.80 Y=80355.53

⑥ POINT 22.52' LT. STA. 124+22.23
X=90099.49 Y=80354.50

⑦ POINT 22.04' LT. STA. 125+02.53
X=90179.78 Y=80353.53

⑧ POINT 22.24' LT. STA. 124+69.16
X=90146.41 Y=80353.93

⑨ POINT 22.06' RT. STA. 124+69.05
X=90146.03 Y=80309.63

⑩ POINT 22.19' LT. STA. 124+77.07
X=90154.32 Y=80353.83

⑪ POINT 22.06' RT. STA. 124+76.98
X=90153.96 Y=80309.59

⑫ POINT 22.06' RT. STA. 124+21.97
X=90098.95 Y=80309.92

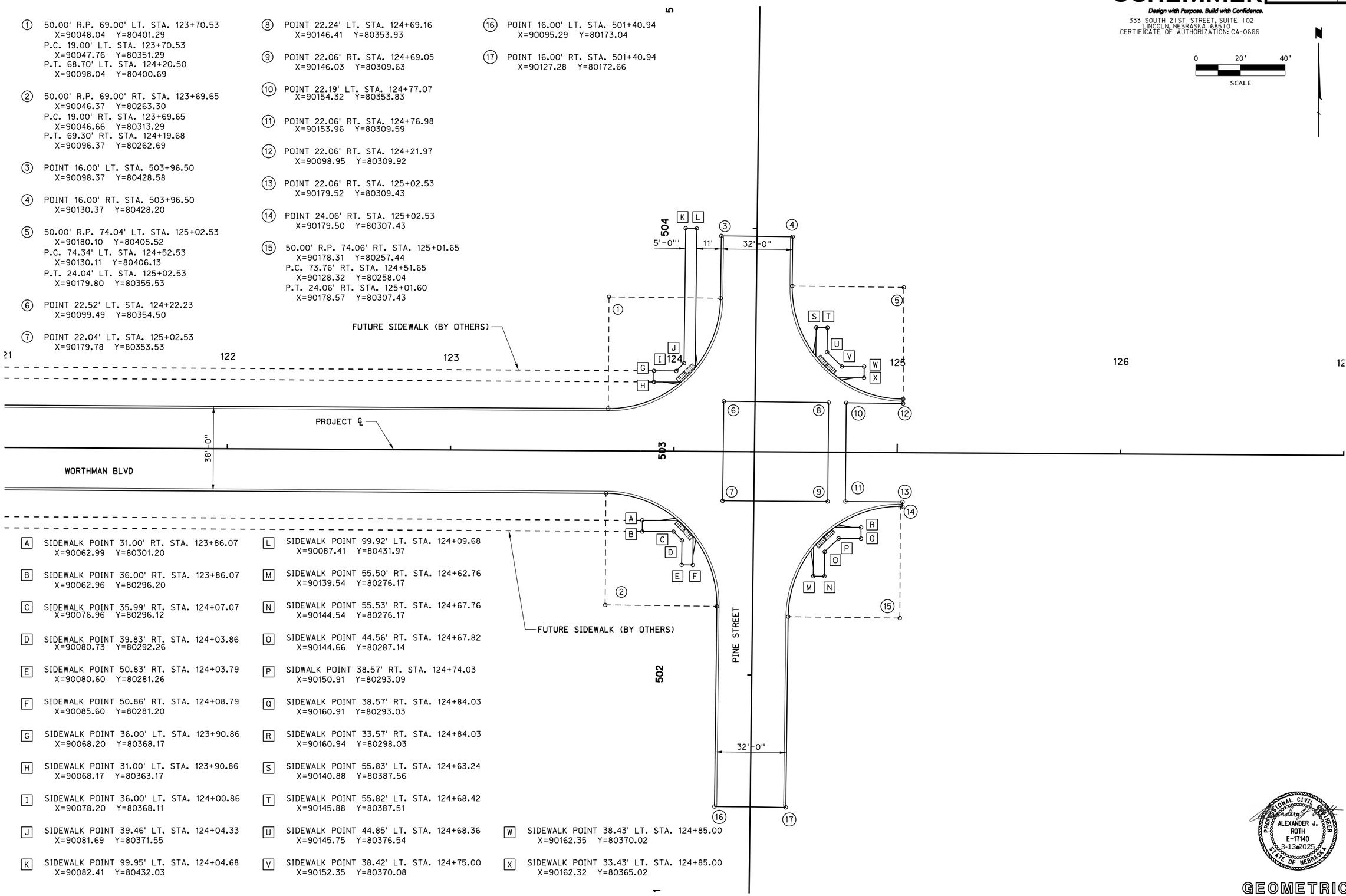
⑬ POINT 22.06' RT. STA. 125+02.53
X=90179.52 Y=80309.43

⑭ POINT 24.06' RT. STA. 125+02.53
X=90179.50 Y=80307.43

⑮ 50.00' R.P. 74.06' RT. STA. 125+01.65
X=90178.31 Y=80257.44
P.C. 73.76' RT. STA. 124+51.65
X=90128.32 Y=80258.04
P.T. 24.06' RT. STA. 125+01.60
X=90178.57 Y=80307.43

⑯ POINT 16.00' LT. STA. 501+40.94
X=90095.29 Y=80173.04

⑰ POINT 16.00' RT. STA. 501+40.94
X=90127.28 Y=80172.66



[A] SIDEWALK POINT 31.00' RT. STA. 123+86.07
X=90062.99 Y=80301.20

[B] SIDEWALK POINT 36.00' RT. STA. 123+86.07
X=90062.96 Y=80296.20

[C] SIDEWALK POINT 35.99' RT. STA. 124+07.07
X=90076.96 Y=80296.12

[D] SIDEWALK POINT 39.83' RT. STA. 124+03.86
X=90080.73 Y=80292.26

[E] SIDEWALK POINT 50.83' RT. STA. 124+03.79
X=90080.60 Y=80281.26

[F] SIDEWALK POINT 50.86' RT. STA. 124+08.79
X=90085.60 Y=80281.20

[G] SIDEWALK POINT 36.00' LT. STA. 123+90.86
X=90068.20 Y=80368.17

[H] SIDEWALK POINT 31.00' LT. STA. 123+90.86
X=90068.17 Y=80363.17

[I] SIDEWALK POINT 36.00' LT. STA. 124+00.86
X=90078.20 Y=80368.11

[J] SIDEWALK POINT 39.46' LT. STA. 124+04.33
X=90081.69 Y=80371.55

[K] SIDEWALK POINT 99.95' LT. STA. 124+04.68
X=90082.41 Y=80432.03

[L] SIDEWALK POINT 99.92' LT. STA. 124+09.68
X=90087.41 Y=80431.97

[M] SIDEWALK POINT 55.50' RT. STA. 124+62.76
X=90139.54 Y=80276.17

[N] SIDEWALK POINT 55.53' RT. STA. 124+67.76
X=90144.54 Y=80276.17

[O] SIDEWALK POINT 44.56' RT. STA. 124+67.82
X=90144.66 Y=80287.14

[P] SIDWALK POINT 38.57' RT. STA. 124+74.03
X=90150.91 Y=80293.09

[Q] SIDEWALK POINT 38.57' RT. STA. 124+84.03
X=90160.91 Y=80293.03

[R] SIDEWALK POINT 33.57' RT. STA. 124+84.03
X=90160.94 Y=80298.03

[S] SIDEWALK POINT 55.83' LT. STA. 124+63.24
X=90140.88 Y=80387.56

[T] SIDEWALK POINT 55.82' LT. STA. 124+68.42
X=90145.88 Y=80387.51

[U] SIDEWALK POINT 44.85' LT. STA. 124+68.36
X=90145.75 Y=80376.54

[V] SIDEWALK POINT 38.42' LT. STA. 124+75.00
X=90152.35 Y=80370.08

[W] SIDEWALK POINT 38.43' LT. STA. 124+85.00
X=90162.35 Y=80370.02

[X] SIDEWALK POINT 33.43' LT. STA. 124+85.00
X=90162.32 Y=80365.02

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

GEOMETRICS

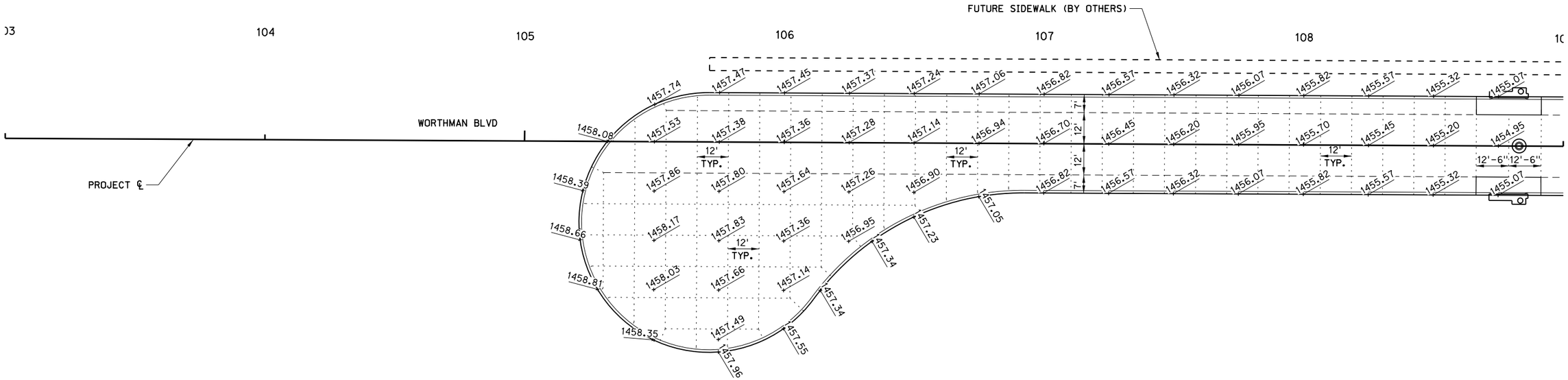
PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:07
Computer: LINMEGANS
File: 09336001 GE04.dgn
Scale: 1:40

SCHEMMER
Design with Purpose. Build with Confidence.
333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J5

ROADWAY DESIGN DIVISION.

0 20' 40'
SCALE



LEGEND

- LONGITUDINAL JOINT (TIED)
- CONTRACTION JOINT
- CONSTRUCTION JOINT

ELEVATION AT CURB LOCATIONS ARE TOP OF CURB, UNLESS SHOWN OTHERWISE.

FOR DETAILS NOT SHOWN SEE PLAN 329

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

JOINTS AND GRADES

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:07
Computer: LINMEGANS

File: 09336001 JG01.dgn
Scale: 1:40

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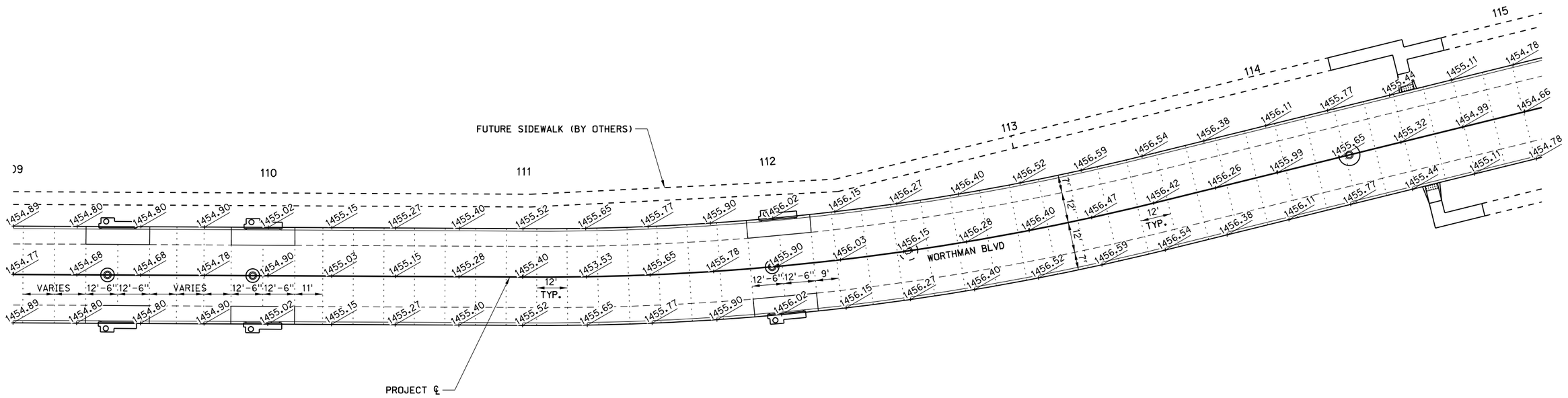
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J6

0 20' 40'
SCALE



LEGEND

- – – – – LONGITUDINAL JOINT (TIED)
- . . . . . CONTRACTION JOINT
- ——— CONSTRUCTION JOINT

ELEVATION AT CURB LOCATIONS ARE TOP OF CURB, UNLESS SHOWN OTHERWISE.

FOR DETAILS NOT SHOWN SEE PLAN 329

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

JOINTS AND GRADES

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:07 Computer: LINMEGANS

File: 09336001 JG02.dgn
Scale: 1:40

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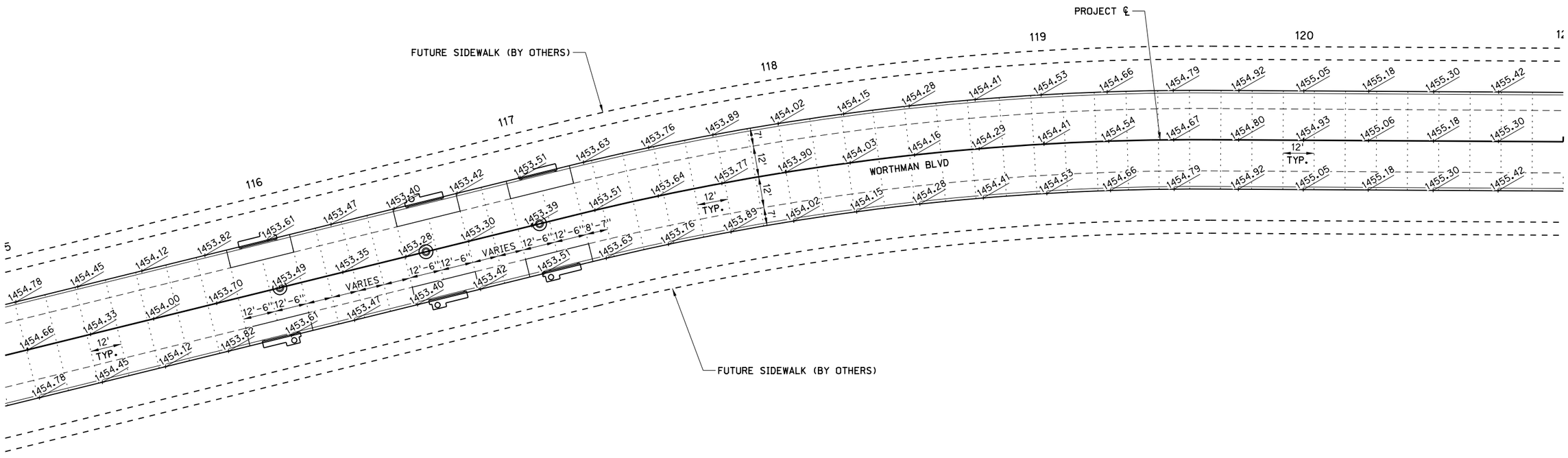
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J7

0 20' 40'
SCALE



LEGEND

- LONGITUDINAL JOINT (TIED)
- CONTRACTION JOINT
- CONSTRUCTION JOINT

ELEVATION AT CURB LOCATIONS ARE TOP OF CURB, UNLESS SHOWN OTHERWISE.

FOR DETAILS NOT SHOWN SEE PLAN 329

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

JOINTS AND GRADES

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:07
Computer: LINMEGANS

File: 09336001 J603.dgn
Scale: 1:40

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:07
Computer: LINMEGANS

File: 09336001 JG04.dgn
Scale: 1:40

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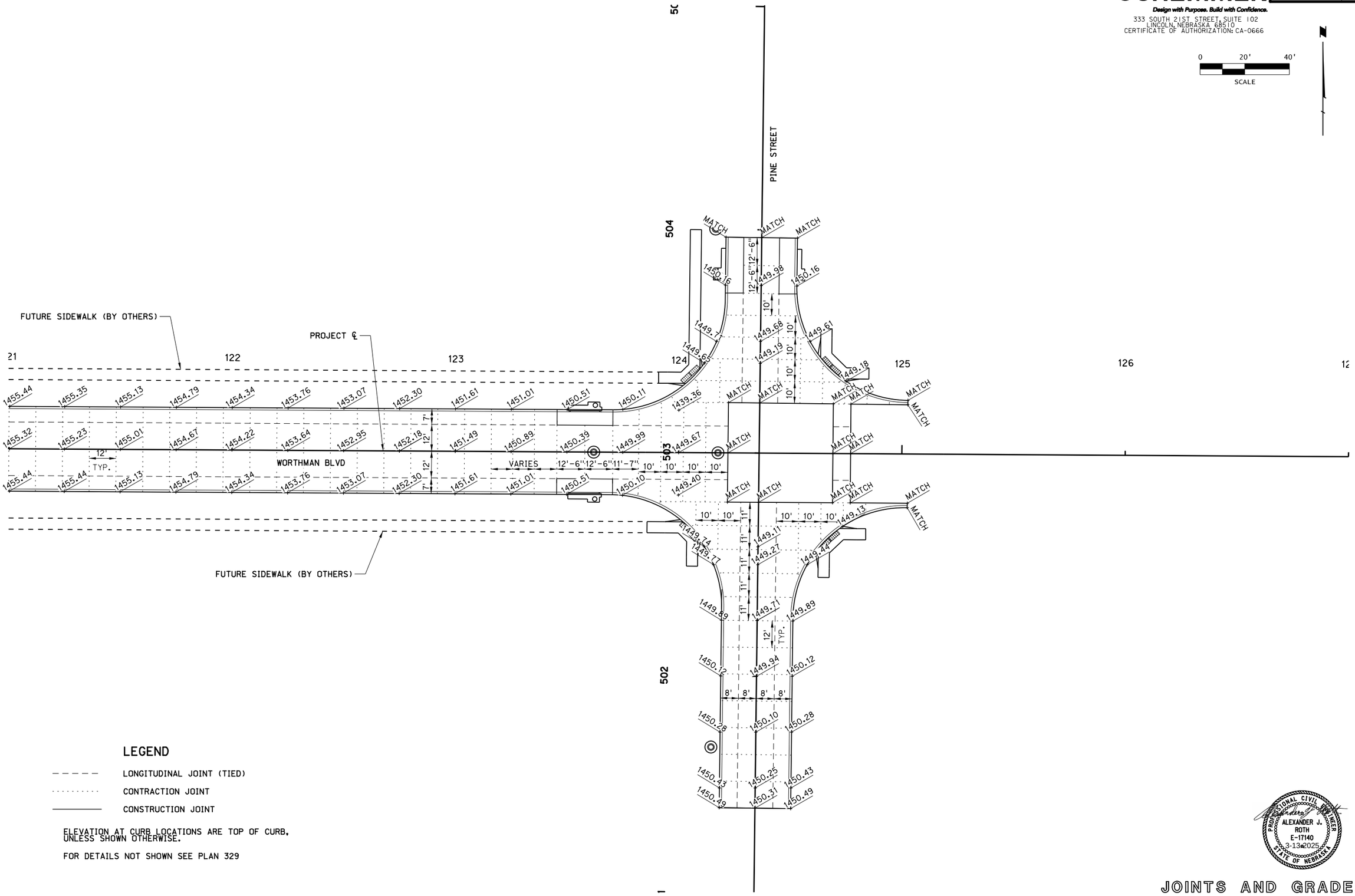
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J8

0 20' 40'
SCALE



LEGEND

- LONGITUDINAL JOINT (TIED)
- CONTRACTION JOINT
- CONSTRUCTION JOINT

ELEVATION AT CURB LOCATIONS ARE TOP OF CURB, UNLESS SHOWN OTHERWISE.

FOR DETAILS NOT SHOWN SEE PLAN 329

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

JOINTS AND GRADES

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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J9

0 20' 40'
SCALE

N

○ BUILD STORM SEWER PIPE

NO.	STATION TO STATION	SIDE	DESCRIPTION
1	108+83	LT.	15" × 22', Type 2, CLASS III, FIll = 2.2'
2	108+83	RT.	15" × 22', Type 2, CLASS III, FIll = 2.2'
3	108+37 - 109+37	℄	18" × 54', Type 2, CLASS III, FIll = 2.4'
4	109+37	LT.	15" × 22', Type 2, CLASS III, FIll = 2.2'
5	109+37	RT.	15" × 22', Type 2, CLASS III, FIll = 2.2'
6	109+37 - 109+94	℄	18" × 57', Type 2, CLASS III, FIll = 2.6'
7	109+94	LT.	15" × 22', Type 2, CLASS III, FIll = 2.2'
8	109+94	RT.	15" × 22', Type 2, CLASS III, FIll = 2.2'
9	109+94 - 111+98	LT./RT.	18" × 204, Type 2, CLASS III, FIll = 3.2'
10	111+98	LT.	15" × 22', Type 2, CLASS III, FIll = 2.2'
11	111+98	RT.	15" × 22', Type 2, CLASS III, FIll = 2.2'

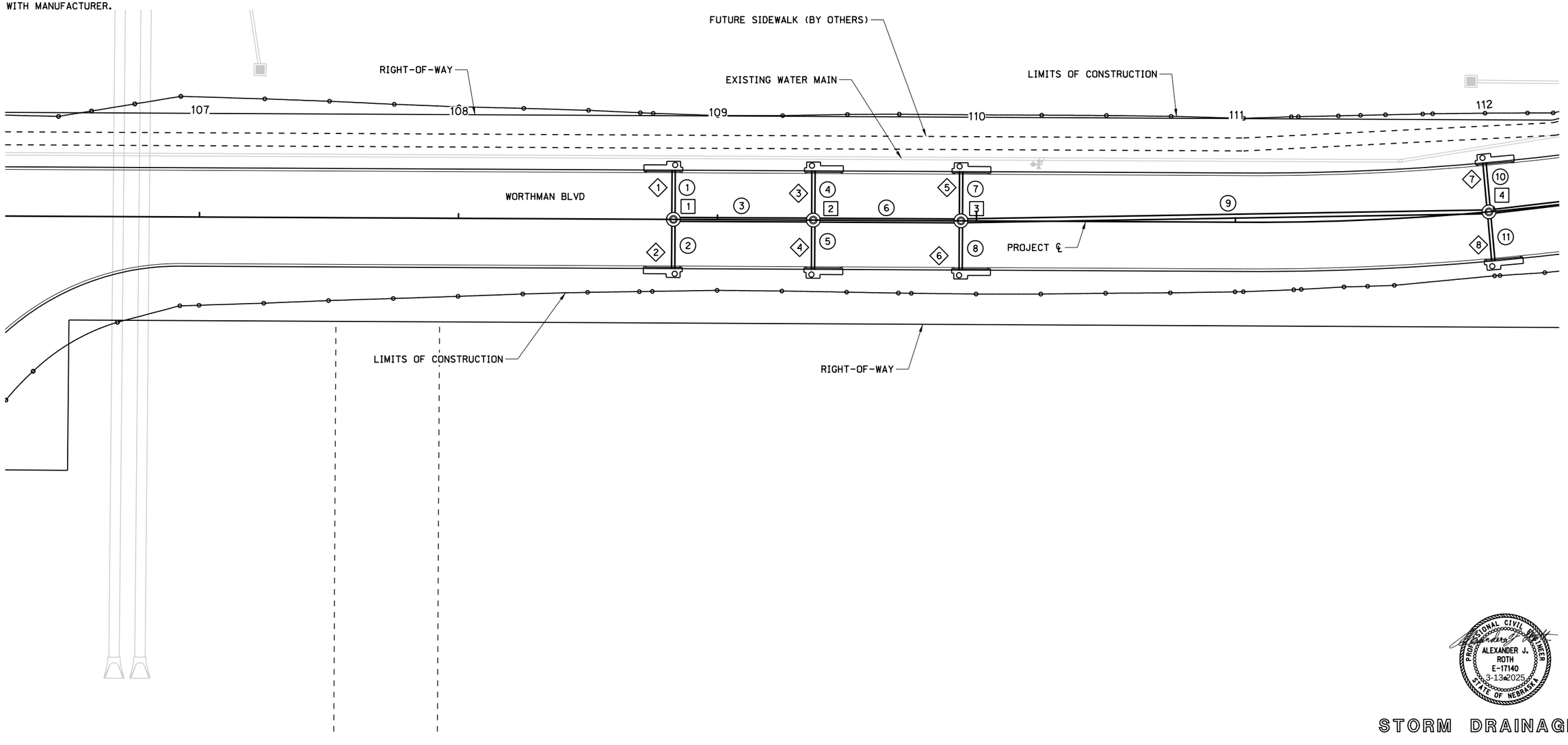
◇ BUILD CURB INLET, PLAN 443

NO.	STATION	SIDE	"X"	"A"	"Y"
1	108+83	21.00' LT.	3'-11"	2'-8"	12'-0"
2	108+83	21.00' RT.	3'-11"	2'-8"	12'-0"
3	109+37	21.00' LT.	3'-11"	2'-8"	12'-0"
4	109+37	21.00' RT.	3'-11"	2'-8"	12'-0"
5	109+94	21.00' LT.	3'-11"	2'-8"	12'-0"
6	109+94	21.00' RT.	3'-11"	2'-8"	12'-0"
7	111+98	21.00' LT.	3'-11"	2'-8"	12'-0"
8	111+98	21.00' RT.	3'-11"	2'-8"	12'-0"

□ BUILD MANHOLE, PLAN 435

NO.	STATION	SIDE	FRAME	FLANGE	RING	DIAMETER*	COVER TYPE
1	108+83	℄	II	-	-	48"	A
2	109+37	℄	II	-	-	48"	A
3	109+94	℄	II	-	-	48"	A
4	111+98	℄	II	-	-	48"	A

* FOR INFORMATION ONLY - CONTRACTOR TO CONFIRM MANHOLE DIAMETER WITH MANUFACTURER.



STORM DRAINAGE

File: 09336001 Storm Drain 01.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 13-MAR-2025 09:25 Computer: LINMEGANS
Scale: 1:40

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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J10

○ BUILD STORM SEWER PIPE

NO.	STATION TO STATION	SIDE	DESCRIPTION
12	111+98 - 112+41.88	LT.	18" × 44', Type 2, CLASS III, FIII = 5.4'
13	114+09.23 - 114+25.04	LT./RT.	48" × 106', Type 2, CLASS III w/FES, FIII = 4.4'
14	114+29.07 - 114+37.87	LT.	48" × 59', Type 2, CLASS III w/FES, FIII = 4.2'
15	114+21.86 - 114+19.15	RT.	48" × 48', Type 2, CLASS III w/FES, FIII = 4.6'
16	114+29.07 - 116+00	℄	18" × 171', Type 2, CLASS III, FIII = 3.3'
17	116+00	LT.	15" × 22', Type 2, CLASS III, FIII = 2.2'
18	116+00	RT.	15" × 22', Type 2, CLASS III, FIII = 2.2'
19	116+00 - 116+58	℄	18" × 58', Type 2, CLASS III, FIII = 2.7'
20	116+58	LT.	15" × 22', Type 2, CLASS III, FIII = 2.2'
21	116+58	RT.	15" × 22', Type 2, CLASS III, FIII = 2.2'
22	116+58 - 117+03	℄	18" × 45', Type 2, CLASS III, FIII = 2.5'
23	117+03	LT.	15" × 22', Type 2, CLASS III, FIII = 2.2'
24	117+03	RT.	15" × 22', Type 2, CLASS III, FIII = 2.2'

◇ BUILD CURB INLET, PLAN 443

NO.	STATION	SIDE	"X"	"A"	"Y"
9	116+00	21.00' LT.	3'-11"	2'-8"	12'-0"
10	116+00	21.00' RT.	3'-11"	2'-8"	12'-0"
11	116+58	21.00' LT.	3'-11"	2'-8"	12'-0"
12	116+58	21.00' RT.	3'-11"	2'-8"	12'-0"
13	117+03	21.00' LT.	3'-11"	2'-8"	12'-0"
14	117+03	21.00' RT.	3'-11"	2'-8"	12'-0"

□ BUILD MANHOLE, PLAN 435

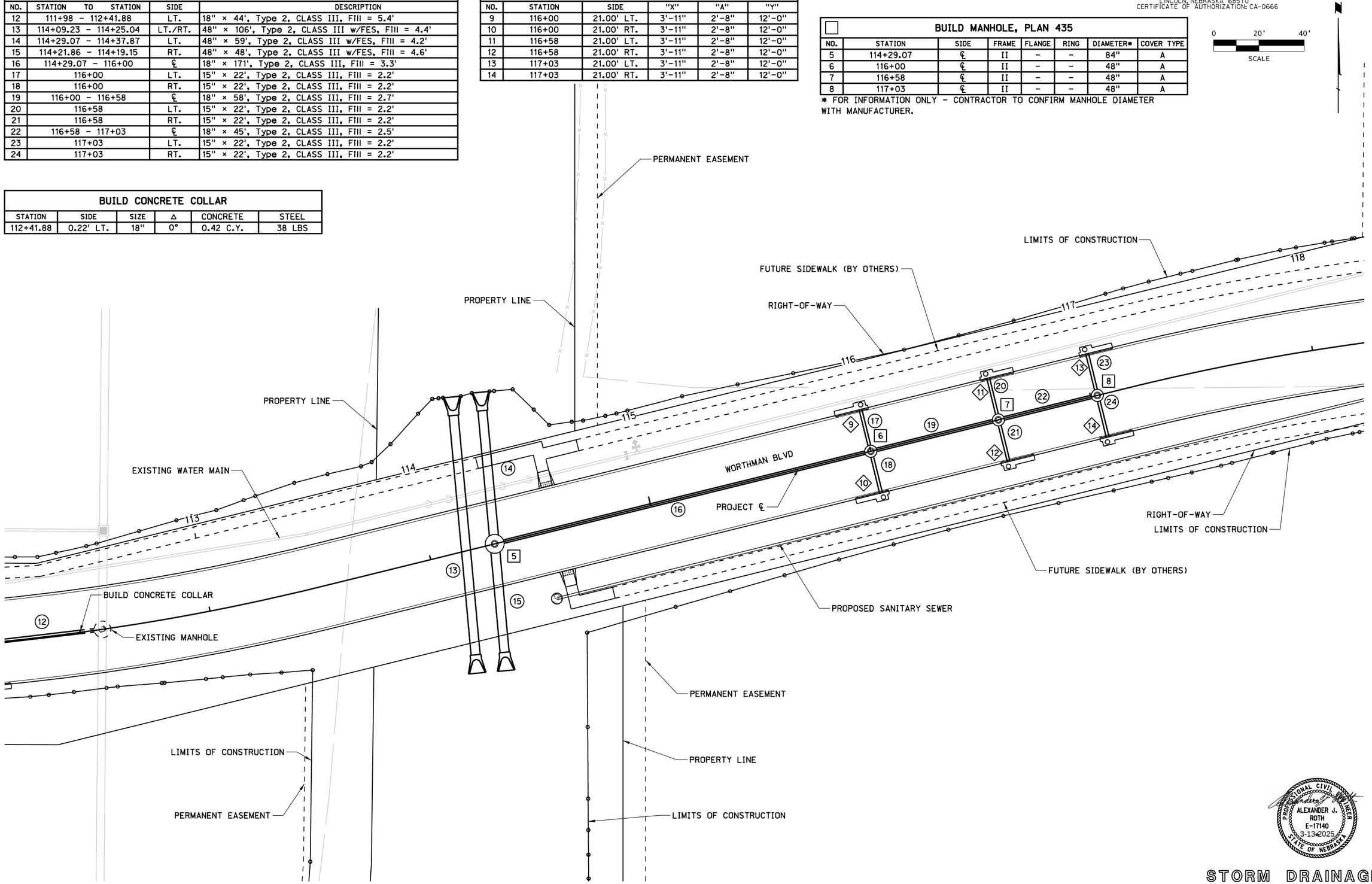
NO.	STATION	SIDE	FRAME	FLANGE	RING	DIAMETER*	COVER TYPE
5	114+29.07	℄	II	-	-	84"	A
6	116+00	℄	II	-	-	48"	A
7	116+58	℄	II	-	-	48"	A
8	117+03	℄	II	-	-	48"	A

* FOR INFORMATION ONLY - CONTRACTOR TO CONFIRM MANHOLE DIAMETER WITH MANUFACTURER.

BUILD CONCRETE COLLAR

STATION	SIDE	SIZE	Δ	CONCRETE	STEEL
112+41.88	0.22' LT.	18"	0°	0.42 C.Y.	38 LBS

0 20' 40'
SCALE



PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

STORM DRAINAGE

File: 09336001 Storm Drain 02.dgnPROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Scale: 1:40
Date: 13-MAR-2025 09:25
Computer: LINMEGANS

SCHEMMER
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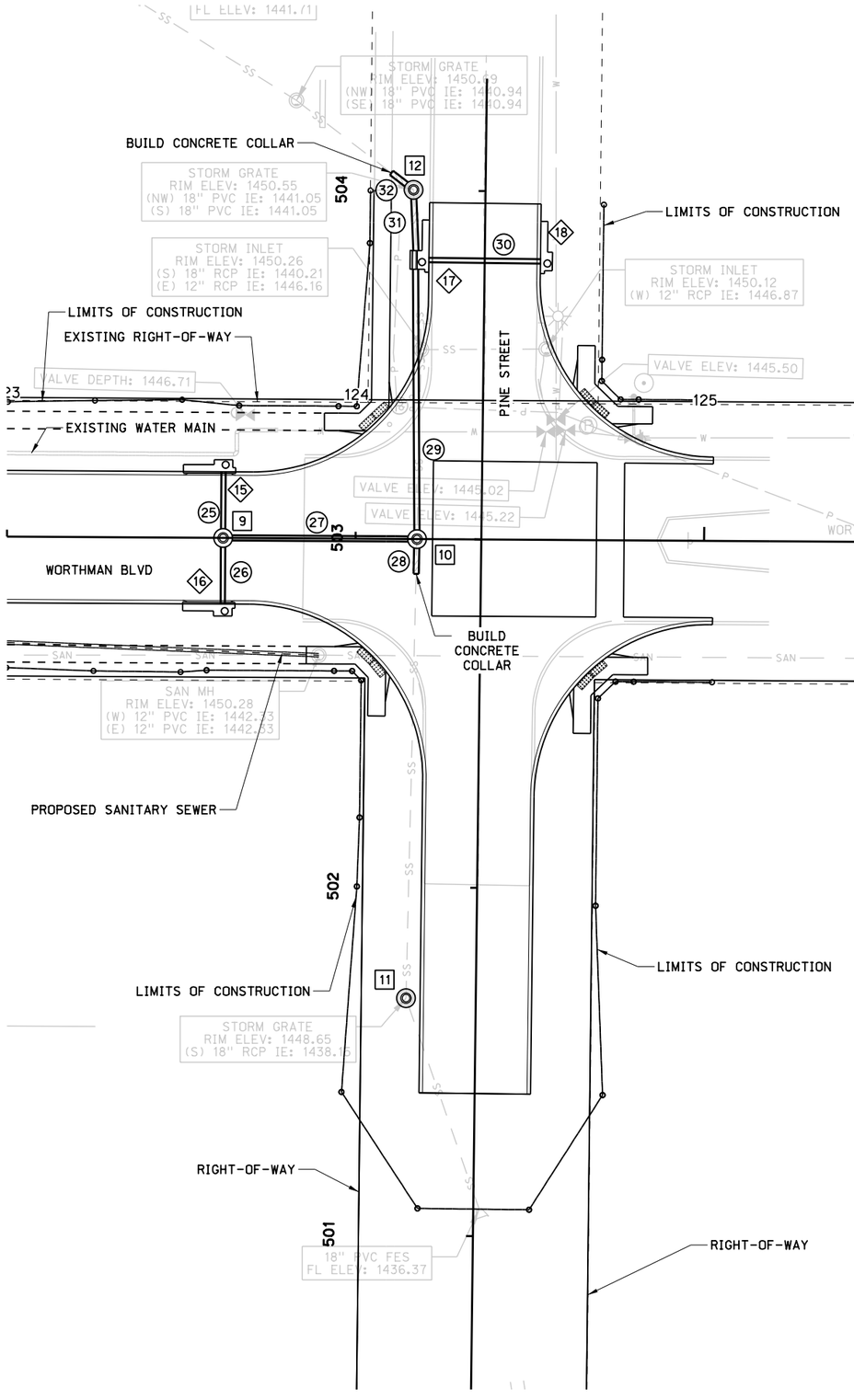
333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J11

ROADWAY DESIGN DIVISION.



REMOVE INLET		
STATION	SIDE	EACH
124+18.56	54.36' LT.	1
124+54.43	54.75' LT.	1

REMOVE MANHOLE		
STATION	SIDE	EACH
501+68.10	20.02' LT.	1
504+00.12	20.66' LT.	1

REMOVE STORM SEWER PIPE	
STATION TO STATION	SIZE
124+18.56, 54' LT - 124+54.43, 55' LT.	12" X 36'
503+54.26, 18' LT - 504+00.12, 21' LT	18" X 46'
502+89.89, 19' LT - 503+54.26, 18' LT	18" X 64'
504+00.12, 21' LT - 504+04.89, 27' LT	18" X 8'

BUILD CONCRETE COLLAR					
STATION	SIDE	SIZE	Δ	CONCRETE	STEEL
502+89.89	18.60' LT.	18"	0°	0.42 C.Y.	38 LBS
504+04.89	27.08' LT.	18"	9.3°	0.46 C.Y.	40 LBS

□ BUILD MANHOLE, PLAN 435							
NO.	STATION	SIDE	FRAME	FLANGE	RING	DIAMETER*	COVER TYPE
9	123+62.00	℄	II	-	-	48"	A
10	124+17.61	℄	II	-	-	48"	A
11	501+68.10	20.02' LT.	II	-	-	48"	A
12	504+00.12	20.66' LT.	II	-	-	48"	A

* FOR INFORMATION ONLY - CONTRACTOR TO CONFIRM MANHOLE DIAMETER WITH MANUFACTURER.

○ BUILD STORM SEWER PIPE			
NO.	STATION TO STATION	SIDE	DESCRIPTION
25	123+62	LT.	15" × 22', Type 2, CLASS III, Fill = 2.2'
26	123+62	RT.	15" × 22', Type 2, CLASS III, Fill = 2.2'
27	123+62.00 - 124+17.61	℄	18" × 56', Type 2, CLASS III, Fill = 2.2'
28	502+91.89 - 502+99.89	LT.	18" × 8', Type 2, CLASS III, Fill = 8.3'
29	502+99.89 - 503+80.00	LT.	18" × 80', Type 2, CLASS III, Fill = 7.5'
30	503+80	LT./RT.	15" × 36', Type 2, CLASS III, Fill = 2.4'
31	503+80.00 - 504+00.12	LT.	18" × 20', Type 2, CLASS III, Fill = 8.1'
32	504+00.12 - 504+04.89	LT.	18" × 8', Type 2, CLASS III, Fill = 8.2'

◇ BUILD CURB INLET, PLAN 443					
NO.	STATION	SIDE	"X"	"A"	"Y"
15	123+62	21.00' LT.	3'-11"	2'-8"	12'-0"
16	123+62	21.00' RT.	3'-11"	2'-8"	12'-0"
17	503+80	18.00' LT.	9'-7"	4'-7"	12'-0"
18	503+80	18.00' RT.	3'-11"	2'-8"	12'-0"

0 20' 40'
SCALE

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

STORM DRAINAGE

File: 09336001 Storm Drain 03.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 13-MAR-2025 09:25 Computer: LINMEGANS
Scale: 1:40

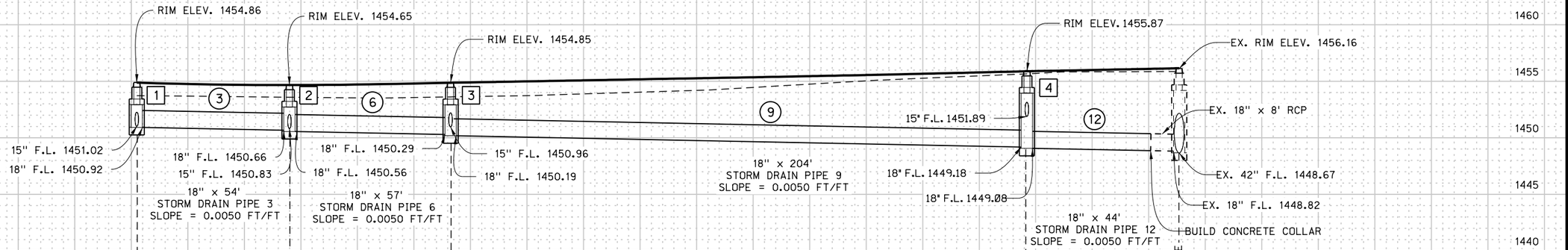
WEST WORTHMAN BOULEVARD STORM DRAINAGE NETWORK PROFILES

SCHEMMER
Design with Purpose. Build with Confidence.
333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

Horizontal Scale 1 : 10
Vertical Scale 1 : 10

PROJECT NO.	SHEET NO.
09336.001-C	J12
C.N.	

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE ROADWAY DESIGN DIVISION.



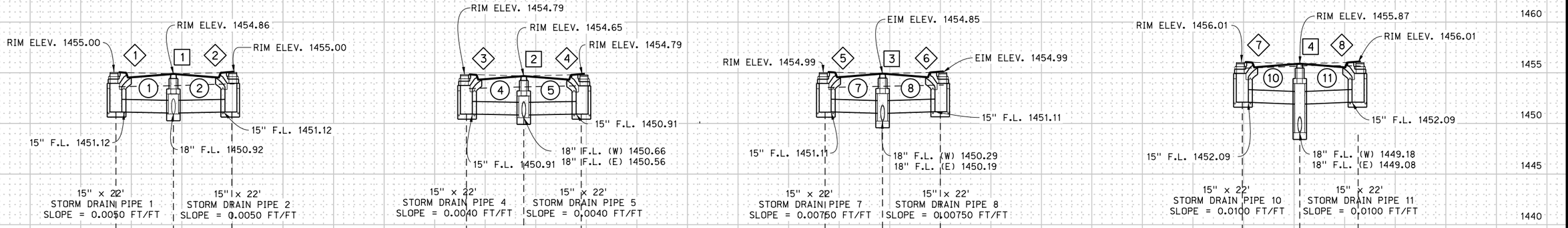
STA. 108+83.00
STORM DRAINAGE MANHOLE 1
RIM ELEV. 1454.86
15" F.L. (N) 1451.02
15" F.L. (S) 1451.02
18" F.L. 1450.92

STA. 109+37.00
STORM DRAINAGE MANHOLE 2
RIM ELEV. 1454.65
15" F.L. (N) 1450.83
15" F.L. (S) 1450.83
18" F.L. (W) 1450.66
18" F.L. (E) 1450.56

STA. 109+94.00
STORM DRAINAGE MANHOLE 3
RIM ELEV. 1454.85
15" F.L. (N) 1450.96
15" F.L. (S) 1450.96
18" F.L. (W) 1450.29
18" F.L. (E) 1450.19

STA. 111+98.00
STORM DRAINAGE MANHOLE 4
RIM ELEV. 1455.87
15" F.L. (N) 1451.89
15" F.L. (S) 1451.89
18" F.L. (W) 1449.18
18" F.L. (E) 1449.08

STA. 112+58.88
EX. STORM DRAINAGE MANHOLE
EX. RIM ELEV. 1456.16
EX. 18" F.L. 1448.82
EX. 42" F.L. 1448.67



STA. 108+83.00, 21.00', LT.
STORM DRAINAGE INLET 1
RIM ELEV. 1455.00
15" F.L. 1451.12

STA. 108+83.00, 21.00', RT.
STORM DRAINAGE INLET 2
RIM ELEV. 1455.00
15" F.L. 1451.12

STA. 109+37.00, 21.00', LT.
STORM DRAINAGE INLET 3
RIM ELEV. 1454.79
15" F.L. 1450.91

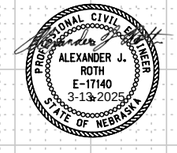
STA. 109+37.00, 21.00', RT.
STORM DRAINAGE INLET 4
RIM ELEV. 1454.79
15" F.L. 1450.91

STA. 109+94.00, 21.00', LT.
STORM DRAINAGE INLET 5
RIM ELEV. 1454.99
15" F.L. 1451.11

STA. 109+94.00, 21.00', RT.
STORM DRAINAGE INLET 6
RIM ELEV. 1454.99
15" F.L. 1451.11

STA. 111+98.00, 21.00', LT.
STORM DRAINAGE INLET 7
RIM ELEV. 1456.01
15" F.L. 1452.09

STA. 111+98.00, 21.00', RT.
STORM DRAINAGE INLET 8
RIM ELEV. 1456.01
15" F.L. 1452.09



File: 09336001 Storm Drain 04.dgn Date: 12-MAR-2025 10:07 Computer: LINNEGANS

EAST WORTHMAN BOULEVARD STORM DRAINAGE NETWORK PROFILES

SCHEMMER
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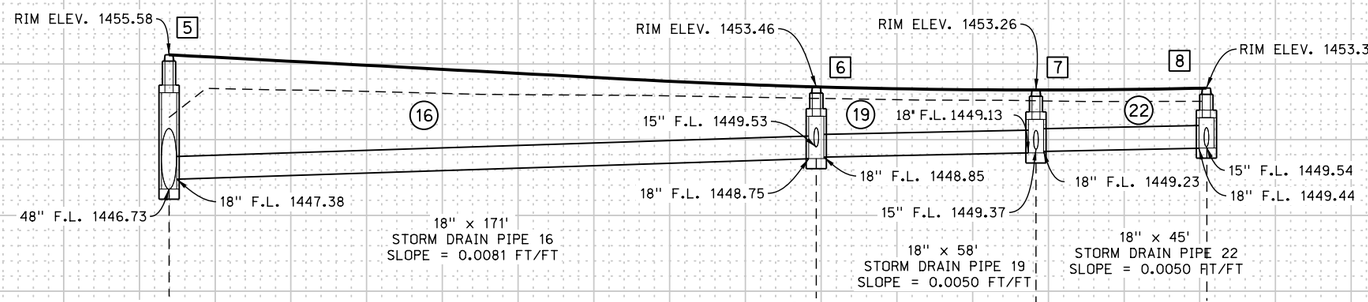
333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

Horizontal Scale 1 : 10
Vertical Scale 1 : 10

PROJECT NO.	SHEET NO.
09336.001-C	J13

C.N.

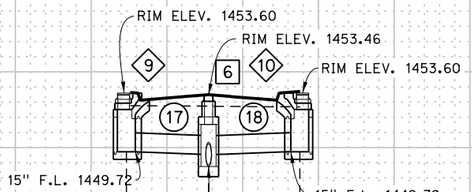


STA. 114+29.07
STORM DRAINAGE MANHOLE 5
RIM ELEV. 1455.58
18" F.L. 1447.38
48" F.L. 1446.73

STA. 116+00.00
STORM DRAINAGE MANHOLE 6
RIM ELEV. 1453.46
15" F.L. (N) 1449.53
15" F.L. (S) 1449.53
18" F.L. (E) 1448.85
18" F.L. (W) 1448.75

STA. 116+58.00
STORM DRAINAGE MANHOLE 7
RIM ELEV. 1453.26
15" F.L. (N) 1449.37
15" F.L. (S) 1449.37
18" F.L. (E) 1449.23
18" F.L. (W) 1449.13

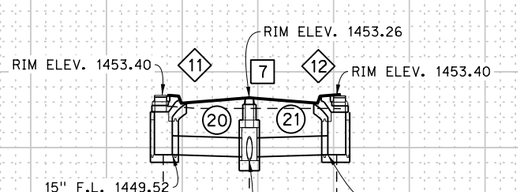
STA. 117+03.00
STORM DRAINAGE MANHOLE 8
RIM ELEV. 1453.38
15" F.L. (N) 1449.54
15" F.L. (S) 1449.54
18" F.L. 1449.44



STA. 116+00.00, 21.00' LT.
STORM DRAINAGE INLET 9
RIM ELEV. 1453.60
15" F.L. 1449.72

STA. 116+00.00
STORM DRAINAGE MANHOLE 6
RIM ELEV. 1453.46
15" F.L. (N) 1449.53
15" F.L. (S) 1449.53
18" F.L. (E) 1448.85
18" F.L. (W) 1448.75

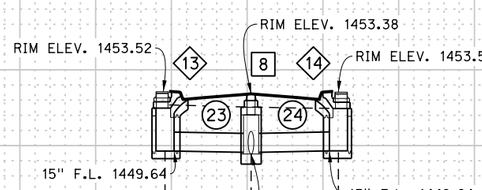
STA. 116+00.00, 21.00' RT.
STORM DRAINAGE INLET 10
RIM ELEV. 1453.60
15" F.L. 1449.72



STA. 116+58.00, 21.00' LT.
STORM DRAINAGE INLET 11
RIM ELEV. 1453.40
15" F.L. 1449.52

STA. 116+58.00
STORM DRAINAGE MANHOLE 7
RIM ELEV. 1453.26
15" F.L. (N) 1449.37
15" F.L. (S) 1449.37
18" F.L. (E) 1449.23
18" F.L. (W) 1449.13

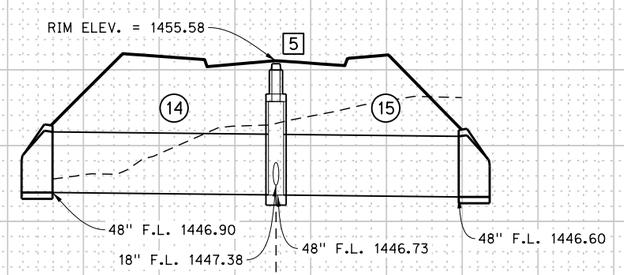
STA. 116+58.00, 21.00' RT.
STORM DRAINAGE INLET 12
RIM ELEV. 1453.40
15" F.L. 1449.52



STA. 117+03.00, 21.00' LT.
STORM DRAINAGE INLET 13
RIM ELEV. 1453.52
15" F.L. 1449.64

STA. 117+00.00
STORM DRAINAGE MANHOLE 8
RIM ELEV. 1453.38
15" F.L. (N) 1449.54
15" F.L. (S) 1449.54
18" F.L. (W) 1449.44

STA. 117+03.00, 21.00' RT.
STORM DRAINAGE INLET 14
RIM ELEV. 1453.52
15" F.L. 1449.64



STA. 114+29.07
STORM DRAINAGE MAHOLE 5
RIM ELEV. 1455.58
18" F.L. 1447.38
48" F.L. 1446.73

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD. SEWARD, NE ROADWAY DESIGN DIVISION.
Computer: LINMEGANS
Date: 12-MAR-2025 10:08
File: 09336001 Storm Drain 04.dgn

PINE STREET STORM DRAINAGE NETWORK PROFILES

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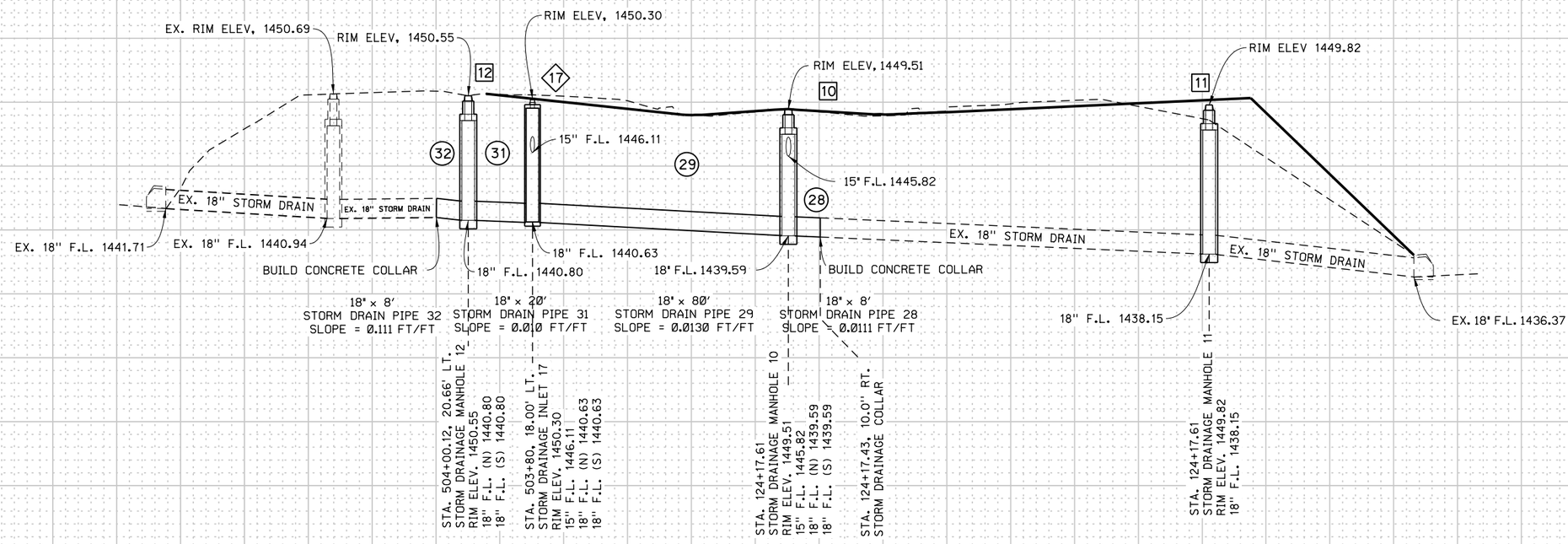
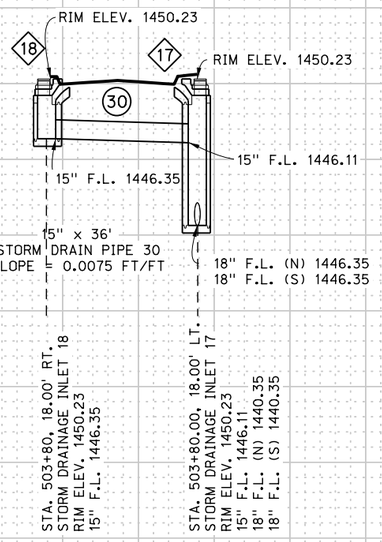
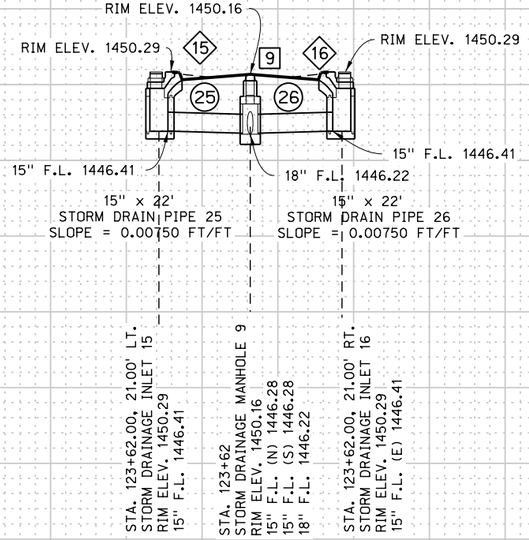
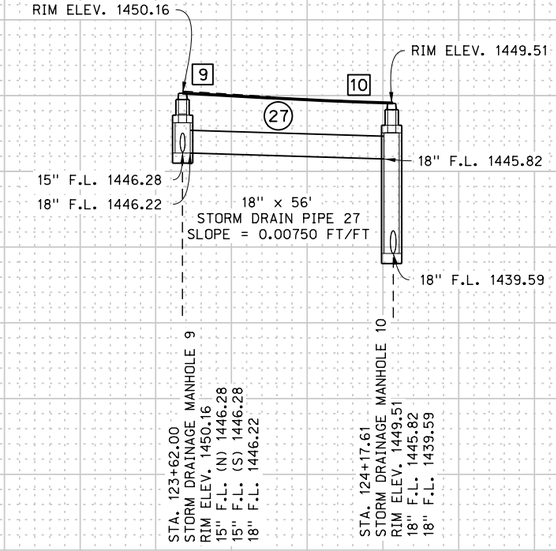
PROJECT NO.	SHEET NO.
09336.001-C	J14

C.N.









PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE ROADWAY DESIGN DIVISION.
Computer: LINNEGANS
Date: 12-MAR-2025 10:08
File: 09336001 Storm Drain 04.dgn

STORM DRAINAGE X-SECTIONS

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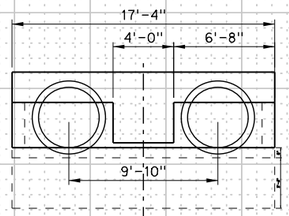
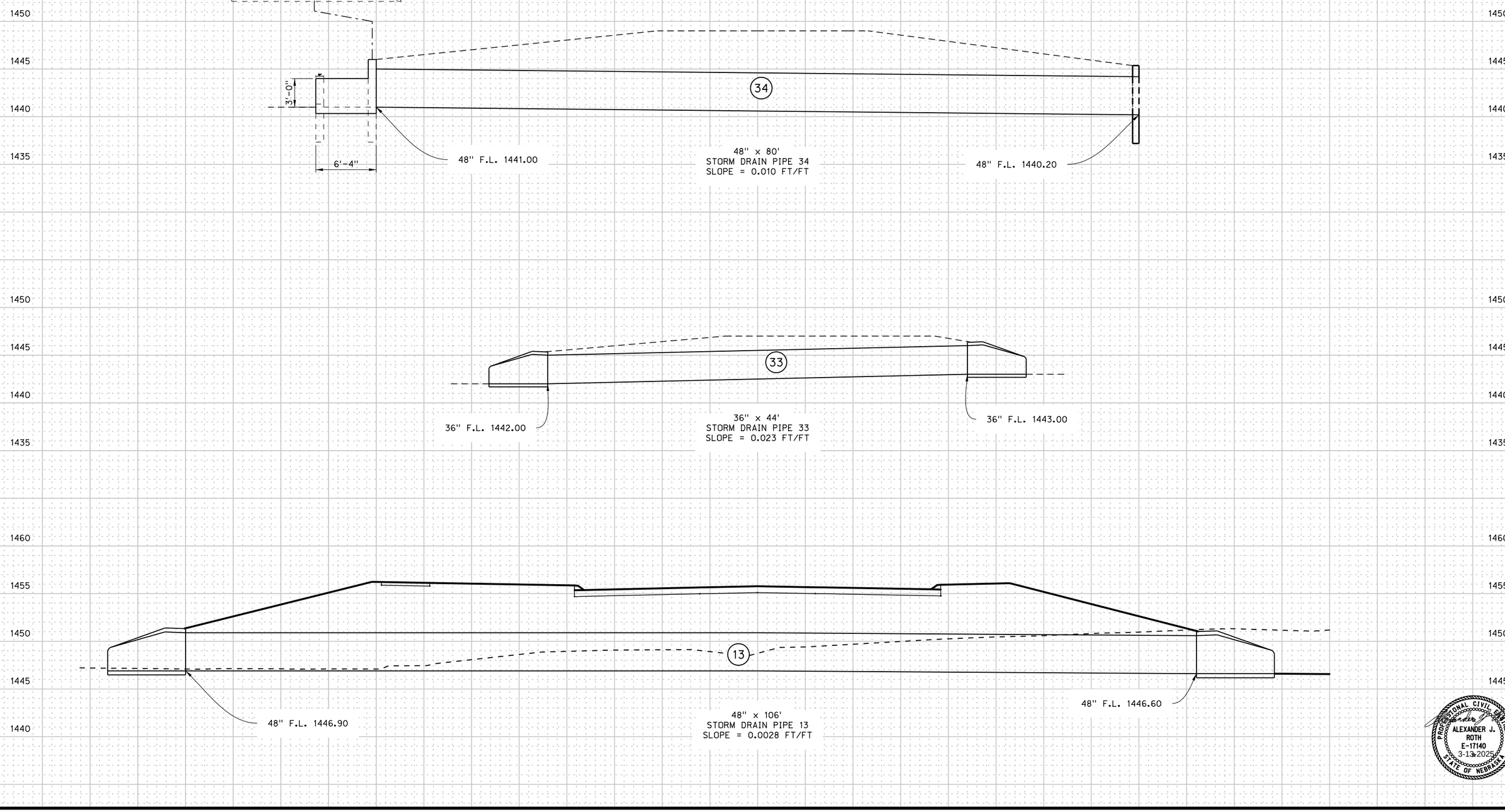
CERTIFICATE OF AUTHORIZATION: CA-0666

Horizontal Scale	1 : 10
Vertical Scale	1 : 10

PROJECT NO.	SHEET NO.
09336.001-C	J15

C.N.





PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
ROADWAY DESIGN DIVISION.
Computer: LINMEGANS
Date: 12-MAR-2025 10:08
File: 09336001 Storm Drain 04.dgn

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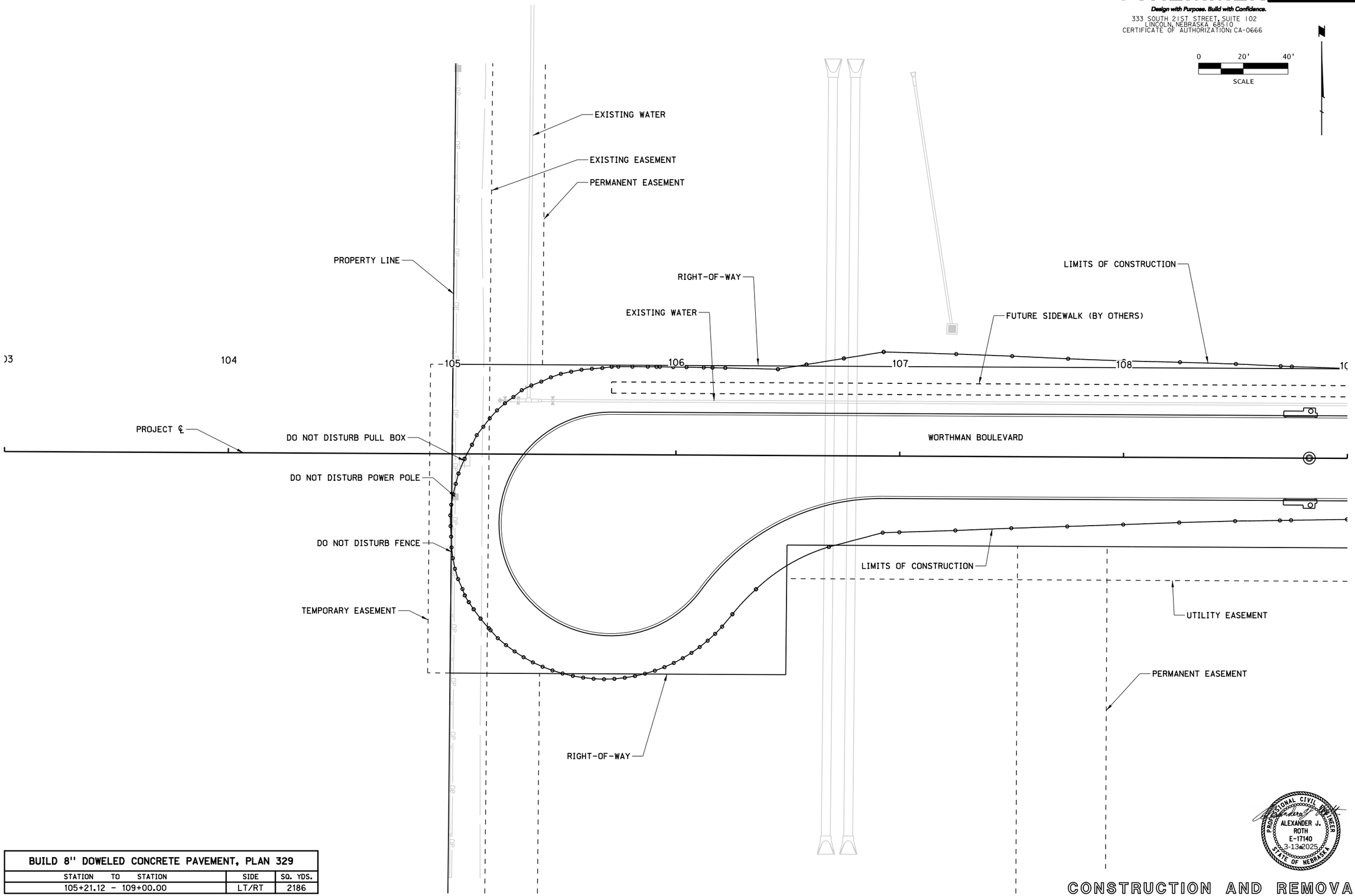
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J16

ROADWAY DESIGN DIVISION.

0 20' 40'
SCALE



BUILD 8" DOWELED CONCRETE PAVEMENT, PLAN 329		
STATION TO STATION	SIDE	SQ. YDS.
105+21.12 - 109+00.00	LT/RT	2186

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

CONSTRUCTION AND REMOVAL

File: 09336001 Const & Rem01.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:08
Computer: LINMEGANS
Scale: 1:40

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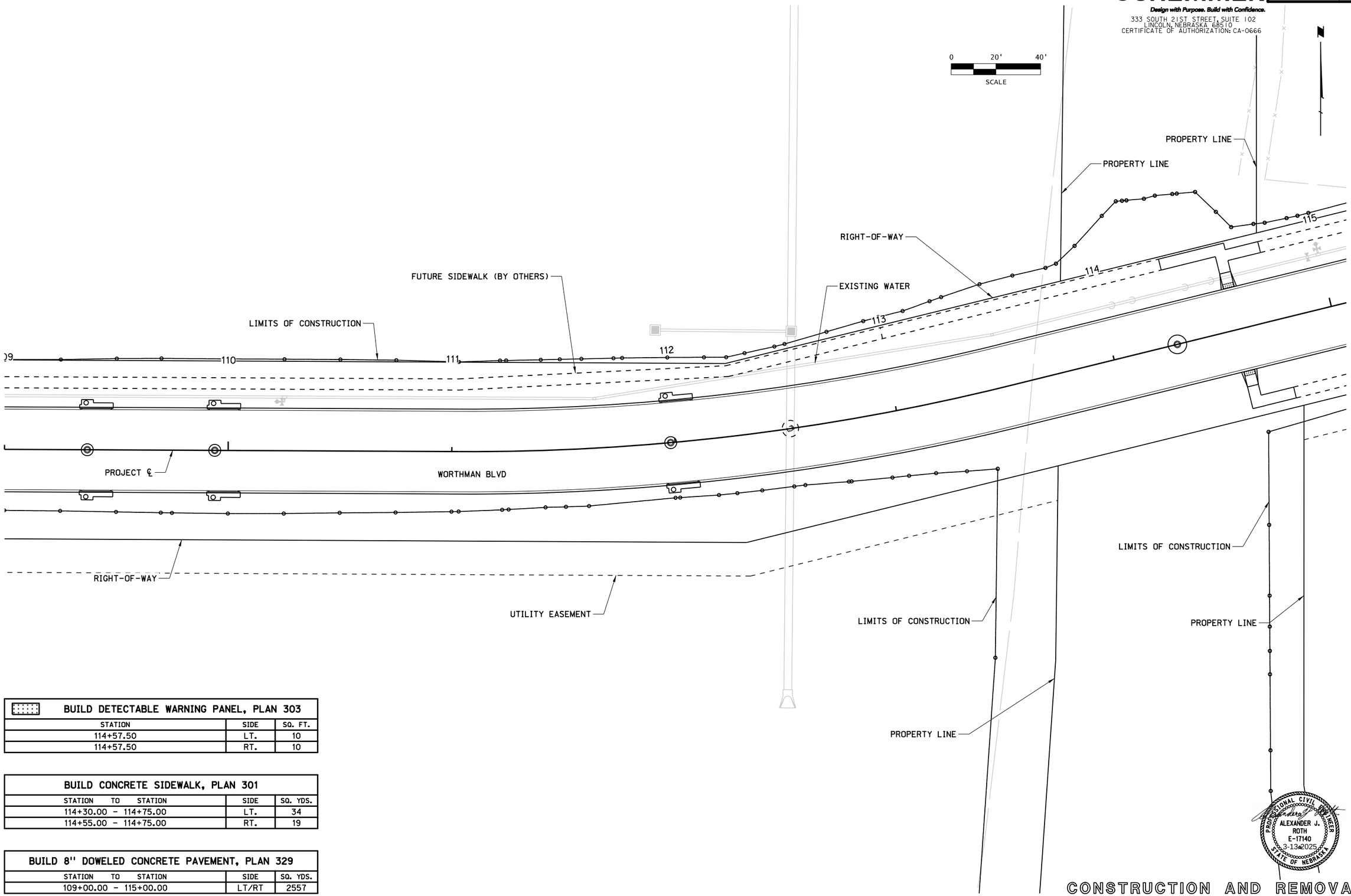
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J17

ROADWAY DESIGN DIVISION.

File: 09336001 Const & Rem02.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Scale: 1:40
Date: 12-MAR-2025 10:08
Computer: LINMEGANS

0 20' 40'
SCALE



BUILD DETECTABLE WARNING PANEL, PLAN 303		
STATION	SIDE	SQ. FT.
114+57.50	LT.	10
114+57.50	RT.	10

BUILD CONCRETE SIDEWALK, PLAN 301		
STATION TO STATION	SIDE	SQ. YDS.
114+30.00 - 114+75.00	LT.	34
114+55.00 - 114+75.00	RT.	19

BUILD 8" DOWELED CONCRETE PAVEMENT, PLAN 329		
STATION TO STATION	SIDE	SQ. YDS.
109+00.00 - 115+00.00	LT/RT	2557

PROFESSIONAL CIVIL ENGINEER
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E-17140
3-13-2025
STATE OF NEBRASKA

CONSTRUCTION AND REMOVAL

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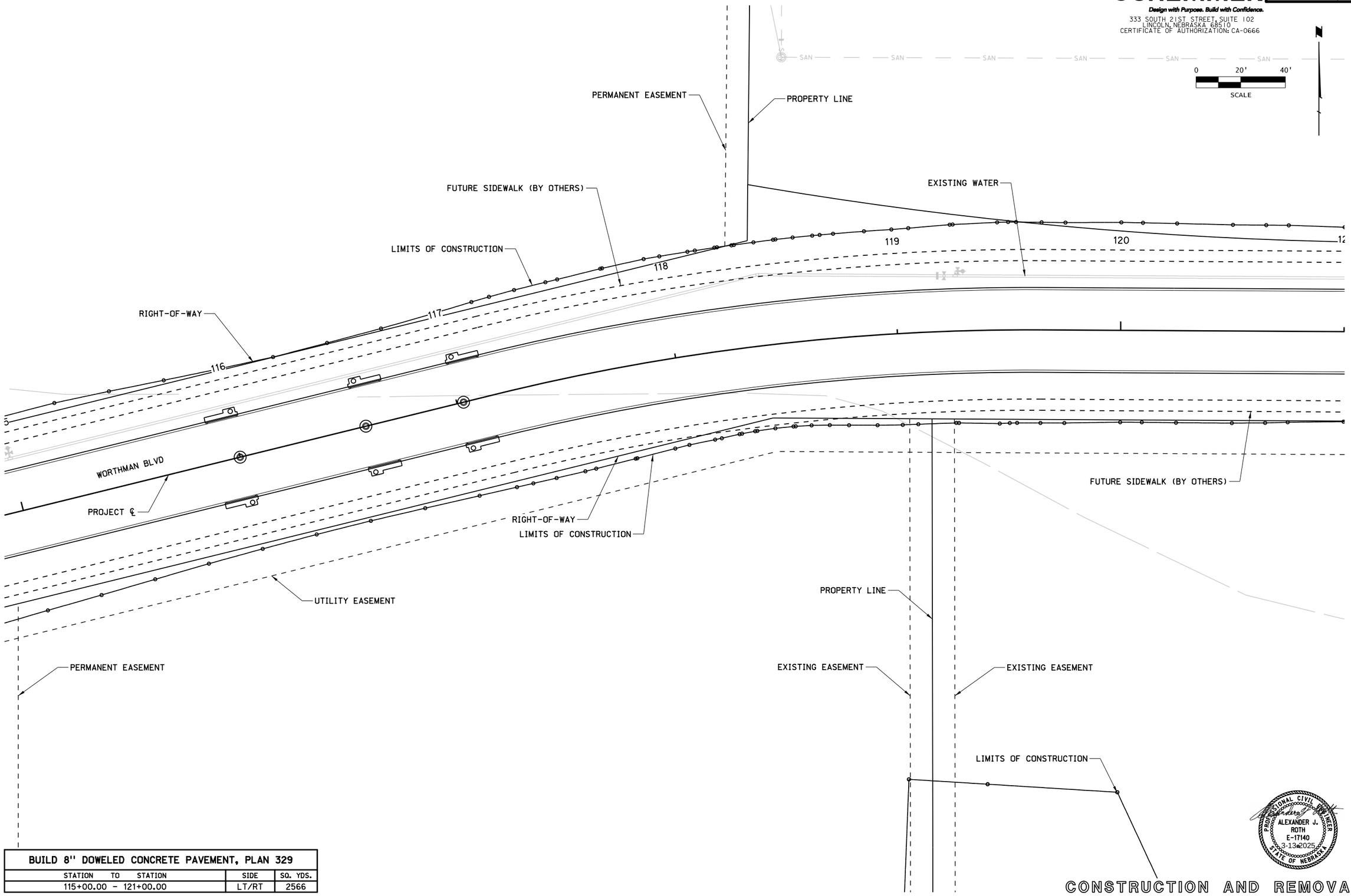
PROJECT NO.	SHEET NO.
09336.001-C	J18

ROADWAY DESIGN DIVISION.



BUILD 8" DOWELED CONCRETE PAVEMENT, PLAN 329		
STATION TO STATION	SIDE	SQ. YDS.
115+00.00 - 121+00.00	LT/RT	2566

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

CONSTRUCTION AND REMOVAL

File: 09336001 Const & Rem03.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Scale: 1:40
Date: 12-MAR-2025 10:08
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LINCOLN, NEBRASKA 68510
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PROJECT NO.	SHEET NO.
09336.001-C	J19

0 20' 40'
SCALE

ADJUST WATER VALVE BOX TO GRADE		
STATION	SIDE	EACH
124+54.44	31.04' LT.	1
124+57.33	34.48' LT.	1
124+60.14	31.49' LT.	1

SAWING PAVEMENT		
STATION TO STATION	SIDE	LIN. FT.
124+22.10 - 125+02.53	LT/RT	145
503+96.50	LT/RT	32
502+78.14 - 502+22.44	RT	137

REMOVE PAVEMENT		
STATION TO STATION	SIDE	SQ. YDS.
123+85.17 - 125+02.53	LT/RT	775

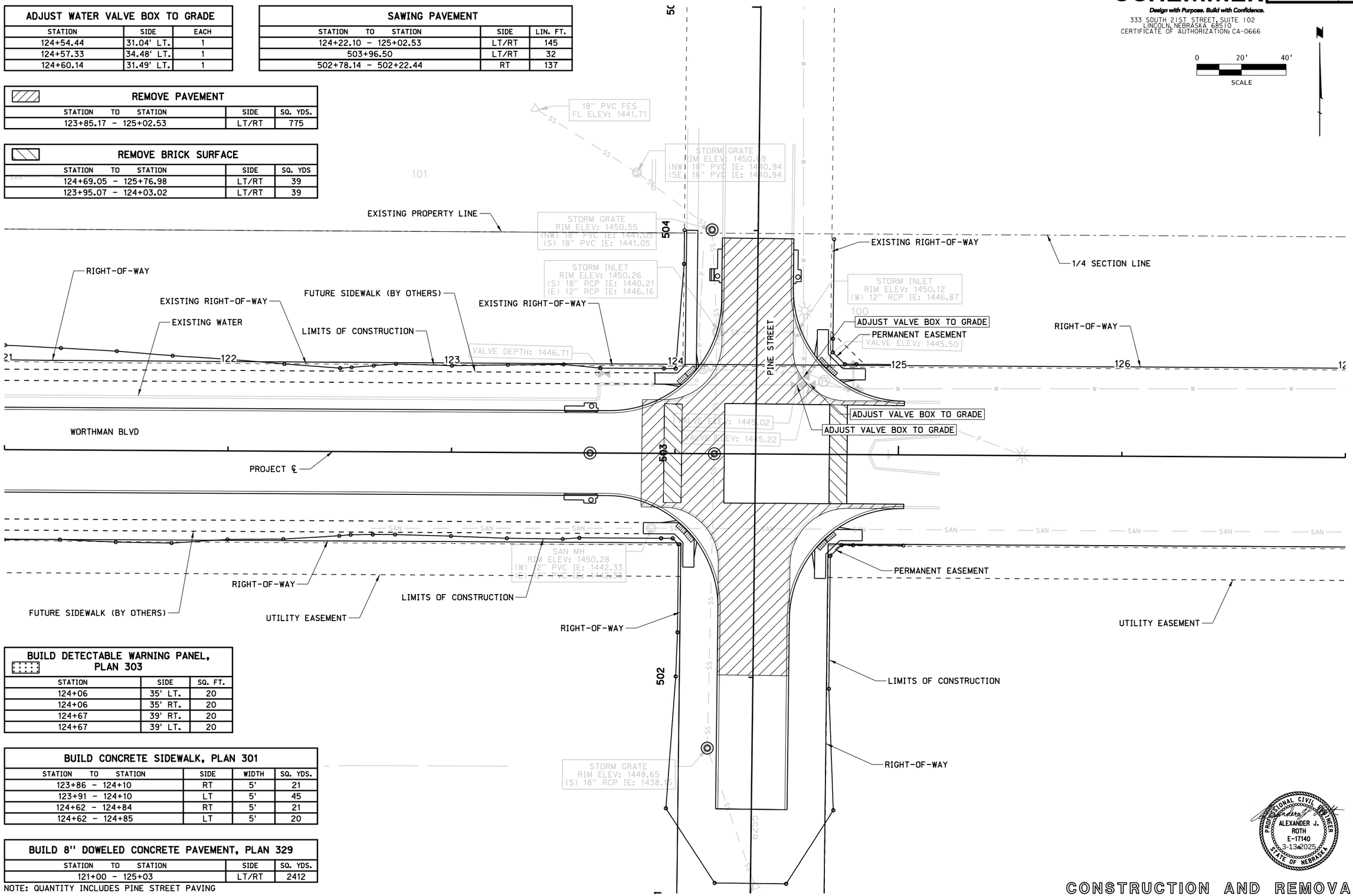
REMOVE BRICK SURFACE		
STATION TO STATION	SIDE	SQ. YDS
124+69.05 - 125+76.98	LT/RT	39
123+95.07 - 124+03.02	LT/RT	39

BUILD DETECTABLE WARNING PANEL, PLAN 303		
STATION	SIDE	SQ. FT.
124+06	35' LT.	20
124+06	35' RT.	20
124+67	39' RT.	20
124+67	39' LT.	20

BUILD CONCRETE SIDEWALK, PLAN 301			
STATION TO STATION	SIDE	WIDTH	SQ. YDS.
123+86 - 124+10	RT	5'	21
123+91 - 124+10	LT	5'	45
124+62 - 124+84	RT	5'	21
124+62 - 124+85	LT	5'	20

BUILD 8" DOWELED CONCRETE PAVEMENT, PLAN 329		
STATION TO STATION	SIDE	SQ. YDS.
121+00 - 125+03	LT/RT	2412

NOTE: QUANTITY INCLUDES PINE STREET PAVING



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ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

CONSTRUCTION AND REMOVAL

File: 09336001 Const & Rem04.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Scale: 1:40 Date: 12-MAR-2025 10:08 Computer: LINMEGANS

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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J20

ROADWAY DESIGN DIVISION.

SITE INFORMATION

SPRING 2025 (Estimated Start Date)		CSW-202509446:Seward-Worthman Boulevard Extension (NDEQ NOI Number)	
WORTHMAN BOULEVARD EXTENSION (Project Name)		(Address)	
N/A (Subdivision Name)	N/A (S&ID #)	Seward (City)	Seward (County)
40.890372° (Latitude)	-97.107679° (Longitude)	Nebraska (State)	68434 (Zip Code)
Total Site Area (Acres)	4.61	Estimated Permit Duration (Months)	12
Disturbed Area (Acres)	4.61		
Undisturbed Area (Acres)	0		

GENERAL NOTES

1. All OPERATORS/CONTRACTORS must confirm with the APPLICANT that any and all applicable governmental approvals have been received prior to the start of work.
2. BMP's may not be removed without INSPECTOR and applicable governmental approval.
3. The INSPECTOR will evaluate compliance with the applicable construction stormwater general permit commitments during Storm Event Inspections.
4. The INSPECTOR will perform inspections on projects regulated under the applicable construction stormwater general permit once every 14 days and within 24 hours or the next business day following a rain event of 0.25 inches of precipitation or greater; or every seven days.
5. The CONTRACTOR'S Environmental Representative is not required to accompany the Engineer on Storm Event Inspections.
6. Subject to storm events, inspections may begin on the first day of construction activities cause land disturbance and end on the date of project completion as evidenced by the completion date in the Construction Agreement.
7. The permitee is prohibited from discharging the following:

   Wastewater from the washout of concrete; except in approved concrete washout basin.

   Wastewater from the washout and cleanout of stucco, paint, form release oils, curing compounds, and other constructions materials;

   Fuels, oils, and other pullutants used in vehicle and equipment operation and maintenance; and

   Soaps or solvents used in vehicle equipments washing.
8. The permitee is authorized for the following non-stormwater discharges:
   a. Discharges from firefighting activities
   b. Fire hydrant flushings
   c. Water used to wash vehicles where detergents are not used
   d. Water used to control dust
   e. Potable water including uncontaminated water line flushings
   f. Routine external building wash down that does not use detergents
   g. Pavement wash water where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been recovered) and where detergents are not used
   h. Uncontaminated air conditioning or compressor condensate
   i. Uncontaminated groundwater or spring water
   j. Foundation or footing drains where flows are not contaminated with process materials such as solvent
   k. Landscape irrigation

MAINTENANCE SCHEDULE

The following Maintenance Schedule has been provided. The INSPECTOR must perform the inspections. The OPERATOR/CONTRACTOR must perform all needed maintenance. Furthermore, all erosion control feature requiring maintenance may not be listed below. The OPERATOR/CONTRACTOR and INSPECTOR must perform their respective duties on all BMP's that are not listed below as well.

1. Construction Entrance – The entrance shall be maintained in a condition which will prevent tracking or flow of sediment onto public rights-of-way. This may require periodic top dressing with additional stone or the washing and reworking of existing stone as conditions demand and repair and/or cleanout of any structures used to trap sediment. All materials spilled, dropped, washed, or tracked from vehicles onto roadways or into storm drains must be removed immediately. The use of water trucks to remove materials dropped, washed, or tracked onto roadways will not be permitted under any circumstances.

2. Silt Fence – The maintenance measures are as follows: (2.1) silt fences shall be inspected immediately after each rainfall and at least daily during prolonged rainfall, any required repairs shall be made immediately; (2.2) close attention shall be paid to the repair of damaged silt fence resulting from end runs and undercutting; (2.3) should the fabric on a silt fence decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, the fabric shall be replaced promptly; (2.4) sediment deposits must be removed when the level of deposition reaches approximately one-half the height of the barrier; and (2.5) any sediment deposits remaining in place after the silt fence is no longer required shall be dressed to conform to the existing grade, prepared and seeded.

3. Storm Drain Inlet Protection – The maintenance measures are as follows: (3.1) structures shall be inspected after each rain and repairs made as necessary and (3.2) structures shall be removed and the area stabilized when the remaining drainage area has been properly stabilized.

4. Temporary Diversion Dike – The measure shall be inspected after every storm and repairs made to the dike, flow channel, outlet or sediment trapping facility, as necessary. Once every two weeks, whether a storm event has occurred or not, the measure shall be inspected and repairs made if needed. Damages caused by construction traffic or other activity must be repaired before the end of each working day.

5. Temporary Fill Diversion – Since the practice is temporary and under most situations will be covered the next working day. The maintenance required should be low. If the practice is to remain in use for more than one day, an inspection shall be made at the end of each work day and repairs made to the measure if needed. The OPERATOR/CONTRACTOR should avoid the placement of any material over the structure while it is in use. Construction traffic should not be permitted to cross the diversion.

6. Temporary Sediment Trap – The maintenance measures are as follows: (6.1) sediment shall be removed and the trap restored to its original dimensions when the sediment has accumulated to one half the design volume of the wet storage, sediment removal from the basin shall be deposited in a suitable area and in such a manner that it will not erode and cause sedimentation problems; (6.2) filter stone shall be regularly checked to ensure that filtration performance is maintained, stone choked with sediment shall be removed and cleaned or replaced; and (6.3) the structure should be checked regularly to ensure that it is structurally sound and has not been damaged by erosion or construction equipment, the height of the stone outlet should be checked to ensure that its center is at least 1 foot below the top of the embankment.

7. Temporary Sediment Basin – The basin embankment should be checked regularly to ensure that it is structurally sound and has not been damaged by erosion or construction equipment. The emergency spillway should be checked regularly to ensure that its lining is well established and erosion-resistant. The basin should be checked after each runoff producing rainfall for sediment cleanout and trash removal. When the sediment reaches the cleanout level, it shall be removed and properly disposed of.

8. Temporary Seeding – Areas which fail to establish vegetative cover adequate to prevent rill erosion will be re-seeded as soon as such areas are identified. Control weeds by mowing.

9. Permanent Seeding – The maintenance measures are as follows: (9.1) in general, a stand of vegetation cannot be determined to be fully established until it has been maintained for one full year after planning; (9.2) new seedlings shall be supplied with adequate moisture, supply water as needed, especially late in the season, in abnormally hot or dry conditions, or on adverse sites, water applications shall be controlled to prevent excessive runoff; (9.3) inspect all seeded areas for failures and make necessary repairs, replacements, and reseedings within the planting season, if possible; [9.3.a] if stand is inadequate for erosion control, over seed and fertilize using half of the rates originally specified; [9.3.b] if stand is 60% damaged, re-establish following seedbed and seeding recommendations; [9.3.c] if stand has less than 40% cover, re-evaluate choice of plant materials and quantities of lime and fertilizer, the soil must be tested to determine if acidity or nutrient imbalances are responsible, re-establish the stand following seedbed and seeding recommendations.

10. Mulching – All mulches and soil coverings should be inspected periodically (particularly after rainstorms) to check for erosion. Where erosion is observed in mulched areas, additional mulch should be applied. Nets and mats should be inspected after rainstorms for dislocation or failure. If washouts or breakage occur, reinstall netting or matting as necessary after repairing damage to the slope or ditch. Inspections should take place until grasses are firmly established. Where mulch is used in conjunction with ornamental plantings, inspect periodically throughout the year to determine if mulch is maintaining coverage of the soil surface; repair as needed.

11. Soil Stabilization Blankets & Matting – All soil stabilization blankets and matting should be inspected periodically following installation, particularly after rainstorms to check for erosion and undermining. Any dislocation or failure should be repaired immediately. If washouts or breakage occurs, reinstall the material after repairing damage to the slope or ditch. Continue to monitor these areas until which time they become permanently stabilized; at that time an annual inspections should be adequate.

12. Street Cleaning / Sweeping – The maintenance measures are as follows: (12.1) evaluate access points daily for sediment tracking; (12.2) when tracked or spilled sediment is found on paved surfaces, it will be removed daily, during times of heavy track-out, such as during rains, cleaning may be done several times throughout the day; (12.3) unknown spills or objects will not be mixed with the sediment; and (12.4) if sediment is mixed with other pollutants, it will be disposed of properly at an authorized landfill.

CONSTRUCTION ACTIVITIES & SCHEDULING

ACTIVITY	SCHEDULE
Install all BMP's needed and associated with the Grading Phase such as stabilized construction entrances, silt basins, riser pipes, outlet pipes, silt traps, silt fence, diversions, terraces, and etcetera.	Prior to any stripping of existing vegetation or grading.
Proceed with stripping of existing vegetation and grading in accordance with the grading plan, while disturbing no more than necessary.	After Installing all BMP's needed and associated with the Grading Phase. Furthermore, INSPECTOR approval must be obtained before the start of any stripping of existing vegetation or grading.
Proceed with infrastructure installation.	Infrastructure installation must occur prior to any lot development.
Implement the installation of Temporary Seeding, Permanent Seeding, and/or Mulching.	Stabilization measures must be initiated as soon as possible in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased
Implement the installation all BMP's needed and associated with the Building Phase.Building	Building Phase BMP's must be installed concurrently with lot development.
Proceed with removal of BMP's.	BMP's may not be removed until each impacted drainage basin has been fully developed. Full development shall mean installation of pavement, buildings, and utilities, landscaping, and fully established permanent seeding. Furthermore, INSPECTOR approval must be obtained before the removal of any BMP's.

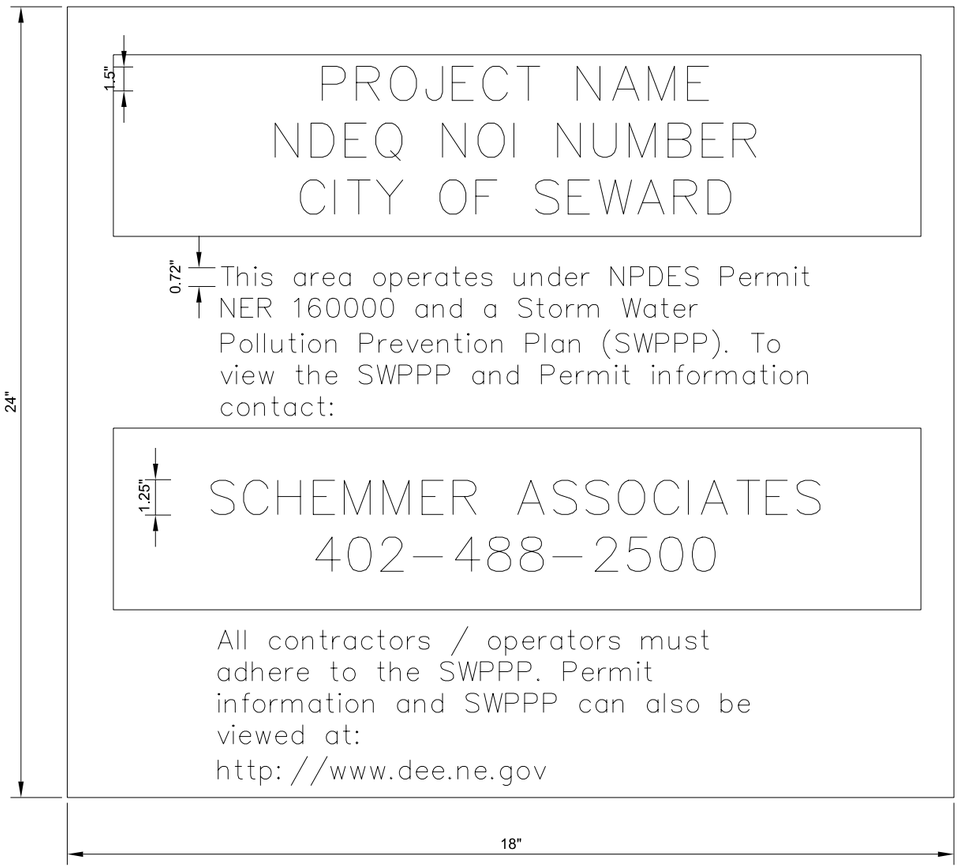
PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

STORM WATER POLLUTION PREVENTION PLAN

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:28
Computer: LINMEGANS
File: 09336001_SWPP.dgn
Scale: 1:200

SCHEMMER
Design with Purpose. Build with Confidence.
333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J21



SWPPP NOTIFICATION SIGN

1. *POST AT ENTRANCES TO CONSTRUCTION PROJECTS.*
2. *PROVIDE STURDY BACKING & POST FOR SIGNS.*

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:08 Computer: LINMEGANS

File: 09336001_SWPP.dgn
Scale: 1:200

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

STORM WATER POLLUTION PREVENTION PLAN

ROADWAY DESIGN DIVISION.

PROJECT NO.	SHEET NO.
09336.001-C	J22

SCHEMMER
Design with Purpose. Build with Confidence.
333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

0 20' 40'
SCALE

1D — BUILD EROSION CONTROL-CLASS 1D, PLAN 501

STATION	TO	STATION	SIDE	DESCRIPTION	WIDTH	SQ. YDS.
104+99	-	109+00	LT./RT.	IN ALL DISTURBED AREAS	VARIES	1,841

—x— BUILD FABRIC SILT FENCE-LOW POROSITY, PLAN 502

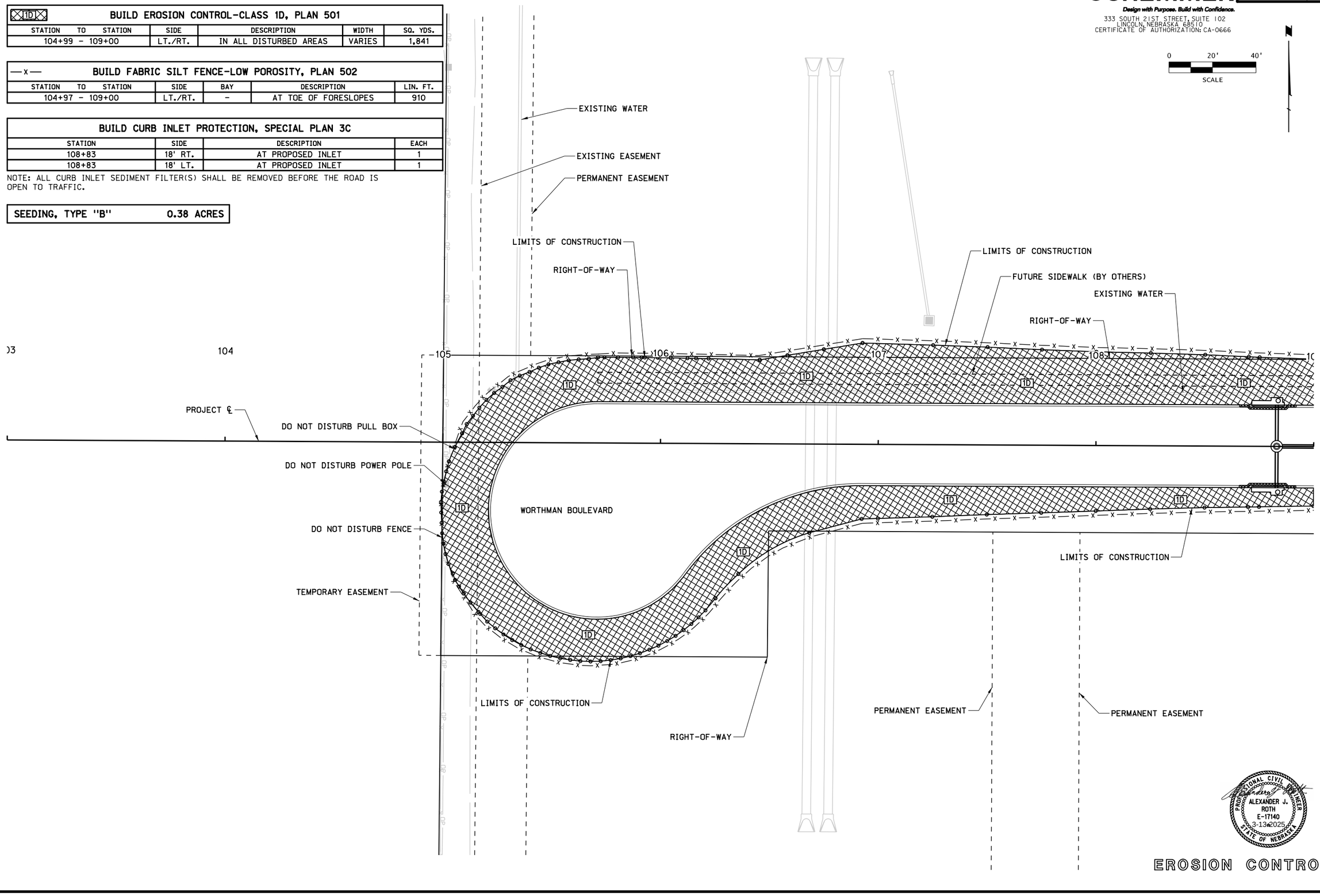
STATION	TO	STATION	SIDE	BAY	DESCRIPTION	LIN. FT.
104+97	-	109+00	LT./RT.	-	AT TOE OF FORESLOPES	910

BUILD CURB INLET PROTECTION, SPECIAL PLAN 3C

STATION	SIDE	DESCRIPTION	EACH
108+83	18' RT.	AT PROPOSED INLET	1
108+83	18' LT.	AT PROPOSED INLET	1

NOTE: ALL CURB INLET SEDIMENT FILTER(S) SHALL BE REMOVED BEFORE THE ROAD IS OPEN TO TRAFFIC.

SEEDING, TYPE "B" 0.38 ACRES



PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

EROSION CONTROL

File: 09336001 Erosion Ctrl01.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Scale: 1:40 Date: 12-MAR-2025 10:08 Computer: LINMEGANS

ROADWAY DESIGN DIVISION.

PROJECT NO.	SHEET NO.
09336.001-C	J23

SCHEMMER
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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

1D — BUILD EROSION CONTROL-CLASS 1D, PLAN 501

STATION	TO STATION	SIDE	DESCRIPTION	WIDTH	SQ. YDS.
109+00	115+00	LT./RT.	IN ALL DISTURBED AREAS	VARIES	2,582

BUILD ROCK RIPRAP

STATION	SIDE	TYPE	TONS
114+14	RT.	B	56

—x— BUILD FABRIC SILT FENCE-LOW POROSITY, PLAN 502

STATION	TO STATION	SIDE	BAY	DESCRIPTION	LIN. FT.
106+00	112+00	LT./RT.	-	AT TOE OF FORESLOPES	1,272

BUILD RIPRAP FILTER FABRIC

STATION	TO STATION	SIDE	WIDTH	SQ. YDS.
114+00	114+29	RT.	15'	93

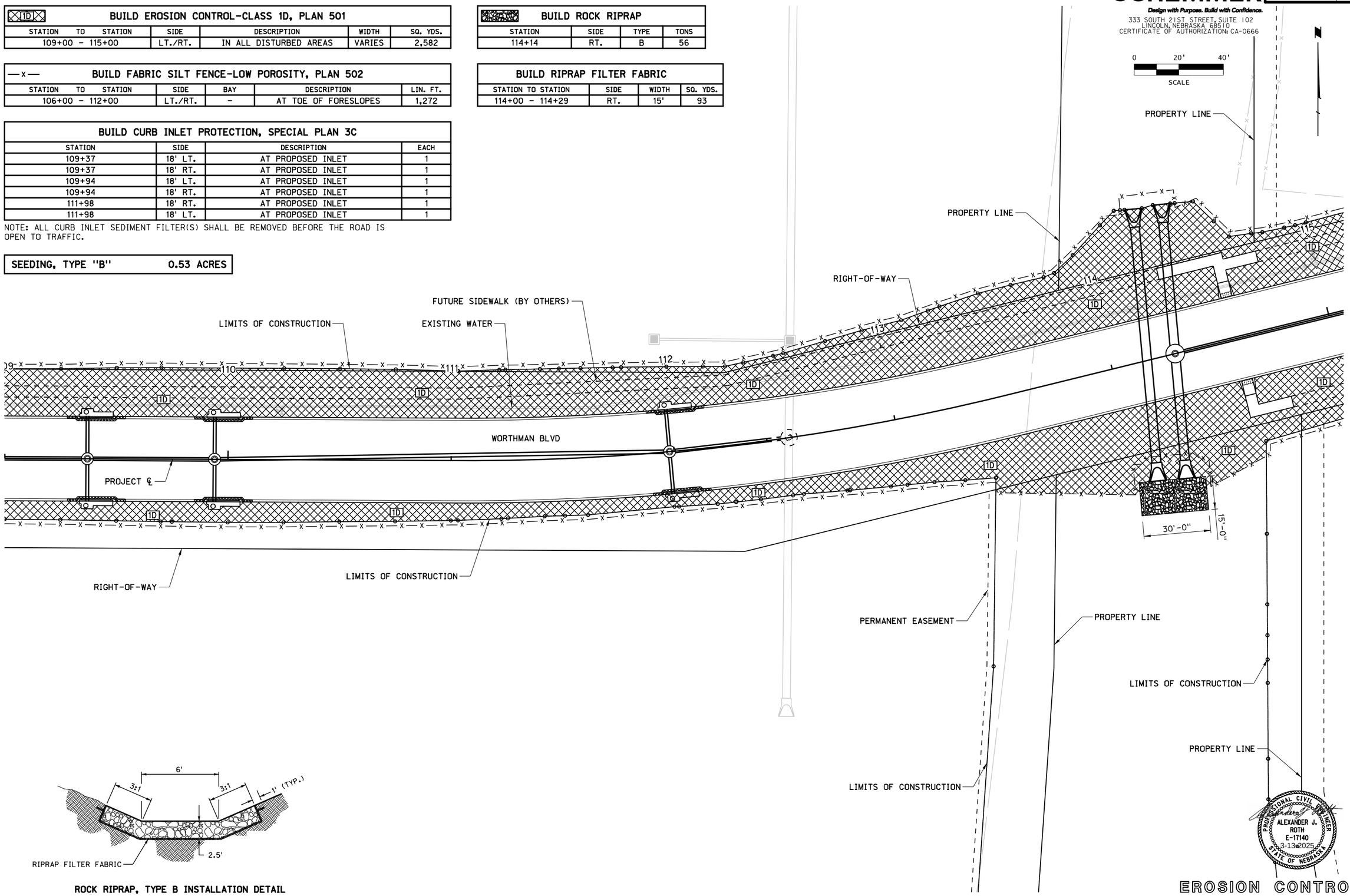
BUILD CURB INLET PROTECTION, SPECIAL PLAN 3C

STATION	SIDE	DESCRIPTION	EACH
109+37	18' LT.	AT PROPOSED INLET	1
109+37	18' RT.	AT PROPOSED INLET	1
109+94	18' LT.	AT PROPOSED INLET	1
109+94	18' RT.	AT PROPOSED INLET	1
111+98	18' RT.	AT PROPOSED INLET	1
111+98	18' LT.	AT PROPOSED INLET	1

NOTE: ALL CURB INLET SEDIMENT FILTER(S) SHALL BE REMOVED BEFORE THE ROAD IS OPEN TO TRAFFIC.

SEEDING, TYPE "B" 0.53 ACRES

0 20' 40'
SCALE



ROCK RIPRAP, TYPE B INSTALLATION DETAIL

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

EROSION CONTROL

File: 09336001 Erosion Ctrl02.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Scale: 1:40 Date: 12-MAR-2025 10:08 Computer: LINMEGANS

ROADWAY DESIGN DIVISION.

PROJECT NO.	SHEET NO.
09336.001-C	J24

SCHEMMER
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333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

0 20' 40'
SCALE

BUILD EROSION CONTROL -CLASS 1D, PLAN 501

STATION	TO STATION	SIDE	DESCRIPTION	WIDTH	SQ. YDS.
115+00	121+00	LT./RT.	IN ALL DISTURBED AREAS	VARIES	3,207

BUILD FABRIC SILT FENCE-LOW POROSITY, PLAN 502

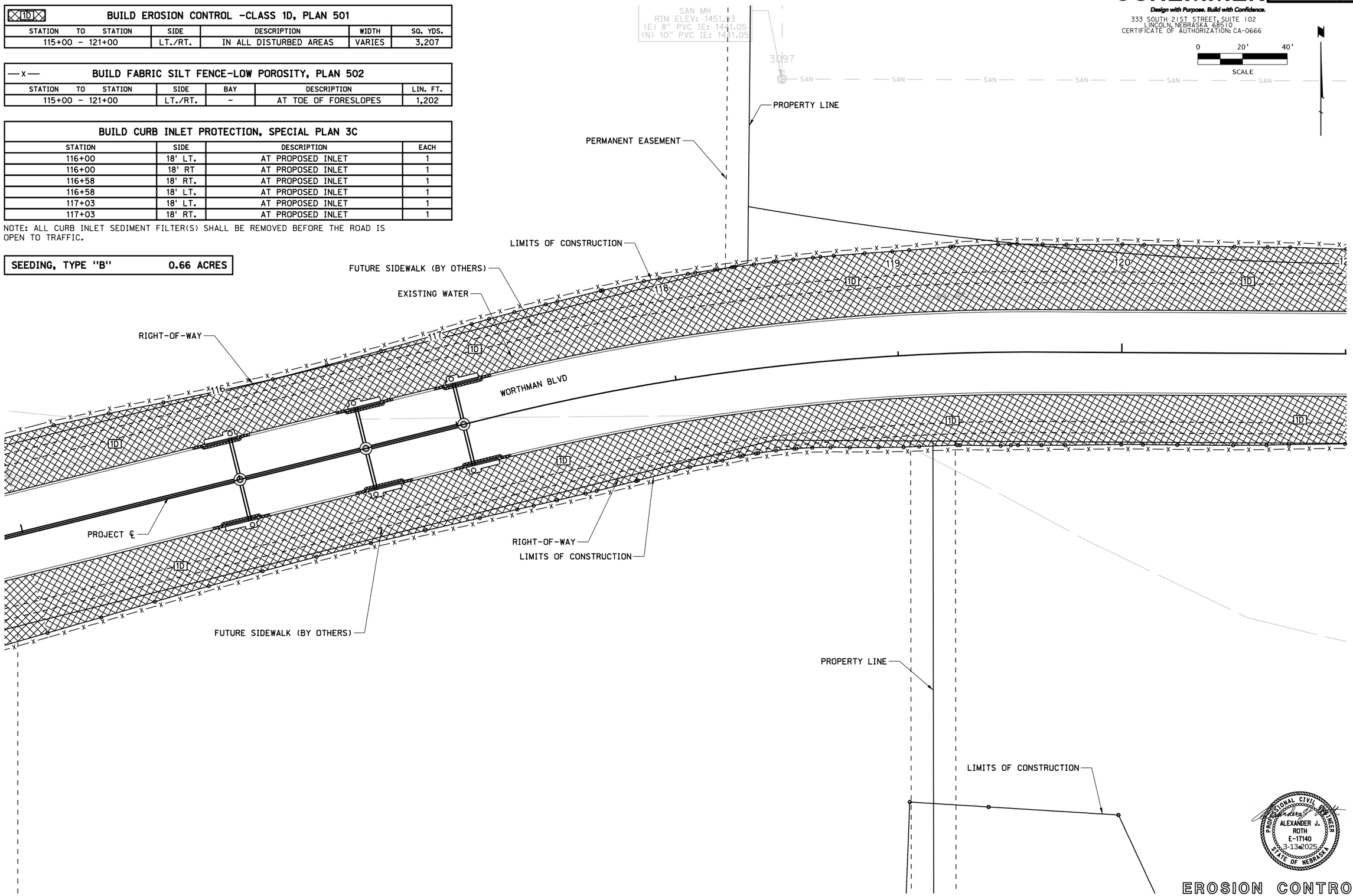
STATION	TO STATION	SIDE	BAY	DESCRIPTION	LIN. FT.
115+00	121+00	LT./RT.	-	AT TOE OF FORESLOPES	1,202

BUILD CURB INLET PROTECTION, SPECIAL PLAN 3C

STATION	SIDE	DESCRIPTION	EACH
116+00	18' LT.	AT PROPOSED INLET	1
116+00	18' RT	AT PROPOSED INLET	1
116+58	18' RT.	AT PROPOSED INLET	1
116+58	18' LT.	AT PROPOSED INLET	1
117+03	18' LT.	AT PROPOSED INLET	1
117+03	18' RT.	AT PROPOSED INLET	1

NOTE: ALL CURB INLET SEDIMENT FILTER(S) SHALL BE REMOVED BEFORE THE ROAD IS OPEN TO TRAFFIC.

SEEDING, TYPE "B" 0.66 ACRES



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ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

EROSION CONTROL

File: 09336001 Erosion Ctrl03.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Scale: 1:40 Date: 12-MAR-2025 10:08 Computer: LINMEGANS

ROADWAY DESIGN DIVISION.

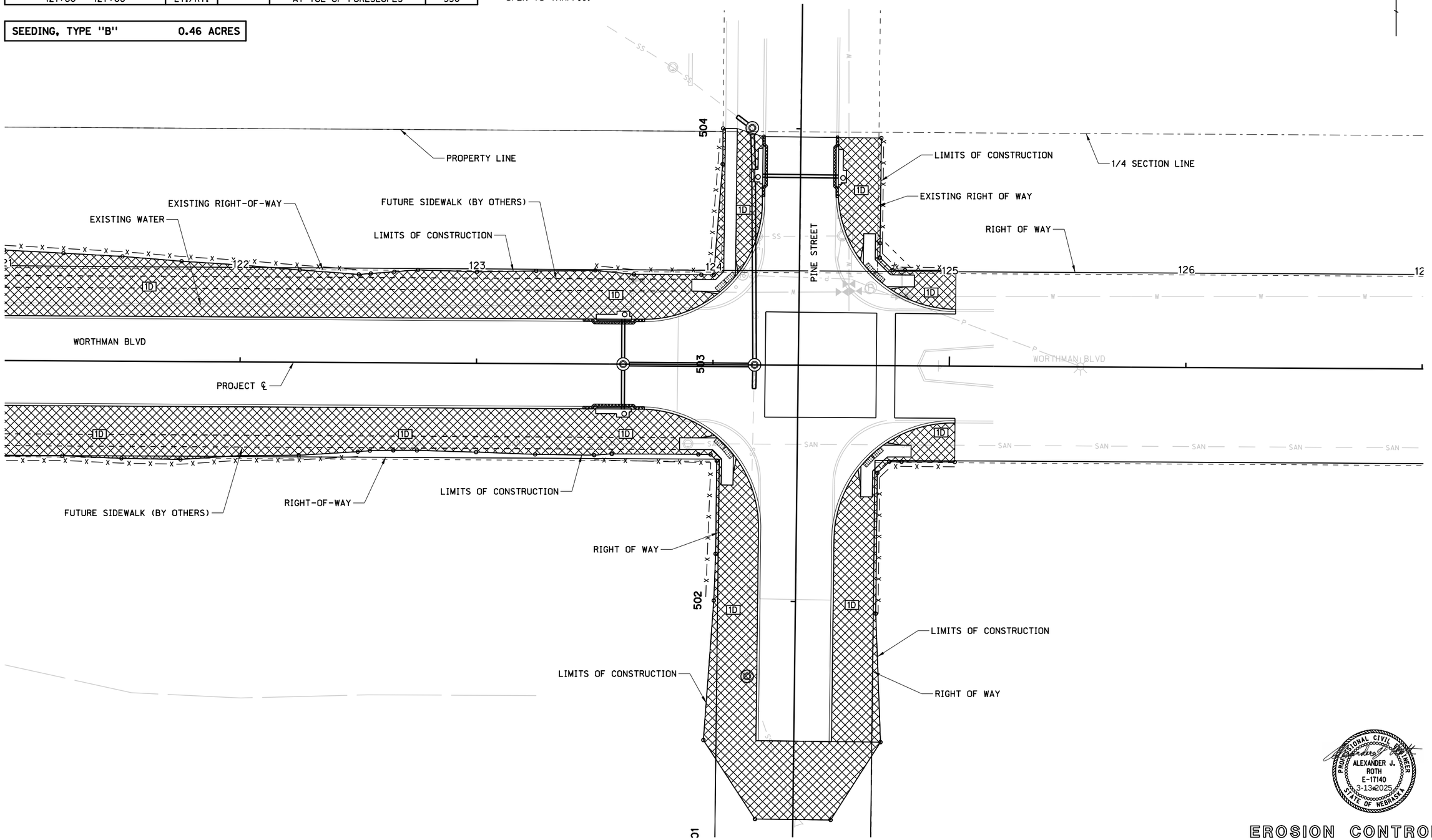
1D	BUILD EROSION CONTROL-CLASS 1D, PLAN 501				
STATION TO STATION	SIDE	DESCRIPTION	WIDTH	SQ. YDS.
121+00 - 127+00	LT./RT.	IN ALL DISTURBED AREAS	VARIES	2,232

—x—	BUILD FABRIC SILT FENCE-LOW POROSITY, PLAN 502				
STATION TO STATION	SIDE	BAY	DESCRIPTION	LIN. FT.
121+00 - 127+00	LT./RT.	-	AT TOE OF FORESLOPES	536

SEEDING, TYPE "B"	0.46 ACRES

BUILD CURB INLET PROTECTION, SPECIAL PLAN 3C			
STATION	SIDE	DESCRIPTION	EACH
123+62	18' LT.	AT PROPOSED INLET	1
123+62	18' RT.	AT PROPOSED INLET	1
503+80	15' LT.	AT PROPOSED INLET	1
503+80	15' LT.	AT PROPOSED INLET	1

NOTE: ALL CURB INLET SEDIMENT FILTER(S) SHALL BE REMOVED BEFORE THE ROAD IS OPEN TO TRAFFIC.



SCHEMMER
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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J25

0 20' 40'
SCALE

ALEXANDER J. ROTH
E-17140
3-13-2025
PROFESSIONAL CIVIL ENGINEER
STATE OF NEBRASKA

EROSION CONTROL

File: 09336001 Erosion Ctrl04.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Scale: 1:40 Date: 12-MAR-2025 10:08 Computer: LINMEGANS

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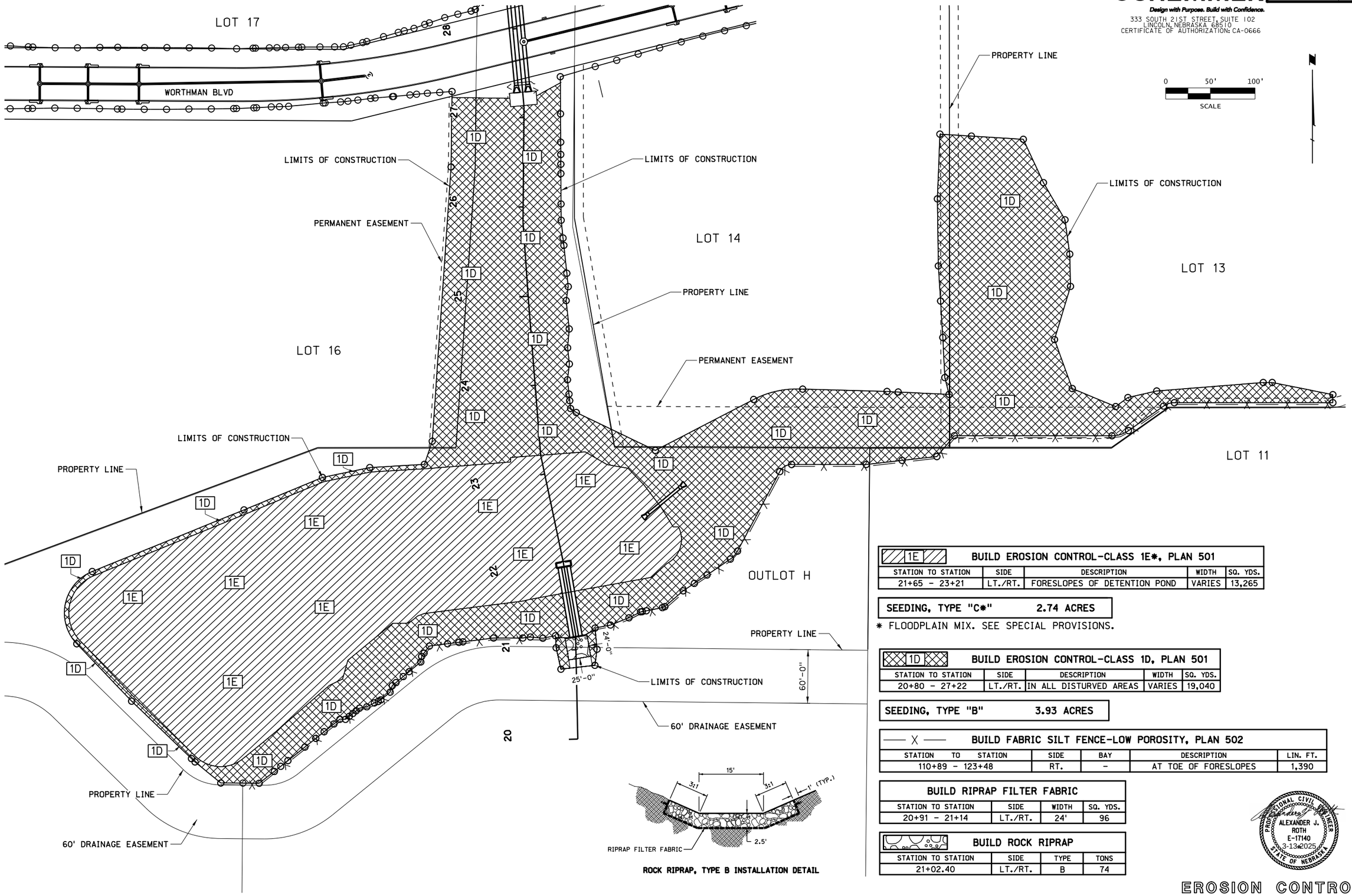
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	J26



1E	BUILD EROSION CONTROL-CLASS 1E*, PLAN 501				
STATION TO STATION		SIDE	DESCRIPTION	WIDTH	SQ. YDS.
21+65 - 23+21		LT./RT.	FORESLOPES OF DETENTION POND	VARIES	13,265

SEEDING, TYPE "C*" 2.74 ACRES

* FLOODPLAIN MIX. SEE SPECIAL PROVISIONS.

1D	BUILD EROSION CONTROL-CLASS 1D, PLAN 501				
STATION TO STATION		SIDE	DESCRIPTION	WIDTH	SQ. YDS.
20+80 - 27+22		LT./RT.	IN ALL DISTURVED AREAS	VARIES	19,040

SEEDING, TYPE "B" 3.93 ACRES

X	BUILD FABRIC SILT FENCE-LOW POROSITY, PLAN 502				
STATION TO STATION		SIDE	BAY	DESCRIPTION	LIN. FT.
110+89 - 123+48		RT.	-	AT TOE OF FORESLOPES	1,390

BUILD RIPRAP FILTER FABRIC			
STATION TO STATION	SIDE	WIDTH	SQ. YDS.
20+91 - 21+14	LT./RT.	24'	96

BUILD ROCK RIPRAP			
STATION TO STATION	SIDE	TYPE	TONS
21+02.40	LT./RT.	B	74

ROCK RIPRAP, TYPE B INSTALLATION DETAIL

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

EROSION CONTROL

File: 09336001 Erosion Ctrl05.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD. SEWARD, NE
Scale: 1:100
Date: 12-MAR-2025 10:08
Computer: LINMEGANS

ROADWAY DESIGN DIVISION.

BUILD SANITARY MANHOLE, PLAN 435						
NO.	STATION	SIDE	FRAME	FLANGE	RING	COVER TYPE
1	114+50.00	30' RT.	III	-	-	B
2	118+40.48	22.52' RT.	III	-	-	B

BUILD SANITARY SEWER PIPE				
NO.	STATION TO STATION	SIDE	DESCRIPTION
1	114+50.00 - 118+40.48	RT.	12" x 388' PVC Pipe, Fill = 8.1'.

0 20' 40'
SCALE

SCHEMMER
Design with Purpose. Build with Confidence.
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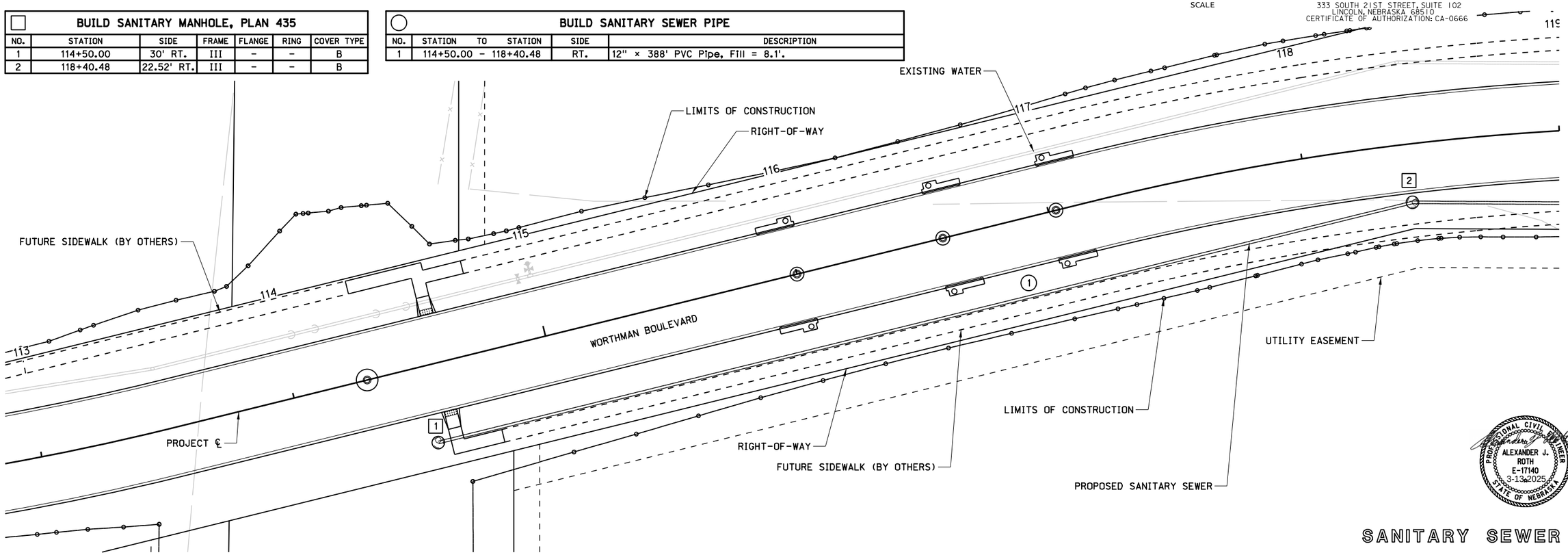
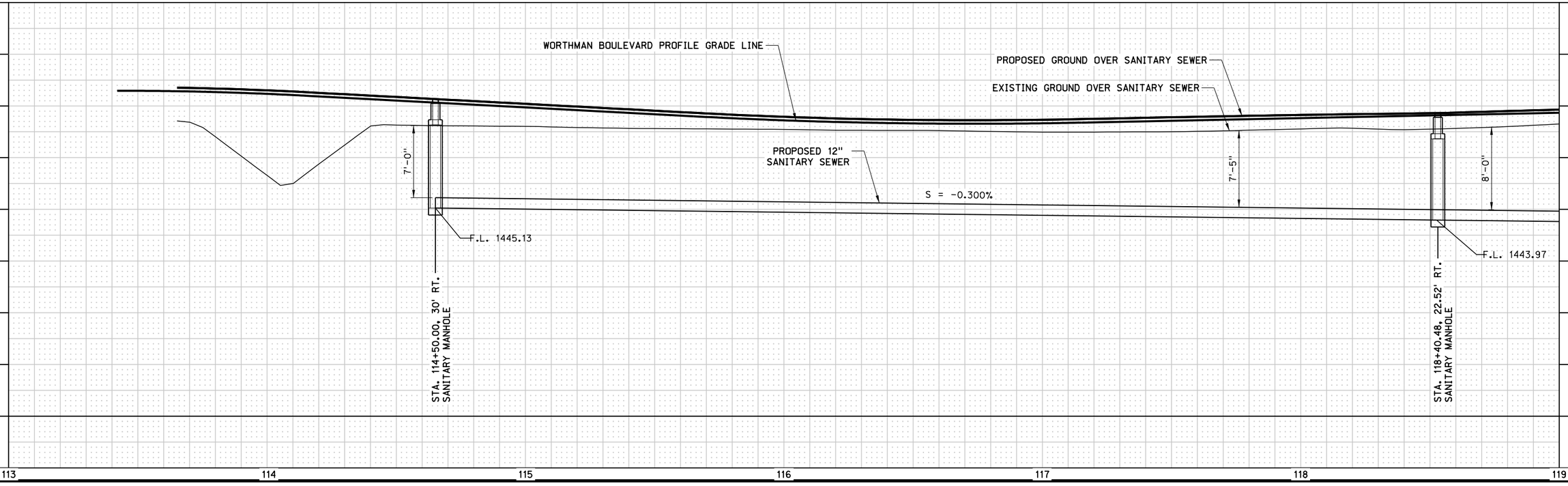
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-C	K1
C.N.	



PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

SANITARY SEWER



PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:08
Computer: LINNEGANS

File: 09336001 PSan01.dgn
Scale: 1:40

SCHEMMER
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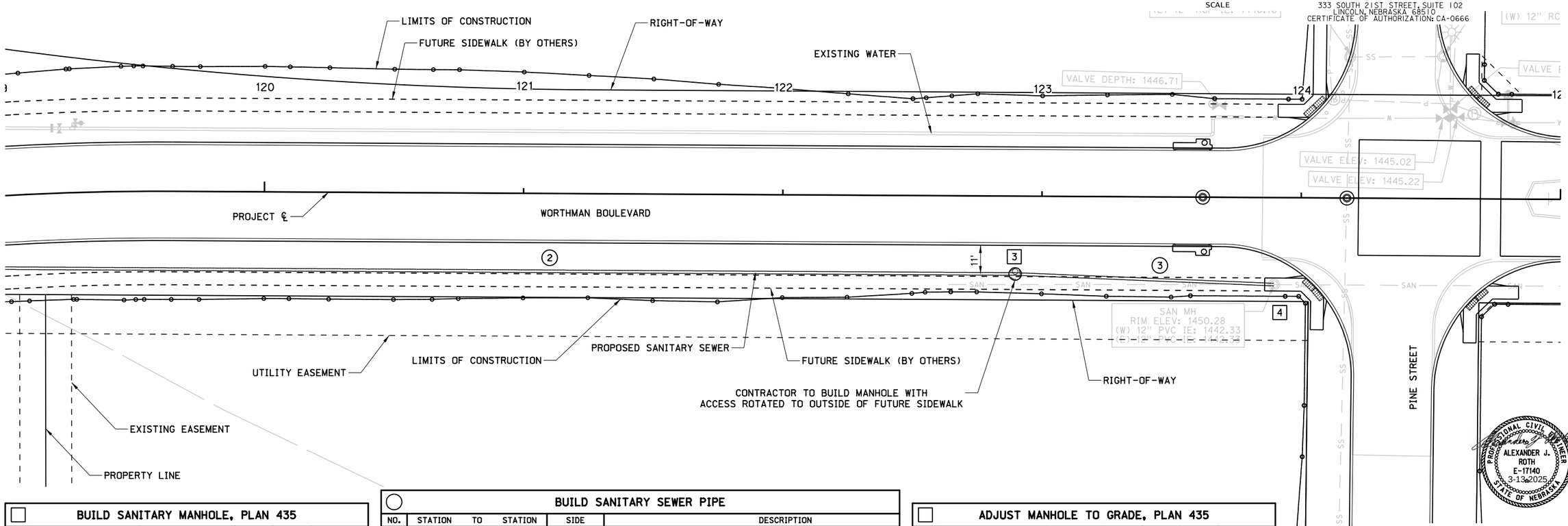
333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-C	K2
C.N.	

SCALE 0 20' 40'



☐ **BUILD SANITARY MANHOLE, PLAN 435**

NO.	STATION	SIDE	FRAME	FLANGE	RING	COVER TYPE
3	122+89.80	30' RT.	III	–	–	B

○ **BUILD SANITARY SEWER PIPE**

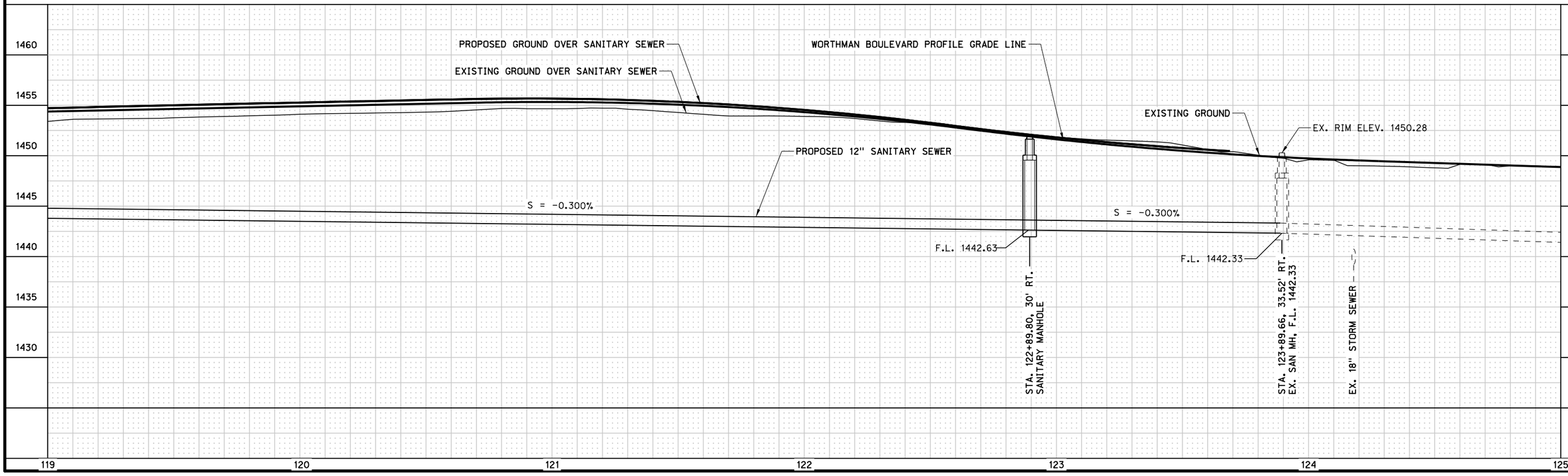
NO.	STATION TO STATION	SIDE	DESCRIPTION
2	118+40.48 – 122+89.80	RT.	12" x 446' PVC Pipe, Fill = 8.6'.
3	122+89.80 – 123+89.66	RT.	12" x 100' PVC Pipe, Fill = 6.9'.

☐ **ADJUST MANHOLE TO GRADE, PLAN 435**

NO.	STATION	SIDE	FRAME	FLANGE	RING	COVER TYPE
4	123+89.66	33.52' RT	–	–	–	–

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

◎ SANITARY SEWER



PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD. SEWARD, NE
Date: 12-MAR-2025 10:08
Computer: LINMEGANS

File: 09336001 PSan02.dgn
Scale: 1:40

ROADWAY DESIGN DIVISION.

SCHEMMER
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333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-C	K3

C.N.

0 20' 40'
SCALE

P IE: 1446.87

ELEV: 1445.50

125 126 127 128 129 130

RIGHT-OF-WAY

PROJECT ℄

WORTHMAN BOULEVARD

SAN MH
RIM ELEV: 1447.56
(W) 12" PVC IE: 1439.36
(E) 12" PVC IE: 1439.36

RIGHT-OF-WAY

EXISTING 12" SANITARY SEWER

SANITARY SEWER

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

1460
1455
1450
1445
1440
1435
1430

WORTHMAN BOULEVARD PROFILE GRADE LINE

EXISTING GROUND OVER SANITARY SEWER

-0.8269% (EX SLOPE)

F.L. 1439.36

EXISTING 12" SANITARY SEWER

STA. 127+48.82
EX. SAN MH
F.L. 1439.36

125 126 127 128 129 130

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:08
Computer: LINMEGANS

File: 09336001 Psan03.dgn
Scale: 1:40

SCHEMMER
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333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-C	L1

C.N.

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Computer: LINMEGANS
Date: 12-MAR-2025 10:08

File: 09336001 PP01.dgn
Scale: 1:40

0 20' 40'
SCALE

PERMANENT EASEMENT
EXISTING EASEMENT
PROPERTY LINE
FUTURE SIDEWALK (BY OTHERS)
RIGHT-OF-WAY
LIMITS OF CONSTRUCTION
EXISTING WATER
WORTHMAN BLVD
PROJECT ℄
TEMPORARY EASEMENT
SECTION LINE
LIMITS OF CONSTRUCTION
UTILITY EASEMENT
PERMANENT EASEMENT
RIGHT-OF-WAY

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

PLAN AND PROFILE

PROPOSED GRADE
1,458.43
-1.0000 %
-1.0000 %
End of Culdesac
STA 109+20.00
EL = 1,454.50
K = 67
L = 100'
EXISTING GROUND
15" STORM DRAIN
F.L. 1451.02
EX. 48" STORM DRAIN
F.L. 1445.63
EX. 48" STORM DRAIN
F.L. 1445.63

1470 1465 1460 1455 1450 1445 1440

1,454.26 1,454.12 1,458.30 1,453.99 1,458.10 1,453.91 1,457.90 1,453.90 1,457.70 1,453.90 1,457.50 1,453.91 1,457.30 1,453.92 1,457.10 1,453.94 1,456.90 1,453.93 1,456.70 1,453.92 1,456.50 1,453.92 1,456.30 1,453.89 1,456.10 1,453.85 1,455.90 1,453.82 1,455.70 1,453.81 1,455.50 1,453.81 1,455.30 1,453.77 1,455.10 1,453.73 1,454.91 1,453.69

103 104 105 106 107 108 109

ROADWAY DESIGN DIVISION.

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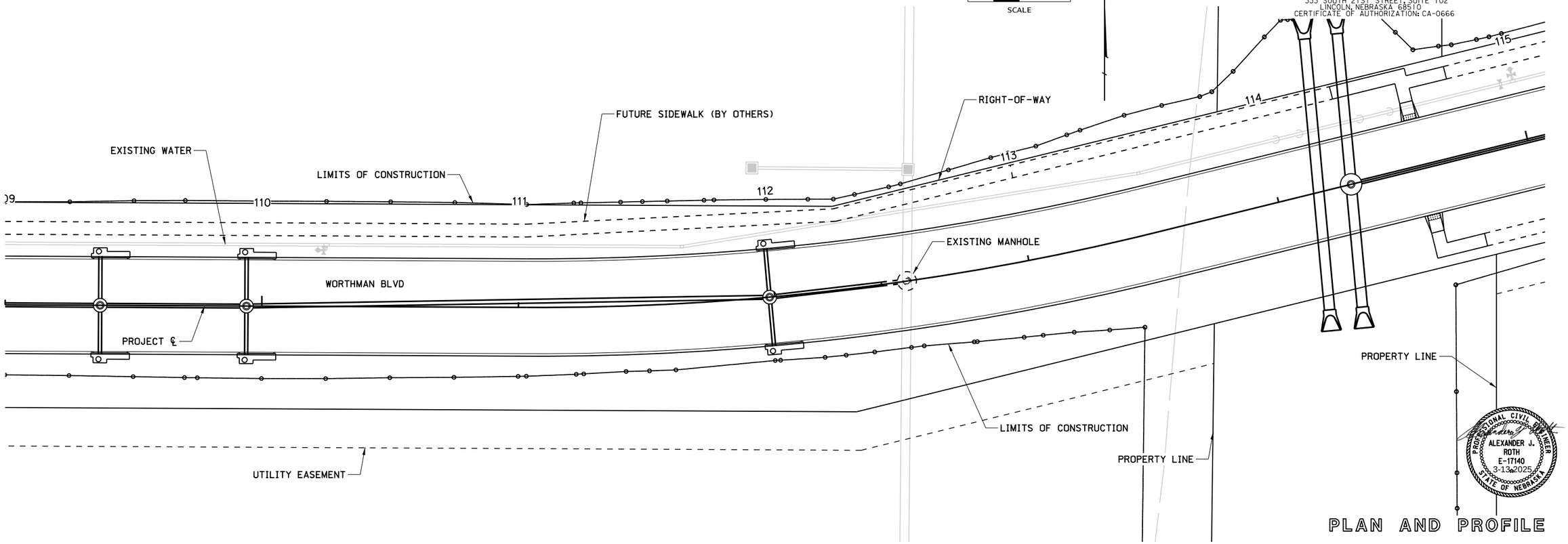
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

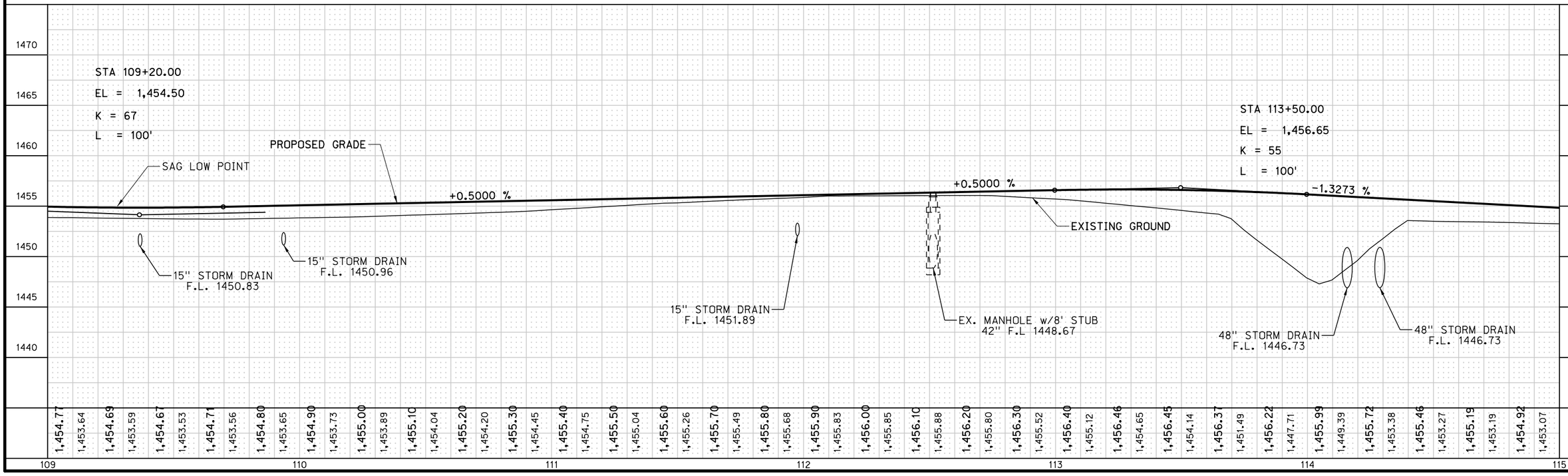
PROJECT NO.	SHEET NO.
09336001-C	L2
C.N.	

0 20' 40'
SCALE



PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

PLAN AND PROFILE



PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:08
Computer: LINMEGANS

File: 09336001 PP02.dgn
Scale: 1:40

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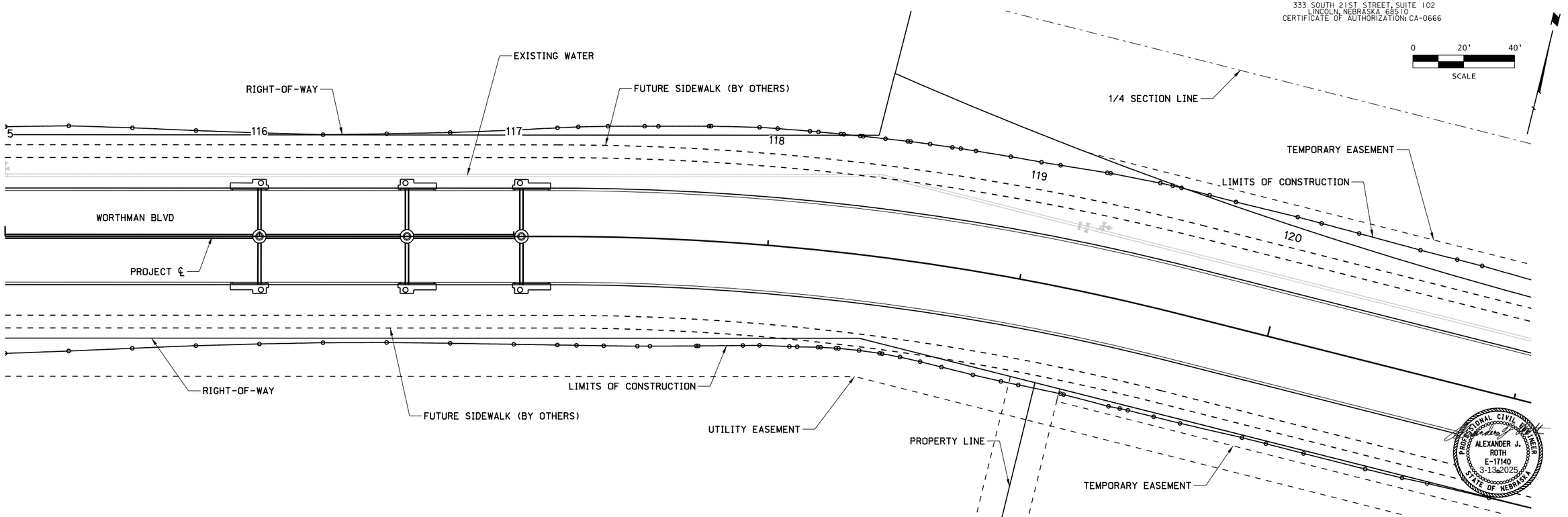
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-C	L3

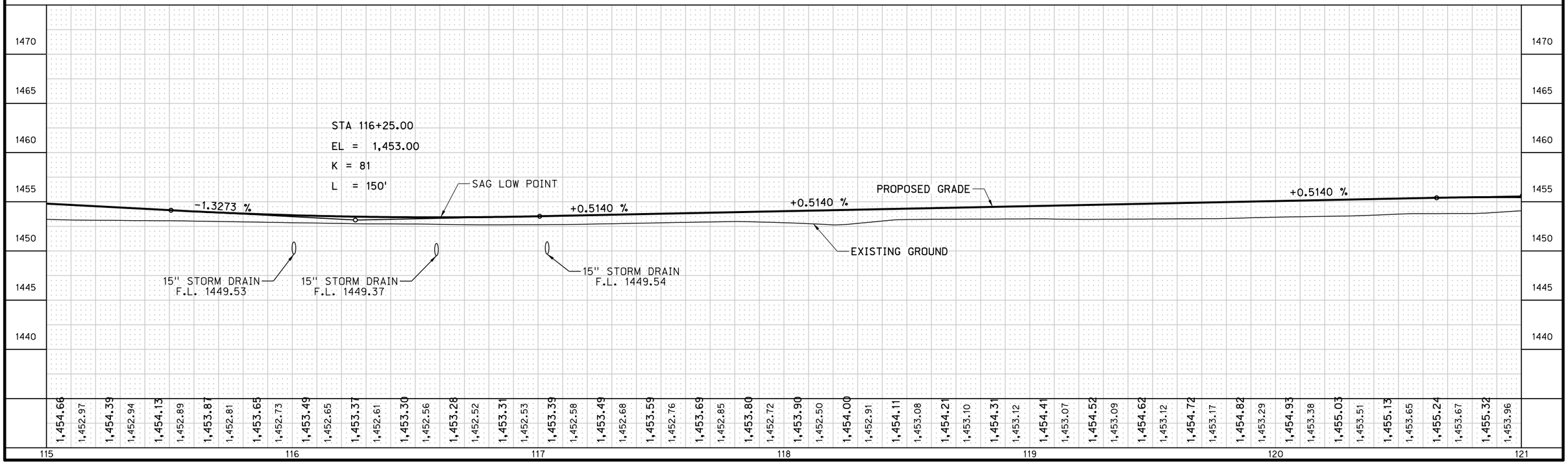
C.N.

ROADWAY DESIGN DIVISION.



PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

PLAN AND PROFILE



PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
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Scale: 1:40

ROADWAY DESIGN DIVISION.

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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-C	L4

C.N.

0 20' 40'
SCALE

LIMITS OF CONSTRUCTION
FUTURE SIDEWALK (BY OTHERS)
EXISTING WATER
EXISTING RIGHT-OF-WAY
TEMPORARY EASEMENT
RIGHT-OF-WAY
LIMITS OF CONSTRUCTION
STORM INLET
RIM ELEV: 1450.12
(W) 12" RCP IE: 1446.87
PERMANENT EASEMENT
VALVE ELEV: 1445.50
RIGHT-OF-WAY
VALVE DEPTH: 4.71'
21 122 123 124 125 126 12
WORTHMAN BLVD
VALVE ELEV: 1445.02
VALVE ELEV: 1445.22
PROJECT ℄
SAN MH
RIM ELEV: 1450.28
(W) 12" PVC IE: 1442.33
(E) 12" PVC IE: 1442.33
LIMITS OF CONSTRUCTION
EXISTING RIGHT-OF-WAY
RIGHT-OF-WAY
UTILITY EASEMENT
FUTURE SIDEWALK (BY OTHERS)
TEMPORARY EASEMENT
PINE STREET
PERMANENT EASEMENT
RIGHT-OF-WAY
UTILITY EASEMENT
LIMITS OF CONSTRUCTION

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

PLAN AND PROFILE

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:08
Computer: LINMEGANS

File: 09336001 PP04.dgn
Scale: 1:40

STA 121+60.00
EL = 1,455.75
K = 52
L = 190'
HIGH POINT
PROPOSED GRADE
EXISTING GROUND
-3.1112 %

STA 123+40.00
EL = 1,450.15
K = 66
L = 150'
-3.1112 %
-0.8236 %
PROJECT TIE-IN
STA 124+22.55
EL = 1,449.47
15" STORM DRAIN
F.L. 1446.19

STA 124+22.55
EL = 1,449.47
℄
PINE STREET
-0.8236 %
-0.7300 %
STA 124+86.90
EL = 1,448.94
1,448.70
18" STORM DRAIN
F.L. 1439.62

1470 1465 1460 1455 1450 1445 1440

1,455.32 1,454.04 1,455.26 1,453.99 1,455.11 1,453.81 1,454.89 1,453.72 1,454.59 1,453.63 1,454.22 1,453.59 1,453.77 1,453.27 1,453.24 1,452.82 1,452.64 1,452.18 1,452.03 1,451.56 1,451.49 1,451.12 1,451.00 1,450.68 1,450.58 1,450.34 1,450.22 1,450.02 1,449.91 1,449.70 1,449.67 1,449.49 1,449.49 1,449.29 1,449.33 1,449.16 1,449.16 1,448.96 1,449.00 1,449.21 1,448.84 1,448.70

121 122 123 124 125 126 127

ROADWAY DESIGN DIVISION.

SCHEMMER
Design with Purpose. Build with Confidence.
333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-C	L5

C.N.

0 20' 40'
SCALE

PROPOSED SANITARY SEWER
UTILITY EASEMENT
TEMPORARY EASEMENT
LIMITS OF CONSTRUCTION
RIGHT-OF-WAY
LIMITS OF CONSTRUCTION
FUTURE SIDEWALK (BY OTHERS)
EXISTING WATER
1/4 SECTION LINE & PROPOSED PROPERTY LINE
TEMPORARY EASEMENT
RIGHT-OF-WAY
LIMITS OF CONSTRUCTION
EXISTING RIGHT-OF-WAY
PROPOSED STORM SEWER
PINE STREET
PROJECT ℄
RIGHT-OF-WAY
EXISTING RIGHT-OF-WAY
LIMITS OF CONSTRUCTION
LIMITS OF CONSTRUCTION
EXISTING RIGHT-OF-WAY
WORTHMAN BLVD
UTILITY EASEMENT
RIGHT-OF-WAY

00 501 502 503 504 505 5(

ALEXANDER J. ROTH
E-17140
3-13-2025
PROFESSIONAL CIVIL ENGINEER
STATE OF NEBRASKA

PLAN AND PROFILE

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:08
Computer: LINMEGANS

File: 09336001 PP05.dgn
Scale: 1:40

PROPOSED GRADE
1,450.31
-0.6253 %
STA 502+77.94
EL = 1,448.82
STA 503+22.44
EL = 1,448.78
PROPOSED GRADE
1,450.50
+2.3214 %
EXISTING GROUND
15" STORM DRAIN
F.L. 1446.31
12" SANITARY SEWER
F.L. 1441.94

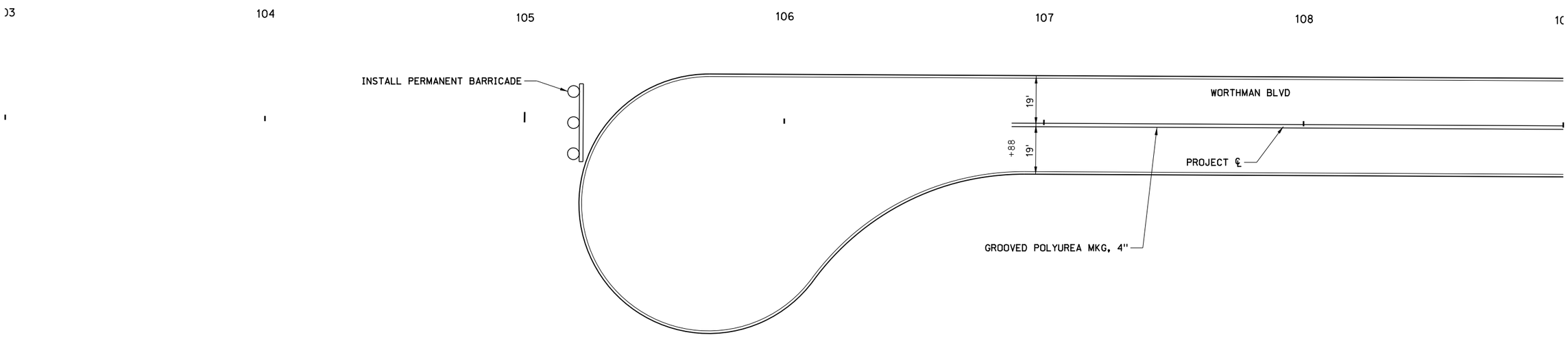
1470 1465 1460 1455 1450 1445 1440

1,450.19 1,449.29 1,450.07 1,449.94 1,449.94 1,449.73 1,449.58 1,449.46 1,449.30 1,449.07 1,449.01 1,448.86 1,449.33 1,448.83 1,448.80 1,449.21 1,449.19 1,449.86 1,449.65 1,450.20 1,450.12 1,450.47 1,450.59 1,450.69

500 501 502 503 504 505 506

4" YELLOW POLYUREA PAVEMENT MARKING, GROOVED		
STATION TO STATION	SIDE	LIN. FT.
106+87.58 - 109+00.00	LT/RT	425

INSTALL PERMANENT BARRICADE, TYPE 3, RED & WHITE STRIPES		
STATION	SIDE	EACH
105+21.84	℄	1



GENERAL NOTES

1. ALL PERMANENT PAVEMENT MARKING SHALL BE INSTALLED WITH SMOOTH AND GRADUAL TRANSITIONS AND ALIGNMENTS. WHEN NECESSARY, THE CONTRACTOR SHALL PREMARK THE SURFACE PRIOR TO PLACING THE MARKINGS.
2. NEW PAVEMENT MARKING SHALL BE ALIGNED WITH EXISTING PAVEMENT MARKING WHERE NECESSARY.
3. ALL LEGENDS AND SYMBOLS SHALL BE CENTERED IN RESPECTIVE LANES.
4. REMOVE ALL CONFLICTING PAVEMENT MARKING FROM ROADWAY. (SUBSIDIARY)

SCHEMMER
Design with Purpose. Build with Confidence.
333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	M1

0 20' 40'
SCALE

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

PAVEMENT MARKING AND SIGNING

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:08
Computer: LINMEGANS

File: 09336001 PM01.dgn
Scale: 1:40

4" YELLOW POLYUREA PAVEMENT MARKING, GROOVED		
STATION TO STATION	SIDE	LIN. FT.
109+00.00 - 115+00.00	LT/RT	1,200

24" WHITE POLYUREA PAVEMENT MARKING, GROOVED		
STATION TO STATION	SIDE	LIN. FT.
114+57.50	LT/RT	42

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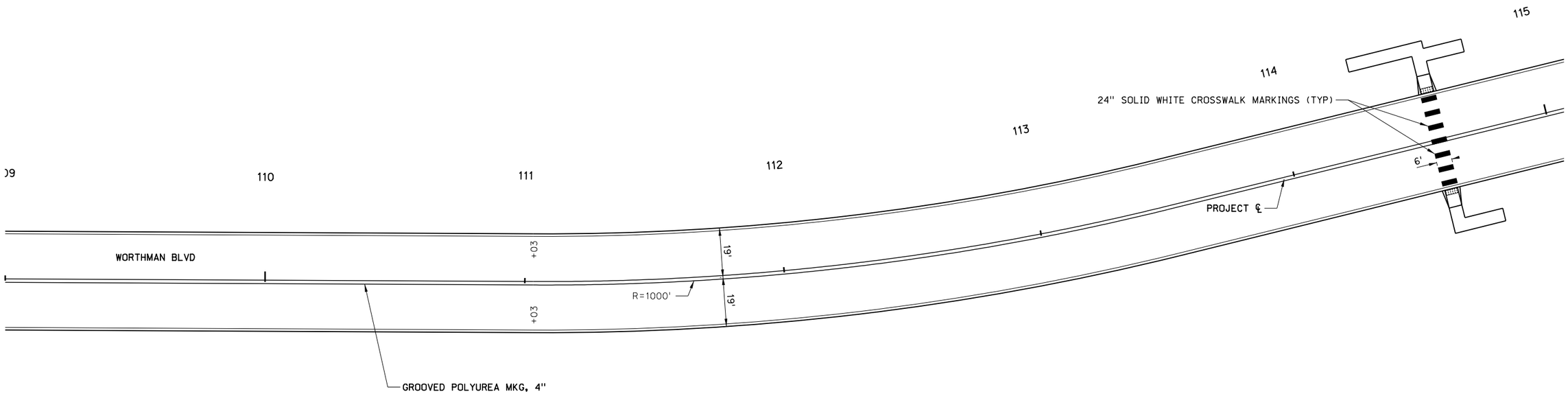
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	M2

0 20' 40'
SCALE



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ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

PAVEMENT MARKING AND SIGNING

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:08
Computer: LINMEGANS

File: 09336001 PM02.dgn
Scale: 1:40

4" YELLOW POLYUREA PAVEMENT MARKING, GROOVED		
STATION TO STATION	SIDE	LIN. FT.
115+00.00 - 121+00.00	LT/RT	1,200

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333 SOUTH 21ST STREET, SUITE 102
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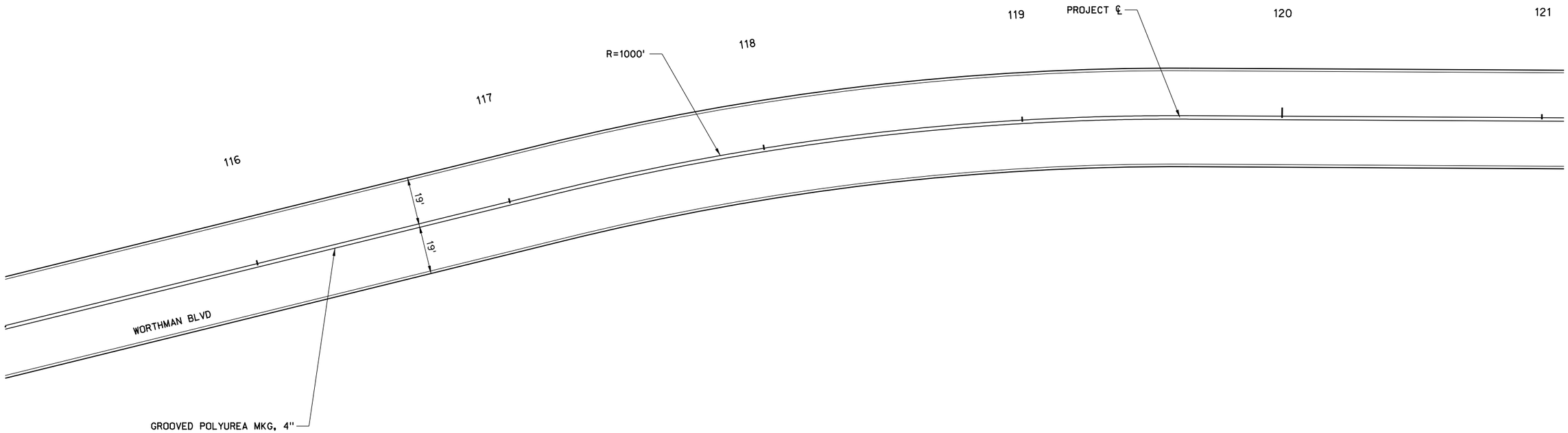
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	M3

0 20' 40'
SCALE



ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:08
Computer: LINMEGANS

File: 09336001 PM03.dgn
Scale: 1:40

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

PAVEMENT MARKING AND SIGNING

SCHEMMER
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CERTIFICATE OF AUTHORIZATION: CA-0666

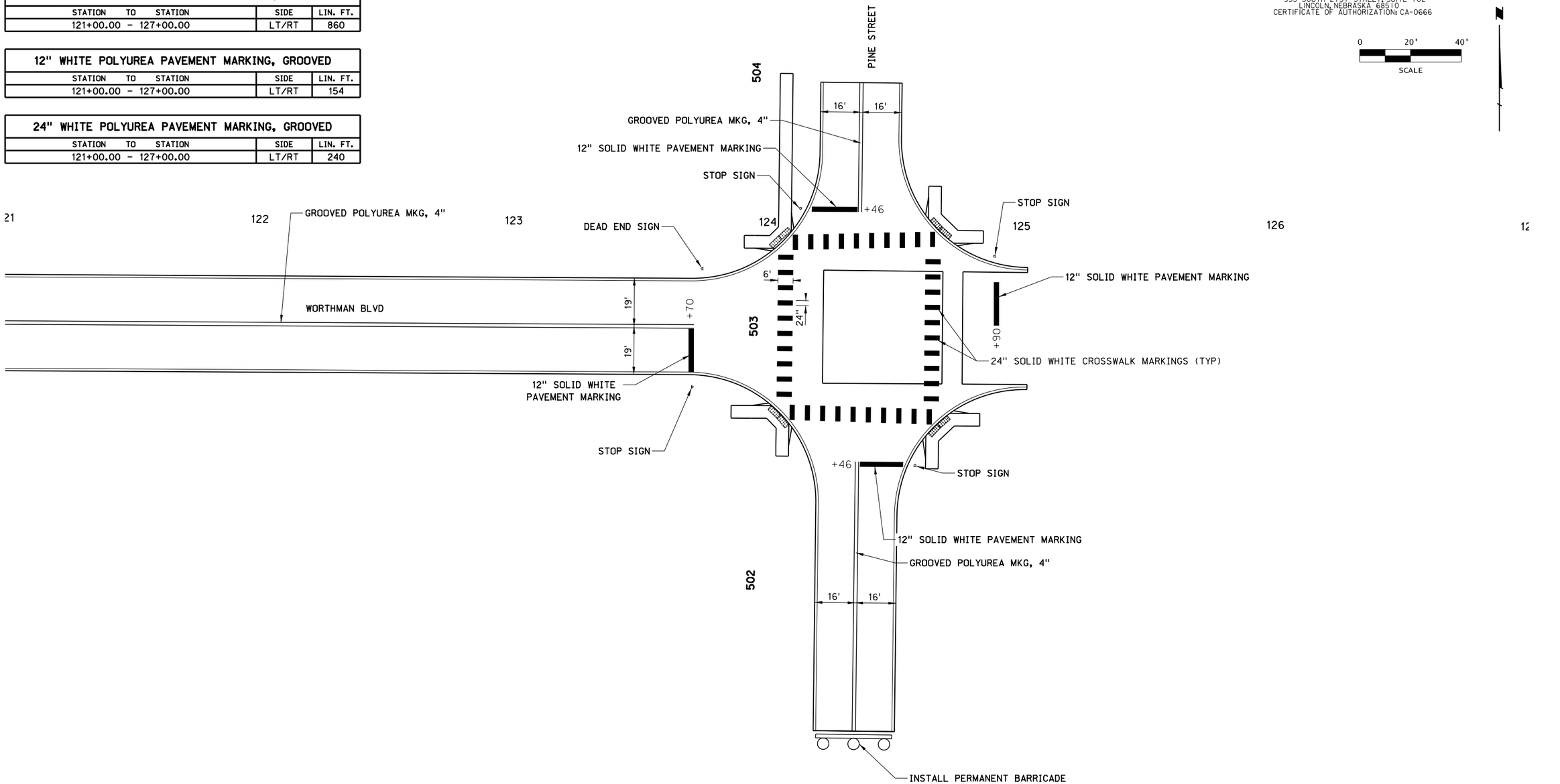
PROJECT NO.	SHEET NO.
09336.001-C	M4

ROADWAY DESIGN DIVISION.

4" YELLOW POLYUREA PAVEMENT MARKING, GROOVED		
STATION TO STATION	SIDE	LIN. FT.
121+00.00 - 127+00.00	LT/RT	860

12" WHITE POLYUREA PAVEMENT MARKING, GROOVED		
STATION TO STATION	SIDE	LIN. FT.
121+00.00 - 127+00.00	LT/RT	154

24" WHITE POLYUREA PAVEMENT MARKING, GROOVED		
STATION TO STATION	SIDE	LIN. FT.
121+00.00 - 127+00.00	LT/RT	240



0 20' 40'
SCALE

INSTALL PERMANENT BARRICADE, TYPE 3, RED & WHITE STRIPES		
STATION	SIDE	EACH
501+39.63	℄	1

INSTALL TYPE A SIGN			
STATION	SIDE	TYPE	EACH
123+70.76	24' RT.	R1-1-36	1
123+74.31	23' LT.	W-14-1-36	1
124+12.95	47' LT.	R1-1-36	1
124+58.64	54' RT.	R1-1-36	1
124+89.32	28' LT.	R1-1-36	1

R1-1-36

W-14-1-36

PAVEMENT MARKING AND SIGNING

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:08
Computer: LINMEGANS

File: 09336001 PM04.dgn
Scale: 1:40

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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-C	N1

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 06-FEB-2025 14:21
Computer: LINMEGANS

File: 09336001 Lighting01.dgn
Scale: 1:40

0 20' 40'
SCALE

EXISTING WATER MAIN
EXISTING EASEMENT
PERMANENT EASEMENT
PROPERTY LINE
RIGHT-OF-WAY
STREET LIGHT POLE 2
STA. 106+60.00, 26.45' LT
SL-BT-30-8-LED
CONTRACTOR TO MAINTAIN A MINIMUM OF 5' OF SEPARATION BETWEEN STREET LIGHTING CONDUIT & WATER MAIN
LIMITS OF CONSTRUCTION
EXISTING WATER MAIN
FUTURE SIDEWALK (BY OTHERS)
TEMPORARY EASEMENT
103
104
105
106
107
108
262'
DO NOT DISTURB PULL BOX
DO NOT DISTURB POWER POLE
DO NOT DISTURB FENCE
WORTHMAN BOULEVARD
90'
146'
PULL BOX 1
STA. 107+00.00, 22.00' RT
STREET LIGHT POLE 3
STA. 107+90.00, 22.00' RT
SL-BT-30-4-LED
UTILITY EASEMENT
RIGHT-OF-WAY
STREET LIGHT POLE 1
STA. 105+75.00, 84.00' RT
SL-BT-30-8-LED
LIMITS OF CONSTRUCTION
PERMANENT EASEMENT

LEGEND

- LIGHTING CONTROL CENTER
- SPARE BEND — SINGLE LIGHTING UNIT
- PAD MOUNTED TRANSFORMER
- EXISTING LIGHTING UNIT
- SPARE BEND — PULL BOX
- EXISTING PULL BOX
- PULL BOX TO BE REMOVED
- CONDUIT IN TRENCH
- CONDUIT UNDER ROADWAY
- P — EXISTING POWER LINE

PROFESSIONAL ELECTRICAL ENGINEER
JOSEPH C. BINGE
E-11337
STATE OF NEBRASKA
02/19/2025

LIGHTING

SCHEMMER
Design with Purpose. Build with Confidence.
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CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-C	N2

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 06-FEB-2025 14:21
Computer: LINMEGANS

File: 09336001 Lighting02.dgn
Scale: 1:40

0 20' 40'
SCALE

PROPERTY LINE

PROPERTY LINE

CONTRACTOR TO MAINTAIN A MINIMUM OF 5' OF SEPARATION
BETWEEN STREET LIGHTING CONDUIT & WATER MAIN

STREET LIGHT POLE 8
STA. 114+10.00, 27.05' LT
SL-BT-30-8-LED

FUTURE SIDEWALK
(BY OTHERS)

STREET LIGHT POLE 4
STA. 109+20.00, 26.50' LT
SL-BT-30-8-LED

EXISTING WATER MAIN

STREET LIGHT POLE 6
STA. 111+70.00, 26.50' LT
SL-BT-30-8-LED

LIMITS OF CONSTRUCTION

RIGHT-OF-WAY

109 110 111 112 113 114 115

250' 237' 214'

WORTHMAN BLVD

252'

PROJECT ℄

250' 255'

RIGHT-OF-WAY

LIMITS OF CONSTRUCTION

STREET LIGHT POLE 7
STA. 112+90.00, 25.00' RT
SL-BT-30-8-LED

LIMITS OF CONSTRUCTION

STREET LIGHT POLE 5
STA. 110+40.00, 25.00' RT
SL-BT-30-8-LED

UTILITY EASEMENT

PERMANENT EASEMENT

PROPERTY LINE

PROPERTY LINE

LIMITS OF CONSTRUCTION

LEGEND

- LIGHTING CONTROL CENTER
- SPARE BEND — SINGLE LIGHTING UNIT
- PAD MOUNTED TRANSFORMER
- EXISTING LIGHTING UNIT
- SPARE BEND — PULL BOX
- EXISTING PULL BOX
- PULL BOX TO BE REMOVED
- CONDUIT IN TRENCH
- CONDUIT UNDER ROADWAY
- P — EXISTING POWER LINE

PROFESSIONAL ELECTRICAL ENGINEER
JOSEPH C. BINGE
E-11337
STATE OF NEBRASKA
02/19/2025

LIGHTING

SCHEMMER
Design with Purpose. Build with Confidence.
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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-C	N3

SCALE 0 20' 40'

SAN MH
RIM ELEV: 1451.93
(E) 8" PVC IE: 1441.05
(N) 10" PVC IE: 1441.05

PROPERTY LINE
1/4 SECTION LINE
EXISTING PROPERTY LINE
PERMANENT EASEMENT
TEMPORARY EASEMENT
STREET LIGHT POLE 12
STA. 118+70.00, 26.50' LT
SL-BT-30-8-LED
CONTRACTOR TO MAINTAIN A MINIMUM OF 5' OF SEPARATION
BETWEEN STREET LIGHTING CONDUIT & WATER MAIN
FUTURE SIDEWALK
(BY OTHERS)
LIMITS OF CONSTRUCTION
STREET LIGHT POLE 10
STA. 116+20.00, 26.50' LT
SL-BT-30-8-LED
RIGHT-OF-WAY
EXISTING WATER MAIN
WORTHMAN BLVD
PROJECT ℄
STREET LIGHT POLE 11
STA. 117+90.00, 22.00' RT
SL-BT-30-4-LED
PULL BOX 2
STA. 118+99.00, 44.00' RT
NEW POWER SERVICE LOCATED
WITHIN 15' UTILITY EASEMENT
STA. 119+03.73, 46.31' RT
TRANSFORMER FOR STREET LIGHT
FEED AND DISCONNECT
(TO BE INSTALLED BY THE CITY OF SEWARD)
STA. 119+08.40, 42.61' RT
STREET LIGHT POLE 13
STA. 120+40.00, 22.00' RT
SL-BT-30-4-LED
UTILITY EASEMENT
EXISTING EASEMENT
PROPERTY LINE
LIMITS OF CONSTRUCTION
PROPOSED 12" SANITARY SEWER
FUTURE SIDEWALK
(BY OTHERS)
STREET LIGHT POLE 9
STA. 115+40.00, 26.50' RT
SL-BT-30-8-LED
PERMANENT EASEMENT

116 117 118 119 120 12
261' 257' 249' 112' 151'
7' 6' 10' 6' 85'

LEGEND

- LIGHTING CONTROL CENTER
- SINGLE LIGHTING UNIT (SPARE BEND)
- PAD MOUNTED TRANSFORMER
- EXISTING LIGHTING UNIT
- PULL BOX (SPARE BEND)
- EXISTING PULL BOX
- PULL BOX TO BE REMOVED
- CONDUIT IN TRENCH
- CONDUIT UNDER ROADWAY
- EXISTING POWER LINE (P)

PROFESSIONAL ELECTRICAL ENGINEER
JOSEPH C. BINGE
E-11337
STATE OF NEBRASKA
02/19/2025

LIGHTING

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 06-FEB-2025 14:21
Computer: LINMEGANS
File: 09336001 Lighting03.dgn
Scale: 1:40

SCHEMMER
Design with Purpose. Build with Confidence.
333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-C	N4

0 20' 40'
SCALE

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 06-FEB-2025 14:21
Computer: LINMEGANS

File: 09336001 Lighting04.dgn
Scale: 1:40

EXISTING PROPERTY LINE & 1/4 SECTION LINE
TEMPORARY EASEMENT
PULL BOX 3
STA. 503+60.04, 25.61' LT
CONNECT TO EXISTING POWER
LIMITS OF CONSTRUCTION
CONTRACTOR TO MAINTAIN A MINIMUM OF 5' OF SEPARATION
BETWEEN STREET LIGHTING CONDUIT & WATER MAIN
STREET LIGHT POLE 14
STA. 121+20.00, 26.50' LT
SL-BT-30-8-LED
REMOVE PULL BOX
PULL BOX 4
STA. 503+60.65, 25.00' RT
FUTURE SIDEWALK
(BY OTHERS)
EXISTING RIGHT-OF-WAY
RIGHT-OF-WAY
LIMITS OF CONSTRUCTION
STREET LIGHT POLE 16
STA. 123+70.00, 26.50' LT
SL-BT-30-8-LED
REMOVE PULL BOX, SPLICE NEW CONDUIT TO EXISTING
PERMANENT EASEMENT
RIGHT-OF-WAY
EXISTING WATER MAIN
WORTHMAN BLVD
FUTURE SIDEWALK
(BY OTHERS)
PROPOSED 12" SANITARY SEWER
STREET LIGHT POLE 15
STA. 122+45.00, 22.00' RT
SL-BT-30-4-LED
LIMITS OF CONSTRUCTION
UTILITY EASEMENT
TEMPORARY EASEMENT
RIGHT-OF-WAY
PINE STREET
PERMANENT EASEMENT
UTILITY EASEMENT
RIGHT-OF-WAY
LIMITS OF CONSTRUCTION

LEGEND

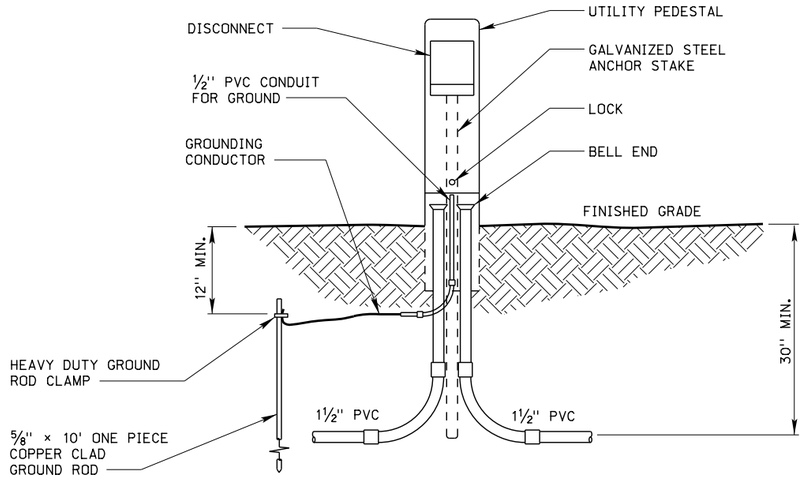
- LIGHTING CONTROL CENTER
- SPARE BEND — SINGLE LIGHTING UNIT
- PAD MOUNTED TRANSFORMER
- EXISTING LIGHTING UNIT
- SPARE BEND — PULL BOX
- EXISTING PULL BOX
- PULL BOX TO BE REMOVED
- CONDUIT IN TRENCH
- CONDUIT UNDER ROADWAY
- P — EXISTING POWER LINE

PROFESSIONAL ELECTRICAL ENGINEER
JOSEPH C. BINGE
E-11337
STATE OF NEBRASKA
02/19/2025

LIGHTING

SCHEMMER
Design with Purpose. Build with Confidence.
333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-C	N5



LIGHTING CONTROL CENTER, TYPE "DP"

UTILITY PEDESTAL

GLASS-FIBER REINFORCED, THERMOSETTING PLASTIC OF SUFFICIENT DIMENSION TO ALLOW ORDERLY PLACEMENT OF, AND UNRESTRICTED ACCESS TO, ALL CONTROL EQUIPMENT. PROVIDE WITH PADLOCK HASP.

DISCONNECT ENCLOSURE

DISCONNECT SHALL HAVE A NEMA-TYPE 1 ENCLOSURE. DOOR SHALL BE HINGED. PROVIDE CABLE-GRIP BUSHINGS OF CORRECT SIZE FOR ALL CABLE ENTRIES.

DISCONNECT

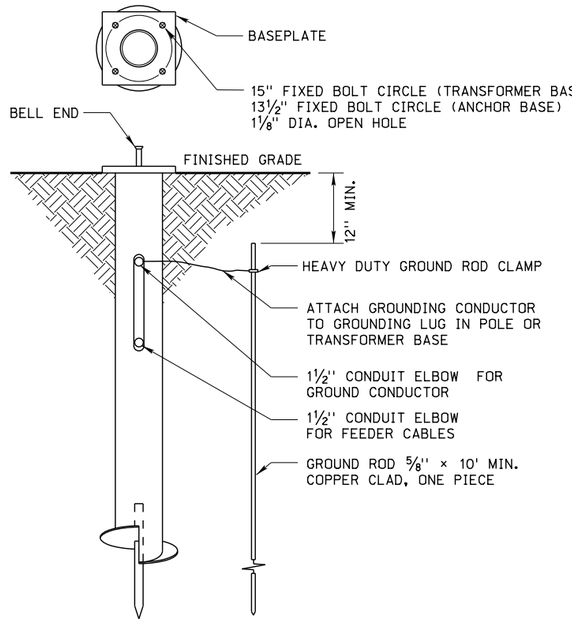
2-POLE/60 AMP, 240V, COMMON TRIP BREAKER IN HEAVY DUTY 60 AMP ENCLOSURE.

PAYMENT

THE DISCONNECT, UTILITY PEDESTAL, CONDUIT ENTRANCE BENDS AND GROUNDING SYSTEM ARE ALL SUBSIDIARY TO THE ITEM "LIGHTING CONTROL CENTER, TYPE "DP".

LOCATION

CONTROL CENTER LOCATION IS APPROXIMATE. ACTUAL LOCATION WILL BE AS DIRECTED BY THE ELECTRIC UTILITY AND PROJECT ENGINEER.



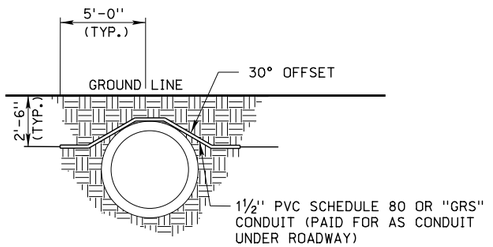
POWER INSTALLED FOUNDATION
(PERMANENT INSTALLATION)

NOTES:

FOUNDATION MUST BE INSTALLED PRIOR TO TRENCHING AND WITHOUT PILOT HOLE.

FOUNDATION MUST BE INSTALLED WITH BOTTOM OF BASEPLATE LEVEL AND FLUSH WITH FINISHED GRADE.

ANY DEVIATION FROM ABOVE INSTALLATION PROCEDURES MUST BE APPROVED BY ENGINEER.



CONDUIT INSTALLATION OVER CULVERT PIPE

PROFESSIONAL ELECTRICAL ENGINEER
JOSEPH C. BINGE
E-11337
STATE OF NEBRASKA
02/19/2025

LIGHTING DETAILS

File: 09336001 Lighting05.dgn
Scale: 1:40
PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 06-FEB-2025 14:21
Computer: LINMEGANS

GENERAL NOTES:

1. A 72 HOUR BURN IS NOT REQUIRED ON INSTALLATIONS USING LED LUMINAIRES.

2. FOR PULL BOX DETAILS, SEE STANDARD PLAN 914-R7. ALL PULL BOXES WITH METAL FRAME AND LID SHALL BE GROUNDED, UNLESS INDICATED OTHERWISE.

3. ALL CONNECTIONS IN PULL BOXES WILL BE MADE USING SUBMERSIBLE SECONDARY CONNECTORS MEETING ANSI C119.1 REQUIREMENTS.

4. ELECTRICAL CONNECTIONS IN POLE OR TRANSFORMER BASE SHALL BE MADE USING U.L. APPROVED, MULTI-CABLE, DUAL RATED, MECHANICAL CONNECTOR BLOCKS WITH ALLEN HEAD SET SCREWS, THE CONNECTOR BLOCK SHALL BE COMPLETELY ENCASED IN A SILICONE GEL OR FULLY SURROUNDED BY A MOLDED INSULATING COVER. CONNECTORS SHALL BE RATED 600 VOLTS. COMPRESSION TAPS AND TAPING WILL NOT BE ALLOWED.

   THE CONNECTOR BLOCK MUST CONTAIN THE CORRECT NUMBER OF CABLE ENTRANCES TO ALLOW ONE CONDUCTOR PER WIRE HOLE AND MUST BE RATED FOR THE SIZE(S) AND TYPE(S) OF CABLE BEING USED. ANTIOXIDANT COMPOUND SHALL BE USED AND PROPER PROCEDURES FOLLOWED.

   THE ELECTRICAL CONNECTION, WHEN COMPLETE, SHALL BE FULLY INSULATED TO PREVENT ACCIDENTAL CONTACT WITH LIVE COMPONENTS.

5. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE BONDED:

   (A) TO ALL POLES OR TRANSFORMER BREAKAWAY BASES.

   (B) AT ALL CONTROL CENTER SERVICE LOCATIONS.

   (C) TO ALL METALLIC NONCURRENT CARRYING COMPONENTS.

   (D) TO ALL GROUND RODS.

6. IN PULL BOXES, POLE BASES, JUNCTION BOXES AND CONTROL CABINETS, THE DIRECTION OF EACH CABLE RUN SHALL BE INDICATED BY ATTACHING A PERMANENT TAG OF RIGID PLASTIC OR NON-FERROUS METAL TO THE CONDUIT. TAGS SHALL BE EMBOSSED, STAMPED OR ENGRAVED WITH LETTERS 3/16" OR GREATER IN HEIGHT AND SECURED TO THE CONDUIT WITH NYLON OR PLASTIC TIES.

   IN INSTANCES WHERE THE CONDUIT OR CONDUIT ENTRANCES ARE NOT VISIBLE OR ACCESSIBLE, AS IN ANCHOR BASE INSTALLATIONS, A DIRECTION TAG SHALL BE ATTACHED TO EACH CABLE.

7. CONDUIT SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 405 OF THE "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION".

8. ALL METALLIC AND NONMETALLIC CONDUIT SHALL BEAR THE U.L. LABEL.

9. UNLESS INDICATED OTHERWISE IN THE PLANS:

   (A) ALL CONDUIT SHALL BE 1½".

   (B) CONDUIT PLACED IN TRENCH OR UNDER THE ROADWAY SHALL BE NONMETALLIC AND OF THE FOLLOWING TYPES AS DEFINED IN THE SPECIFICATIONS: PVC, FRE, CID OR HDPE.

   (C) NONMETALLIC CONDUIT SURFACE MOUNTED ON STRUCTURES OR USED AS RISERS SHALL BE SCHEDULE 80 PVC.

   (D) METALLIC CONDUIT WHEN USED SHALL BE TYPE GRS OR IMC.

   (E) GALVANIZED INTERMEDIATE METAL CONDUIT (IMC) MAY BE USED IN LIEU OF GALVANIZED RIGID STEEL CONDUIT (GRS).

   (F) CONDUIT PLACED IN GROUND SHALL HAVE A MINIMUM EARTH COVER OF 30" UNLESS INDICATED OTHERWISE.

   (G) ALL UNDERGROUND CONDUIT RACEWAYS TERMINATING IN PULL BOXES, LIGHT POLE BASES, BREAKAWAY TRANSFORMER BASES, PEDESTAL BASES, LIGHTING CONTROL CENTER CABINETS OR OTHER IN GROUND OR GROUND MOUNTED ENCLOSURES, SHALL ENTER THE ENCLOSURE VERTICAL TO THE EARTH'S SURFACE. ALL CONDUIT ENDS SHALL BE EQUIPPED WITH BELLS OR BUSHINGS TO PROTECT THE CABLE THEY CARRY FROM CHAFING OR ABRASION.

10. CONDUIT UNDER ROADWAY SHALL BE MEASURED FOR PAYMENT AS EXTENDING 1 FT. BEYOND THE EDGE OF THE ROADWAY SURFACE (INCLUDING SURFACED SHOULDERS).

11. JACKED CONDUIT MAY BE EITHER METALLIC OR NONMETALLIC.

12. TRENCHING SHALL BE KEPT A MINIMUM OF 5 FT. FROM THE TRUNK OF EXISTING TREES. JACKING MAY BE REQUIRED UNDER THE CENTER OF LARGE TREES IN LIMITED SPACE.

13. ROUTING OF CONDUIT AND CABLE MAY BE ALTERED BY THE PROJECT ENGINEER, IF NECESSARY, TO SUIT FIELD CONDITIONS.

14. INSTALL SPARE BENDS AS SHOWN ON PLANS. SPARE BENDS MUST BE SECURELY CAPPED OR PLUGGED AT BOTH ENDS WITH FITTINGS OF THE CORRECT SIZE AND TYPE FOR THE CONDUIT BEING USED.

15. CONDUIT DRAINS ARE NOT REQUIRED.

16. LUMINAIRES SHALL BE LEVELED AFTER POLE HAS BEEN INSTALLED ON FOUNDATION. LUMINAIRE MOUNTING BOLTS SHALL BE TORQUED TO MANUFACTURERS SPECIFICATIONS.

17. ROADWAY LIGHTING SYSTEM MUST MEET PROJECT ENGINEERS FINAL INSPECTION. ROADWAY LIGHTING SYSTEMS ARE NOT SUBJECT TO STATE OR LOCAL ELECTRICAL INSPECTION. ELECTRICAL WORK PERFORMED ON REST AREAS OR WEIGH STATIONS WILL REQUIRE AN ELECTRICAL PERMIT AND WILL BE SUBJECT TO A FINAL INSPECTION BY THE STATE ELECTRICAL INSPECTOR.

18. CONTACT UTILITY THREE WORKING DAYS PRIOR TO REQUIRING SERVICE CONNECTION OR DISCONNECT.

19. GROUNDING CONNECTIONS IN PULL BOXES AND JUNCTION BOXES SHALL BE MADE USING MECHANICAL CONNECTORS SPECIFICALLY DESIGNED FOR THE PURPOSE.

20. UNLESS INDICATED OTHERWISE IN THE PLANS:

   (A) CONVENTIONAL LIGHTING UNITS MAY BE INSTALLED USING EITHER CONCRETE OR POWER DRIVEN FOUNDATIONS.

   (B) ALL FOUNDATIONS USED ON A PROJECT SHALL BE OF ONE TYPE.

21. A LEGIBLE POLE IDENTIFICATION NUMBER CONSISTING OF THE POLE TYPE (EXAMPLE: SL-BT-40-12) TOGETHER WITH THE POLE MANUFACTURER'S NAME AND THE DATE OF MANUFACTURE (MONTH AND YEAR) WILL BE REQUIRED ON ALL NEW LIGHT POLES. THE POLE IDENTIFICATION NUMBER SHALL BE APPLIED TO THE POLE BY EITHER OF THE FOLLOWING TWO METHODS.

   (A) THE TOP OF THE POLE BASE SHALL BE STAMPED OR ENGRAVED WITH THE REQUIRED INFORMATION. (PRIOR TO GALVANIZING IN THE CASE OF STEEL POLES).

   (B) A DURABLE METAL TAG, STAMPED WITH THE REQUIRED INFORMATION, SHALL BE SECURELY ATTACHED TO THE POLE BASE OR POLE SHAFT. THE TAG AND ITS METHOD OF ATTACHMENT MUST BE APPROVED BY THE LIGHTING ENGINEER.

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PROJECT NO.	SHEET NO.
09336001-C	N6

DESCRIPTION OF EXISTING FACILITIES

THE DESCRIPTION OF EXISTING FACILITIES IS FOR INFORMATION ONLY. ACCURACY OR COMPLETENESS IS NOT GUARANTEED. THE CONTRACTOR SHOULD VERIFY ESSENTIAL DATA BEFORE ORDERING MATERIALS OR BEGINNING WORK.

SCHEDULE OF WIRING MATERIALS

WIRE & CABLE

THE ELECTRICAL, MECHANICAL AND PHYSICAL PROPERTIES OF THE CONDUCTORS LISTED IN THE FOLLOWING SCHEDULE ESTABLISH THE MINIMUM ACCEPTABLE REQUIREMENTS FOR EACH OF THE LISTED APPLICATIONS. CONDUCTORS WHICH HAVE PROPERTIES THAT EXCEED THESE MINIMUM REQUIREMENTS MAY BE FURNISHED, AT THE CONTRACTORS OPTION, WITH THE ENGINEERS' APPROVAL. NO ADJUSTMENT IN THE CONTRACT PRICE WILL BE ALLOWED.

UNLESS INDICATED OTHERWISE ALL CONDUCTORS SHALL BE SINGLE CONDUCTOR, STRANDED COPPER U.L. LISTED, 600V. WITH SIZE OF CONDUCTOR AND TYPE AND COLOR OF INSULATION AS LISTED BELOW.

ONE PHASE CONDUCTOR MUST, AT THE TIME OF INSTALLATION, BE PERMANENTLY IDENTIFIED AS THE LINE 2 (RED) CONDUCTOR AT EACH END AND AT EVERY POINT WHERE THE CONDUCTOR IS ACCESSIBLE, IDENTIFICATION WILL BE ACCOMPLISHED BY (A) COLORING THE EXPOSED INSULATION RED (B) MARKING THE EXPOSED INSULATION WITH RED TAPE.

SERVICE ENTRANCE:	TYPE USE OR XHHW, NO. 6 AWG
EQUIPMENT GROUND:	BARE OR INSULATED, NO. 6 AWG
POLE:	NO. 12 AWG, THW OR THWN.
BRANCH CIRCUIT FEEDERS, INCLUDING NEUTRALS:	USE OR XHHW (IF PLACED IN CONDUIT) USE OR UF (IF DIRECT BURIED). NO. 6 AWG
COLOR CODES:	"NEUTRAL" - WHITE OR GREY; "INSULATED EQUIPMENT GROUND" - GREEN. "LINE 1" - BLACK "LINE 2" - RED

PROFESSIONAL ELECTRICAL ENGINEER
JOSEPH C. BINGE
E-11337
STATE OF NEBRASKA
02/19/2025

LIGHTING DETAILS

File: 09336001 Lighting05.dgn
Scale: 1:40
PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD. SEWARD, NE
Date: 06-FEB-2025 14:21
Computer: LINMEGANS

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PROJECT NO.	SHEET NO.
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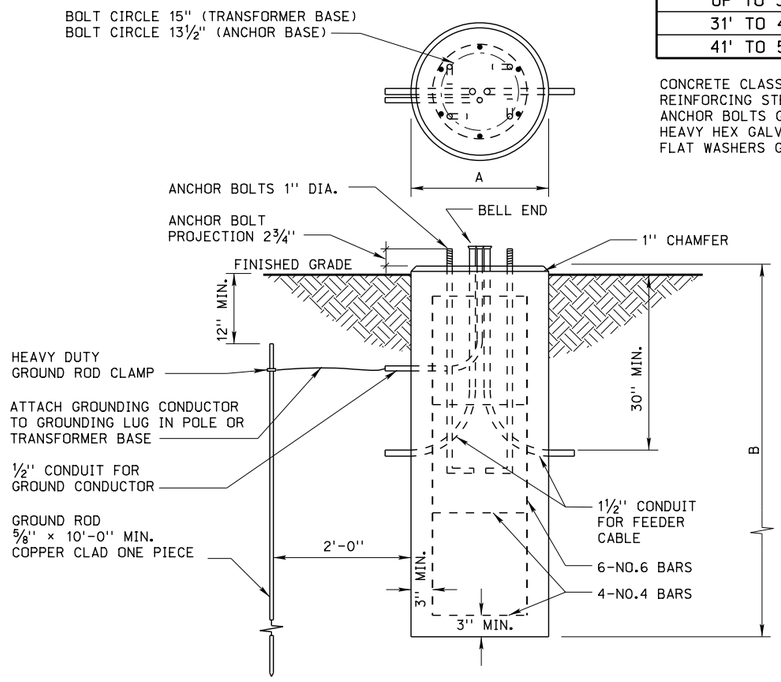
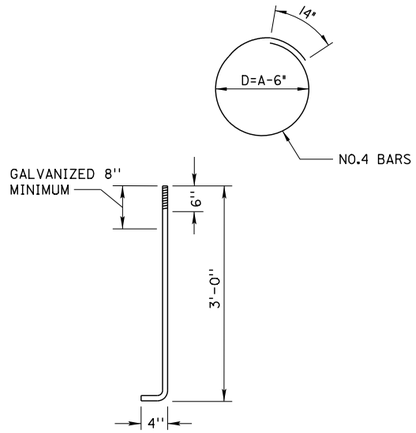
STREET LIGHT FOUNDATION DATA				
MOUNTING HEIGHT	A	B	STEEL	CONCRETE
UP TO 30'	2'-0''	5'-0''	56 LB.	0.58 CU. YDS.
31' TO 40'	2'-0''	5'-6''	61 LB.	0.64 CU. YDS.
41' TO 50'	2'-6''	6'-0''	70 LB.	1.10 CU. YDS.

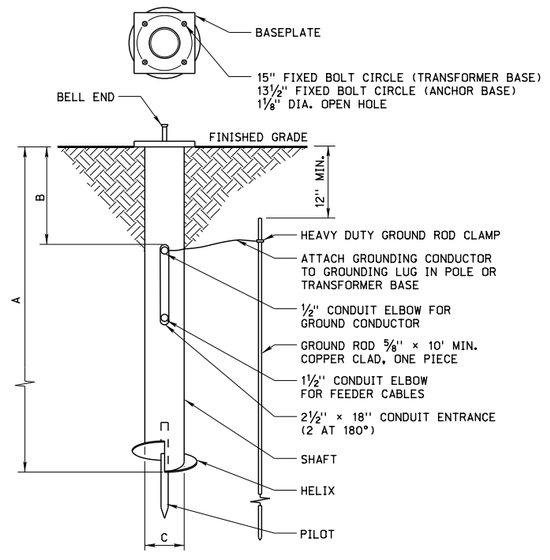
CONCRETE CLASS ''47B-3000''
REINFORCING STEEL: GRADE 60
ANCHOR BOLTS GALVANIZED: 1'' DIA. (AASHTO M314, GR.55)
HEAVY HEX GALVANIZED NUTS: (AASHTO M291, GR A)
FLAT WASHERS GALVANIZED: (AASHTO M293)



CONCRETE FOUNDATION



ANCHOR BOLT DETAIL



POWER INSTALLED FOUNDATION

NOTES:

FOUNDATION SHOWN IS OF A "HELIX/PILOT" DESIGN. FOUNDATIONS OF A "KEY-HOLE" DESIGN AND MEETING OR EXCEEDING ALL OTHER REQUIREMENTS ARE EQUALLY ACCEPTABLE.

FOUNDATION MUST BE INSTALLED PRIOR TO TRENCHING AND WITHOUT PILOT HOLE.

FOUNDATION MUST BE INSTALLED WITH BASEPLATE LEVEL AND FLUSH WITH FINISHED GRADE.

ANY DEVIATION FROM THE ABOVE INSTALLATION PROCEDURES MUST BE APPROVED BY THE ENGINEER.

INSTALL IN ACCORDANCE WITH THE MANUFACTURES RECOMMENDATIONS.

STREET LIGHT FOUNDATION DATA			
MOUNTING HEIGHT	A	B	C
UP TO 30'	5'-0''	1'-6''	8''
31' TO 40'	6'-0''	1'-6''	8''
41' TO 50'	7'-0''	1'-6''	8''

FOUNDATION

SHAFT: ASTM A53 SCHEDULE 20, GRADE B. OR ASTM A252, GRADE 2, 0.25 WALL THICKNESS.

BASE PLATE: ASTM A36

HELIX: ASTM A29

PILOT: ASTM 575

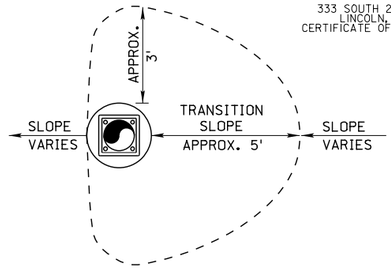
GALVANIZE FOUNDATION PER ASTM A123 AFTER FABRICATION.

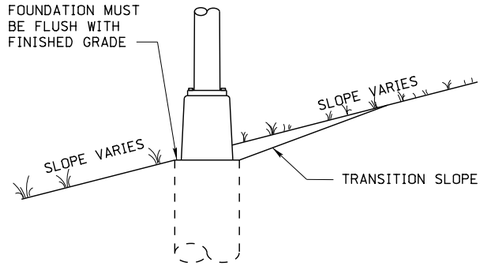
HARDWARE

HEX HEAD BOLTS: ASTM A325; GALVANIZED ASTM A153

HEAVY HEX NUTS: ASTM A563 GRADE D OR DH; GALVANIZED ASTM A153

WASHERS: ASTM F436; GALVANIZED ASTM A153

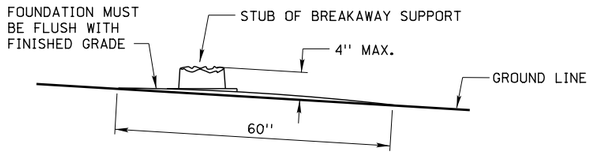




BREAK-A-WAY SUPPORTS ARE DESIGNED TO YIELD OR SEPARATE WHEN STRUCK BY AN ERRANT VEHICLE, THEREBY MINIMIZING INJURY TO THE OCCUPANTS OF THE VEHICLE AND DAMAGE TO THE VEHICLE ITSELF. IN ORDER FOR THE BREAK-A-WAY SUPPORT TO WORK AS DESIGNED, THE SUPPORT MUST BE KEPT FREE OF ALL ENCUMBRANCES AND ITS BASE MUST BE FLUSH WITH FINAL GRADE.

WHEN PERFORMING EARTHWORK IN THE VICINITY OF BREAK-A-WAY SUPPORTS, NO EMBANKMENT (BACKFILL) SHALL BE ALLOWED TO COVER ANY PORTION OF THE SUPPORT NOR SHALL THE POLE FOUNDATION (CONCRETE OR POWER) BE ALLOWED TO PROJECT ABOVE FINAL GRADE. SHOULD THE TOE OF THE BACKFILL EXTEND BEYOND THE BREAK-A-WAY SUPPORT, A TRANSITION SLOPE, CONSTRUCTED AS SHOWN IN THE PLAN DETAIL TITLED "LIGHT POLES LOCATED ON SLOPE" MUST BE PROVIDED TO PROTECT THE INTEGRITY OF THE SUPPORT.

LIGHT POLES LOCATED ON SLOPE



ANY SUBSTANTIAL REMAINS OF A BREAKAWAY DEVICE, AFTER BEING BROKEN AWAY, SHALL NOT PROJECT MORE THAN 4 INCHES ABOVE A 60-INCH CHORD ALIGNED RADIALLY TO THE CENTERLINE OF THE HIGHWAY AND CONNECTING ANY POINT, WITHIN THE LENGTH OF THE CHORD, ON THE GROUND SURFACE ON ONE SIDE OF THE SUPPORT TO A POINT ON THE GROUND SURFACE ON THE OTHER SIDE.

BREAKAWAY SUPPORT STUB CLEARANCE DIAGRAM

PROFESSIONAL ELECTRICAL ENGINEER
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STATE OF NEBRASKA
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LIGHTING DETAILS

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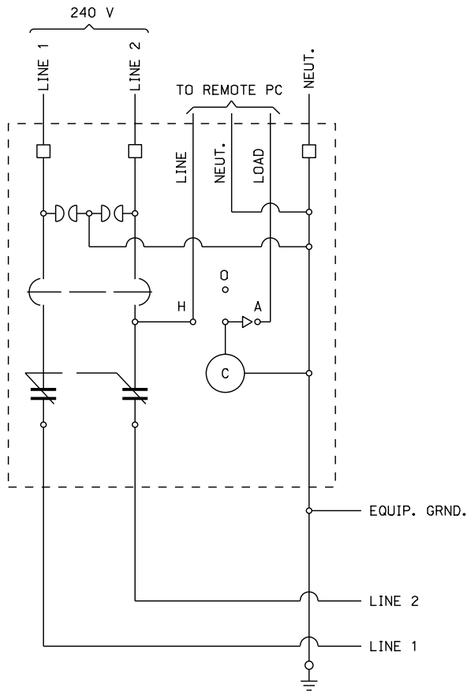
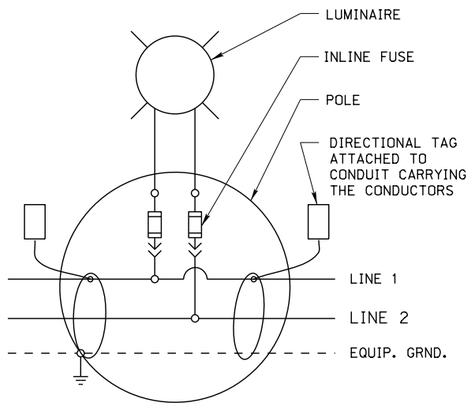
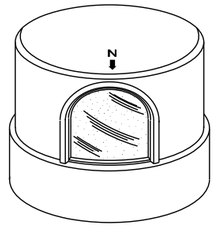
ROADWAY DESIGN DIVISION.



TYPE "R" OR "R-3" CONTROL CENTER SCHEMATIC
(240 VOLT-2 WIRE)

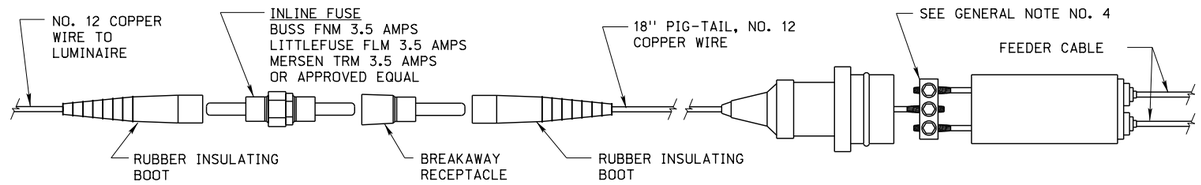


POLE WIRING SCHEMATIC
(240 VOLT-2 WIRE)



SOLID STATE, LED COMPATIBLE, LONG LIFE, FAIL ON, 105-285VAC
MEETING ANSI SPECIFICATIONS.
ACUITY BRANDS DLL127
RIPLEY LIGHTING CONTROLS 6390LL-BK
INTERMATIC LED4536SC
SUN-TECH TRS-2
TORK NSI INDUSTRIES ZTL124-510J-LED
OR APPROVED EQUAL

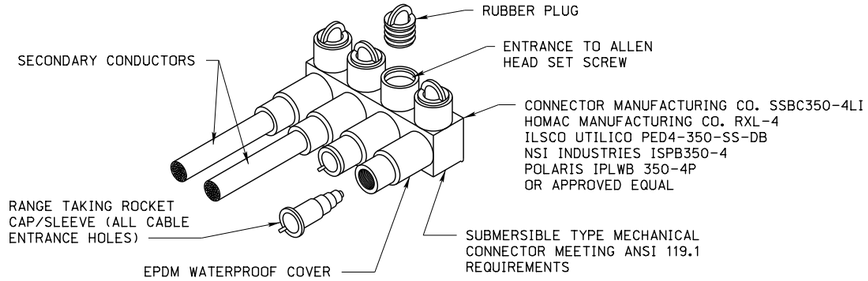
PHOTO CONTROL



FUSEHOLDER AND BREAKAWAY DISCONNECT
BUSS HEB-AW-RLC-A
LITTLEFUSE LEB-AA-S
TRON HEB-AW-RLC-A
OR APPROVED EQUAL

MECHANICAL CABLE CONNECTOR
HMC SL3-2K
POLARIS SLOWB2/0-21P
BUCHANAN 84S-ADB1
OR APPROVED EQUAL

CONNECTIONS FOR BREAKAWAY INSTALLATIONS



URD CONNECTOR IN PULL BOX

02/19/2025

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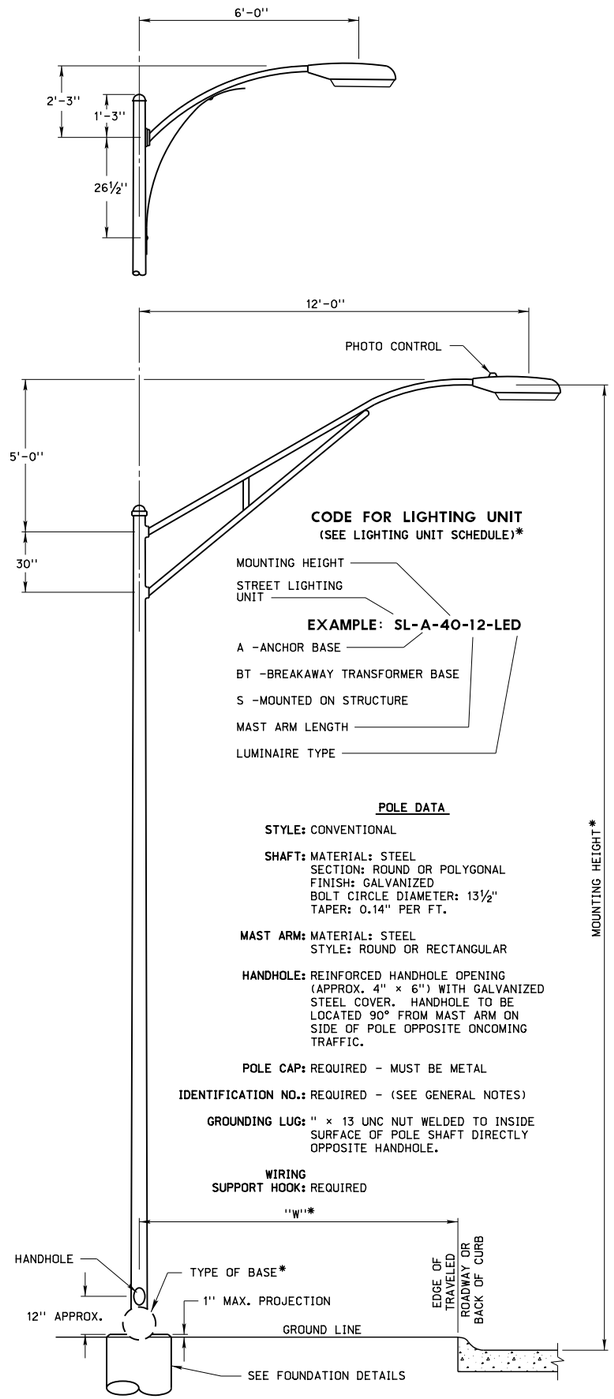
PROJECT NO.	SHEET NO.
09336001-C	N9



LIGHTING UNIT SCHEDULE

UNIT NO.	STATION	TYPE	''W''	REMARKS
1	105+75, 84.0' RT	SL-BT-30-4-LED	3'	CONC. FOUNDATION
2	106+60, 26.5' LT	SL-BT-30-8-LED	7.5'	CONC. FOUNDATION
3	107+90, 22' RT	SL-BT-30-4-LED	3'	CONC. FOUNDATION
4	109+20, 26.5' LT	SL-BT-30-8-LED	7.5'	CONC. FOUNDATION
5	110+40, 25' RT	SL-BT-30-8-LED	6'	CONC. FOUNDATION
6	111+70, 26.5' LT.	SL-BT-30-8-LED	7.5'	CONC. FOUNDATION
7	112+90, 25' RT.	SL-BT-30-8-LED	6'	CONC. FOUNDATION
8	114+10, 27.05' LT.	SL-BT-30-8-LED	8'	CONC. FOUNDATION
9	115+40, 26.5' RT.	SL-BT-30-8-LED	7.5'	CONC. FOUNDATION
10	116+20, 26.5' LT.	SL-BT-30-8-LED	7.5'	CONC. FOUNDATION
11	117+90, 22' RT.	SL-BT-30-4-LED	3'	CONC. FOUNDATION
12	118+70, 26.5' LT.	SL-BT-30-8-LED	7.5'	CONC. FOUNDATION
13	120+40, 22' RT.	SL-BT-30-4-LED	3'	CONC. FOUNDATION
14	121+20, 26.5' LT.	SL-BT-30-8-LED	7.5'	CONC. FOUNDATION
15	122+45, 22' RT.	SL-BT-30-4-LED	3'	CONC. FOUNDATION
16	123+70, 26.5' LT.	SL-BT-30-8-LED	7.5'	CONC. FOUNDATION

PULL BOX SCHEDULE

UNIT NO.	STATION	TYPE	REMARKS
1	107+22, 22.0' RT.	PB-5	--
2	118+99, 44.0' RT.	PB-5	--
3	503+60, 25.6' LT.	PB-5	--
4	503+60, 25.0' RT.	PB-5	--

LED LUMINAIRE REQUIREMENTS

UNIT NO.	SPECIFICATION AND PERFORMANCE CRITERIA
ALL	SEE SPECIAL PROVISIONS

PROFESSIONAL ELECTRICAL ENGINEER
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LIGHTING DETAILS

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PROJECT NO.	SHEET NO.
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ROADWAY DESIGN DIVISION.
PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
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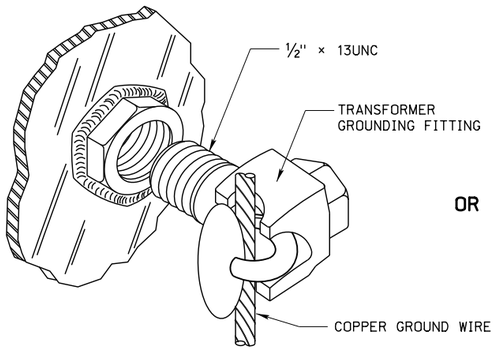
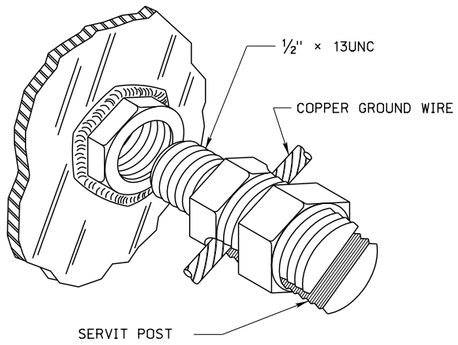


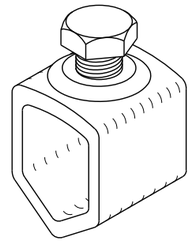
OR



CONNECTOR MANUF. CO. TGC2
BLACKBURN TTC3
BURNDY EQC632C
BURNDY KC22B2TN
OR APPROVED EQUAL

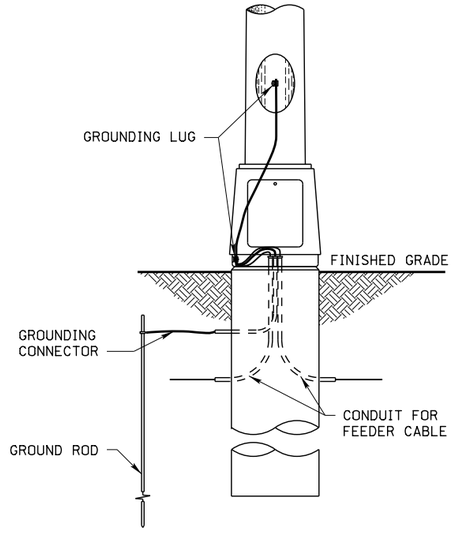
POLE GROUNDING CONNECTORS

GROUND ROD (NOT SHOWN)
ERITECH 615800
BLACKBURN 6260
ROBBINS LIGHTING INC. 94-10
OR APPROVED EQUAL

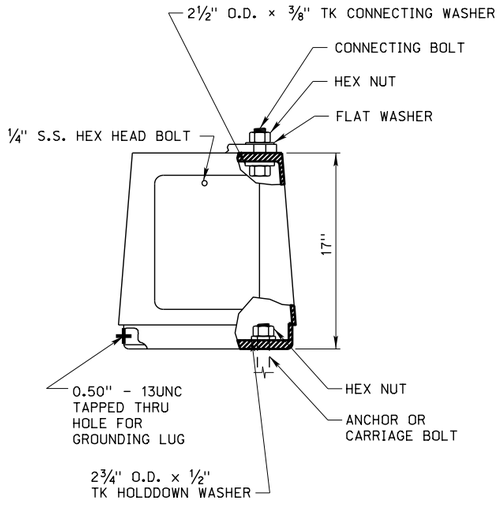


CONNECTOR MANUF. CO. WB58H
ERITECH HDC58R
BLACKBURN JAB58H
BURNDY GKP635
OR APPROVED EQUAL

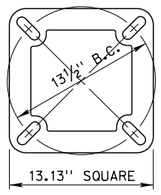
GROUND ROD CLAMP



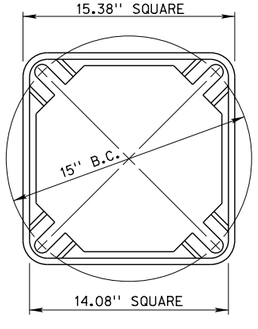
GROUNDING CONNECTION TO BREAKAWAY BASE AND POLE



ELEVATION



TOP PLAN



BOTTOM PLAN

TRANSFORMER BASE INSTALLATION

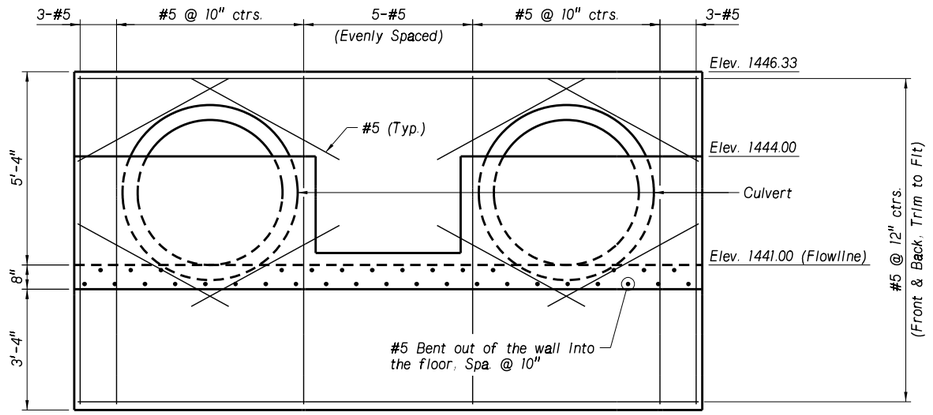
TRANSFORMER BASE INSTALLATION NOTES:

1. POLE FAILURES AND IRREGULAR BREAKAWAY PERFORMANCE CAN RESULT FROM IMPROPER INSTALLATION OF THE TRANSFORMER BASE. TO OBTAIN THE MAXIMUM CAPABILITY OF EACH BASE THE CONTRACTOR MUST COMPLY WITH THE FOLLOWING:
   (A) USE THE LARGEST POSSIBLE BOLT CIRCLES, BOTH TOP AND BOTTOM.
   (B) USE GALVANIZED STEEL WASHERS OF THE SIZE AND TYPE ILLUSTRATED. (THE HOLD DOWN AND CONNECTING WASHERS ARE AVAILABLE FROM THE TRANSFORMER BASE MANUFACTURER).
   (C) INSTALL WASHERS EXACTLY AS SHOWN.
   (D) SHIM BETWEEN FOUNDATION AND TRANSFORMER BASE IF NEEDED USING ONLY REGULAR "U" SHAPED SHIM STOCK CAPABLE OF PROVIDING SUPPORT ON THREE SIDES OF THE ANCHOR BOLT. INSTALL WITH BACK EDGE OF SHIM FLUSH WITH BOTTOM EDGE OF TRANSFORMER BASE.
   (E) TORQUE ALL NUTS TO A MINIMUM OF 150 FT. LBS.
2. INSTALL BREAKAWAY TRANSFORMER BASE WITH DOOR OPENING ON SAME SIDE OF POLE AS HANDHOLE.
3. SECURE EQUIPMENT GROUNDING CONDUCTOR TO TRANSFORMER BASE BY USE OF APPROVED GROUNDING CONNECTOR (LUG) THREADED INTO TAPPED HOLE IN BASE. ROUTE GROUNDING CONDUCTOR FROM GROUNDING LUG IN "T" BASE TO GROUNDING LUG IN POLE AS SHOWN.

PROFESSIONAL ELECTRICAL ENGINEER
JOSEPH C. BINGE
E-11337
STATE OF NEBRASKA
02/19/2025

LIGHTING DETAILS

BRIDGE DIVISION.



ELEVATION VIEW
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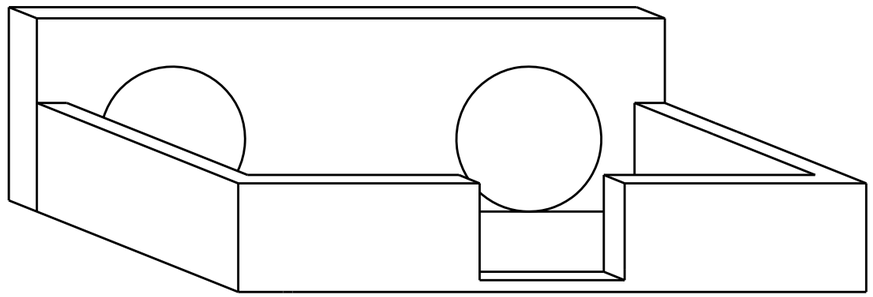
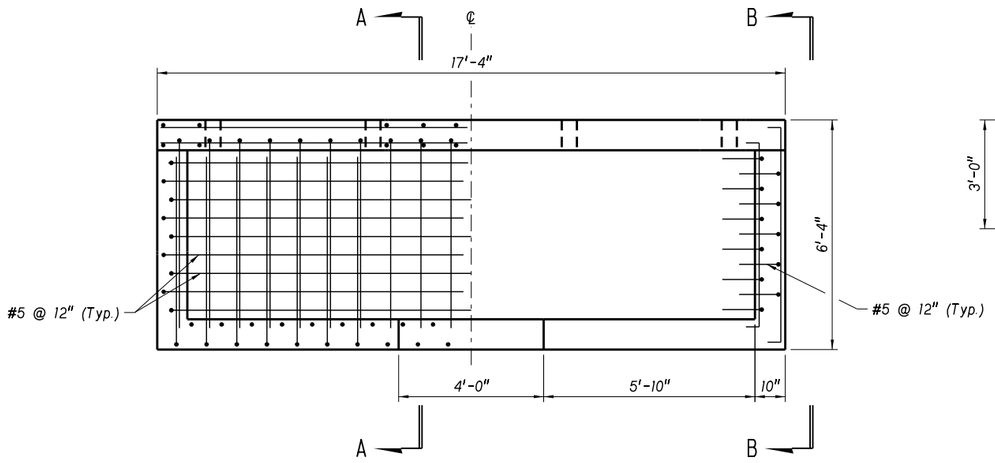
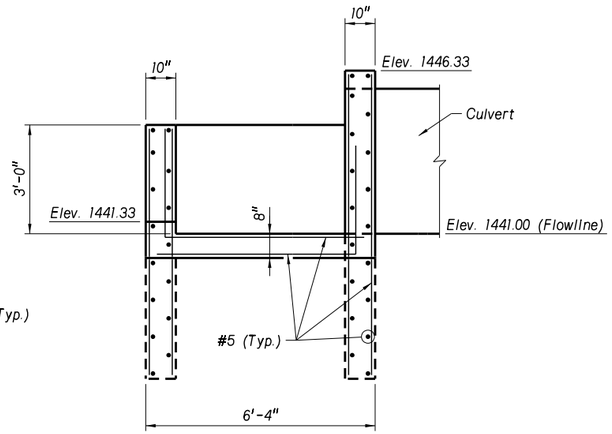


ORIENTATION VIEW



PLAN VIEW
(Symmetrical about ℄)
No Scale



SECTION A-A
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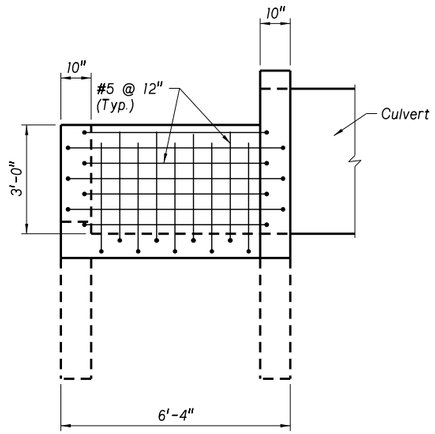

SECTION B-B
No Scale

NOTES:
Provide ¾" chamfer on all exposed wall edges.
Optional construction joint allowed at elevation 1441.33.
Reinforcing steel shall be Grade 60, AASHTO LRFD Sect. 5.
Concrete shall attain a strength of 4000 psi.

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2/5/2025
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PROJECT NUMBER	SHEET NO.
09336.001	U1

SEWARD NEBRASKA

WORTHMAN BOULEVARD EXTENSION
PRINCIPAL SPILLWAY

ROADWAY WORTHMAN BOULEVARD
STA. 21+93.57
SKEW 0°
DESIGN LIVE LOAD N/A
DESIGNED BY MKR **DETAILED BY** JLK **CHECKED BY** DGB **DATE** NOVEMBER 2024

DETENTION POND DETAILS

SCHEMMER
402-493-4600
1044 N. 115th St., Suite 300
Omaha, NE 68154

PROFESSIONAL CIVIL ENGINEER
DARIN G. BROWN
E-12246
STATE OF NEBRASKA

The Schemmer Associates, Inc.
COA NE CA-0666

SPECIAL PLAN NO.	
1C	1 / 1

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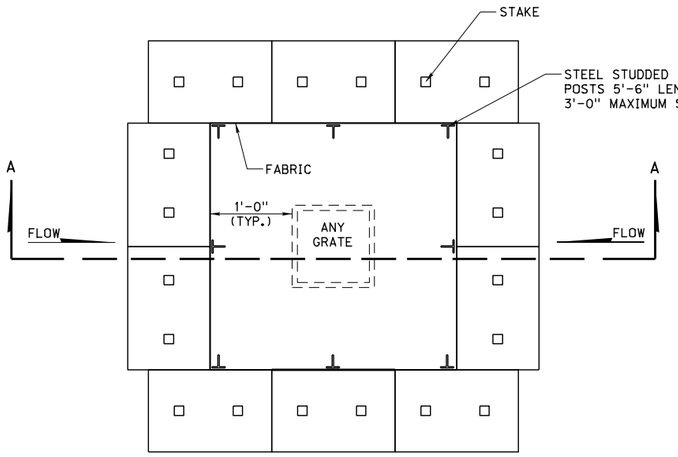
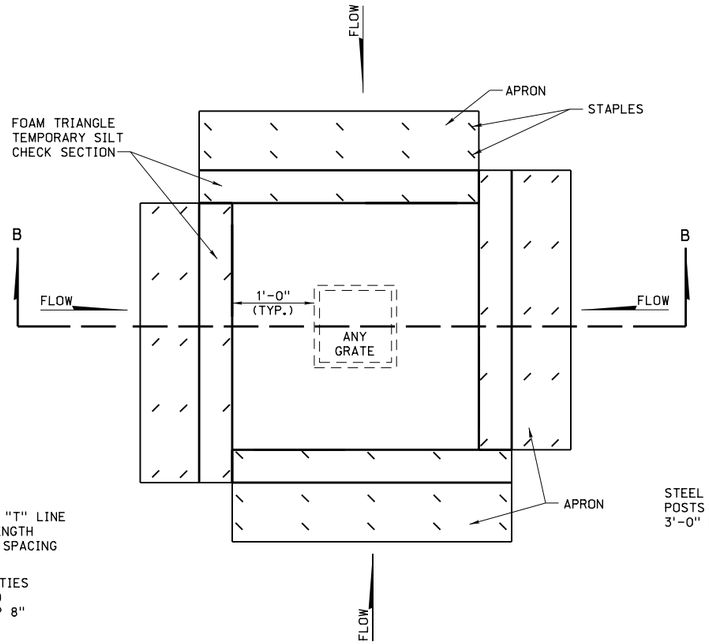
Design with Purpose. Build with Confidence.
333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	U2

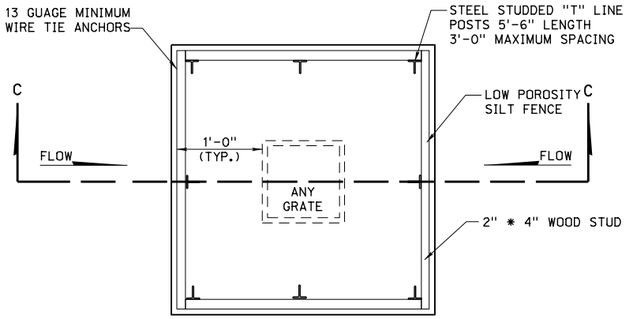
ROADWAY DESIGN DIVISION.



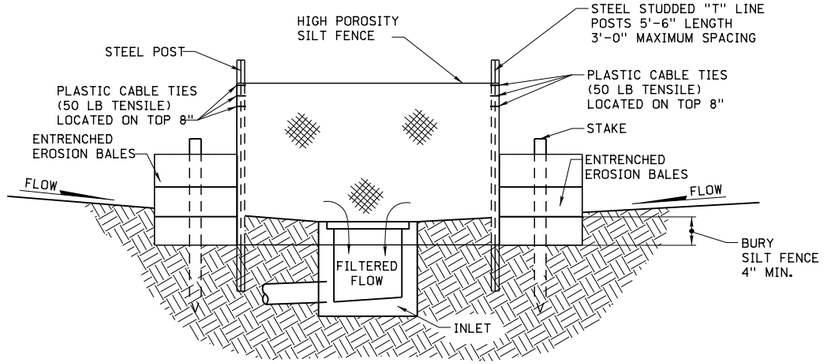
PLAN VIEW



PLAN VIEW



PLAN VIEW



SECTION A-A

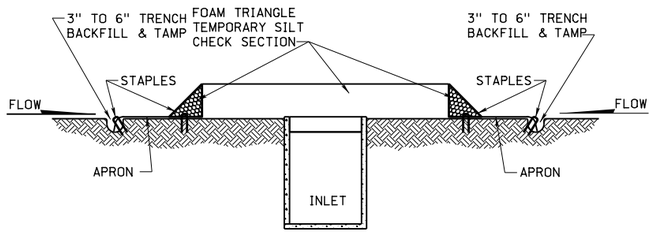
EROSION BALE AND SILT FENCE FILTER AT INLET

NOTES:

STAKES SHALL BE WOOD AND BE 2" * 2" * 3'-0" NOMINAL.

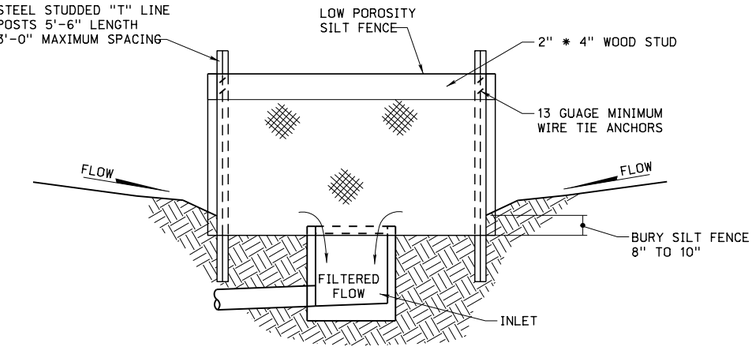
EROSION BALES SHALL BE 18" * 18" * 36".

EROSION BALES SHALL BE ENTRENCHED 4 INCH MINIMUM INTO THE SOIL, TIGHTLY ABUTTED WITH NO GAPS, STAKED, AND BACKFILLED AROUND THE ENTIRE OUTSIDE PERIMETER.



SECTION B-B

FOAM TRIANGLE FILTER AT INLET



ELEVATION

SECTION C-C

SILT FENCE AND WOOD FRAME FILTER AT INLET

NOTES:

1. THE TOP OF THE STRUCTURE (PONDING HEIGHT) MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE TO PREVENT RUNOFF FROM BYPASSING THE INLET. A TEMPORARY DIKE MAY BE NECESSARY ON THE DOWNSLOPE SIDE OF THE STRUCTURE.

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

SPECIAL PLAN 2C - INLET PROTECTION

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Scale: 1:40
Date: 12-MAR-2025 10:47
Computer: LINMEGANS

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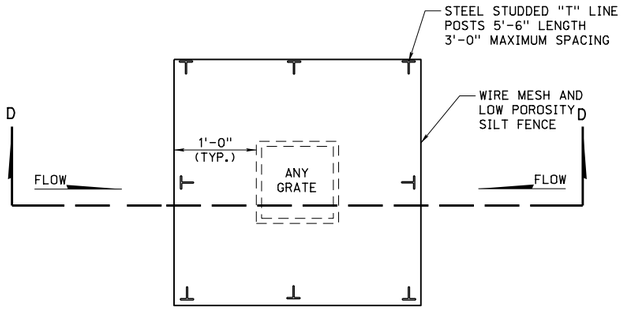
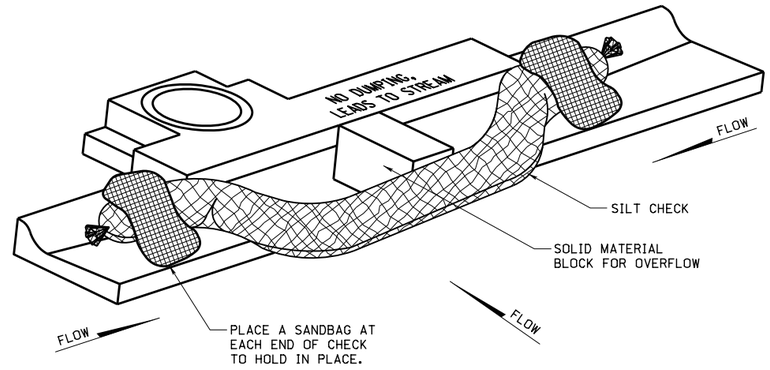
PROJECT NO.	SHEET NO.
09336.001-C	U3

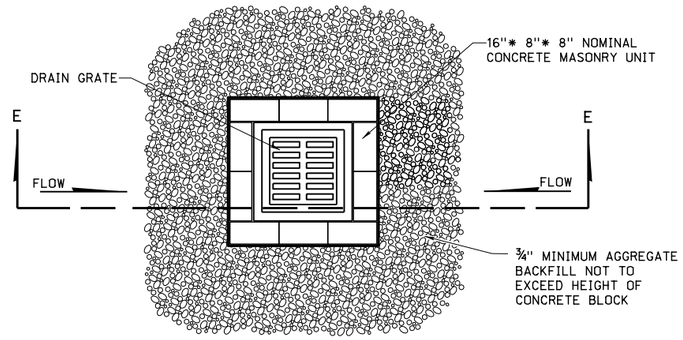
ROADWAY DESIGN DIVISION.



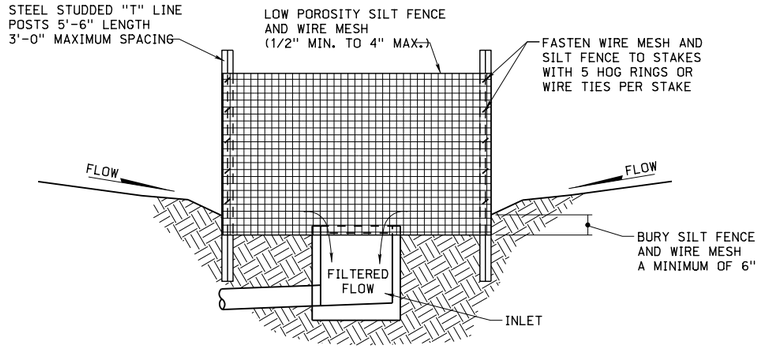
PLAN VIEW



CURB INLET PERSPECTIVE VIEW



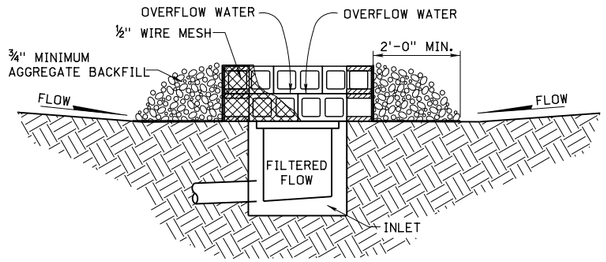
PLAN VIEW



ELEVATION

SECTION D-D

WIRE MESH BACKED SILT FENCE FILTER AT INLET



SECTION E-E

BLOCK AND GRAVEL FILTER AT INLET

NOTES:

1. APPLICABLE WHERE HEAVY FLOWS ARE EXPECTED AND WHERE AN OVERFLOW CAPACITY IS NECESSARY TO PREVENT EXCESSIVE PONDING AROUND THE STRUCTURE.
2. ½" WIRE MESH SHALL COVER ENTIRE VERTICAL FACE OF BLOCKS AND APRON BELOW THE AGGREGATE BACKFILL.
3. THE TOP OF THE STRUCTURE (PONDING HEIGHT) MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE TO PREVENT RUNOFF FROM BYPASSING THE INLET. A TEMPORARY DIKE MAY BE NECESSARY ON THE DOWNSLOPE SIDE OF THE STRUCTURE.
4. BLOCK COURSES SHOULD OFFSET TO IMPROVE STRUCTURAL STABILITY.

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E-17140
3-13-2025
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SPECIAL PLAN 2C - INLET PROTECTION

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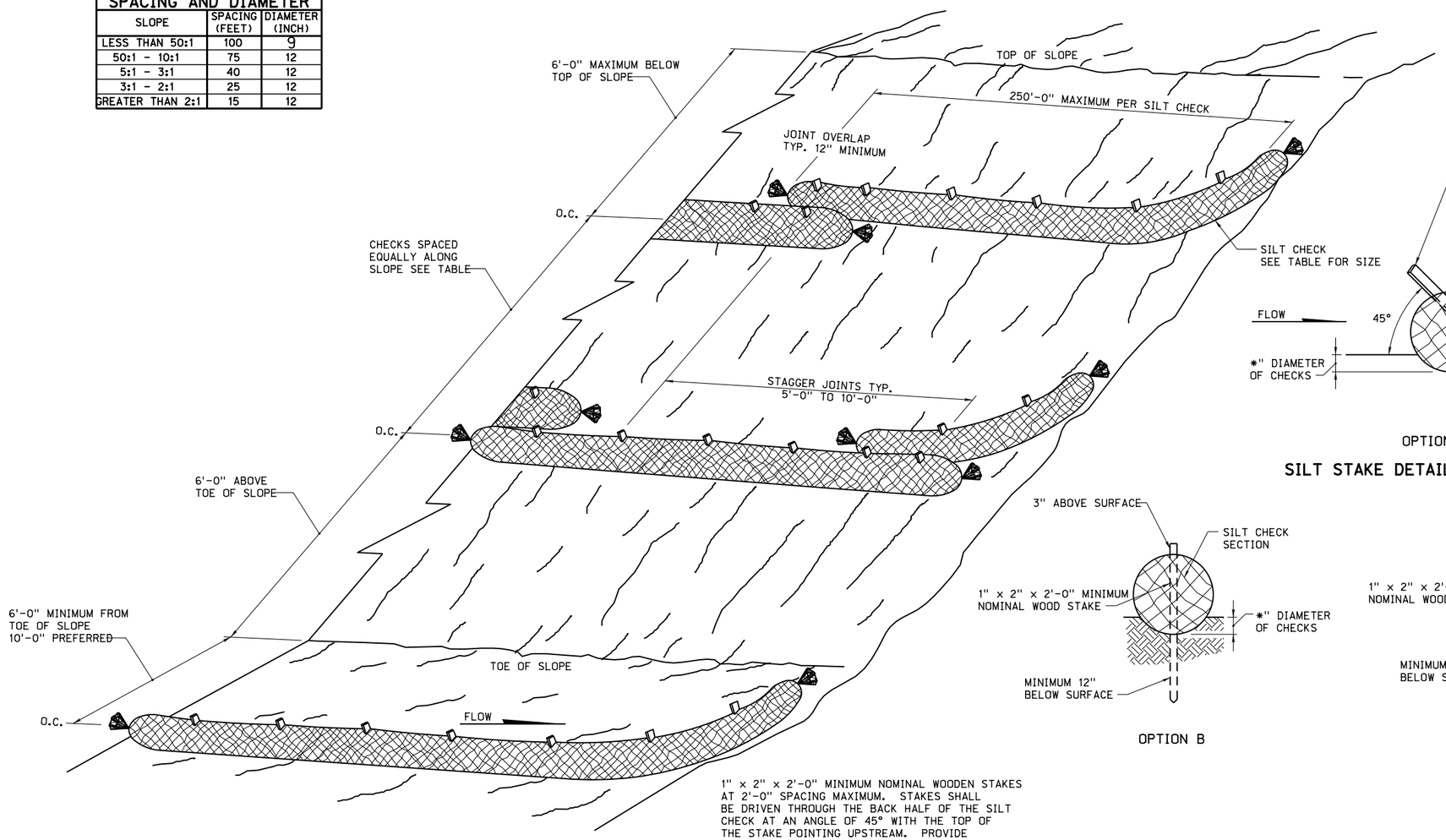
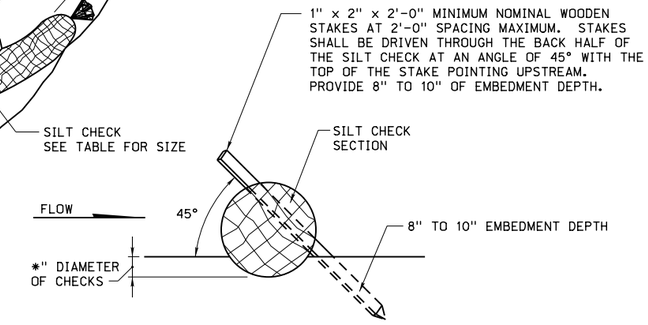
ROADWAY DESIGN DIVISION.

SILT CHECKS, SLOPE, SPACING AND DIAMETER		
SLOPE	SPACING (FEET)	DIAMETER (INCH)
LESS THAN 50:1	100	9
50:1 - 10:1	75	12
5:1 - 3:1	40	12
3:1 - 2:1	25	12
GREATER THAN 2:1	15	12



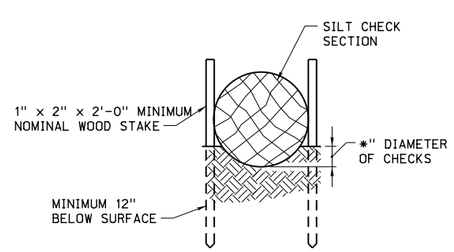
SLOPE APPLICATION
PERSPECTIVE VIEW



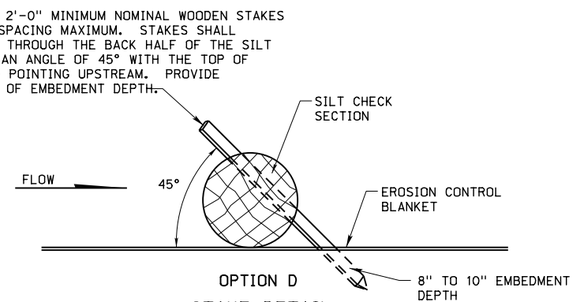
OPTION A

SILT STAKE DETAIL (WITH TRENCH)

OPTION B



OPTION C



OPTION D

STAKE DETAIL
(NO TRENCH)

NOTE:

TRENCHING IS OPTIONAL FOR CHECKS ON BACKSLOPES & FORESLOPES

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SHEET 1 OF 4

SPECIAL PLAN 3C

File: 09336001 Special Plan 4C - SPROADWAY DESIGN DIVISION: HIGHWAY 15 & WORTHMAN BLVD. SEWARD, NE
Scale: 1:40 Date: 12-MAR-2025 10:09 Computer: LINMEGANS

1 OF 4 5104 1 R0

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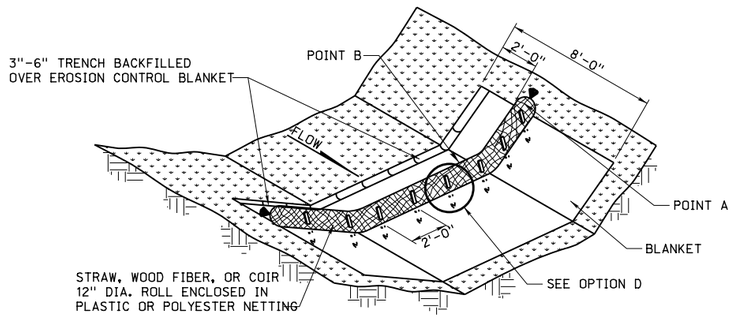
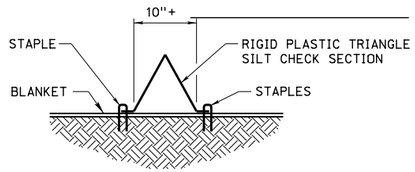
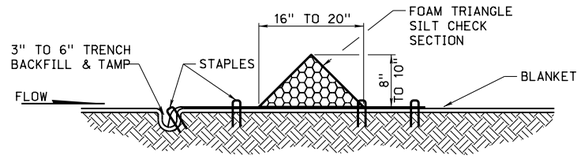
PROJECT NO.	SHEET NO.
09336.001-C	U5



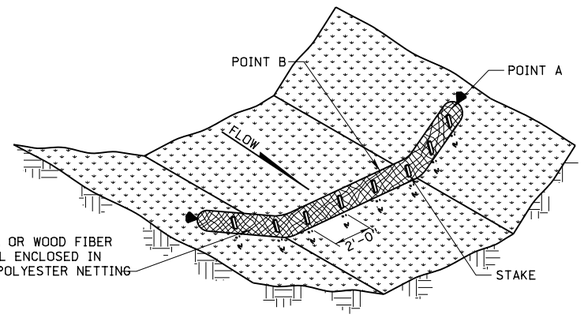
TYPE 2 & 3: HIGH & LOW
WITH EROSION CONTROL



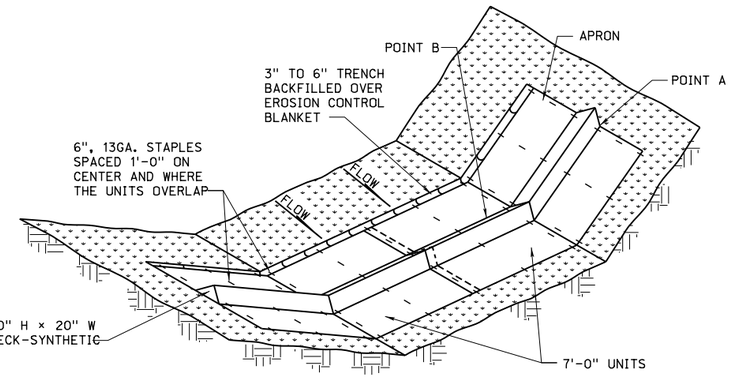
TYPE 4 SECTION



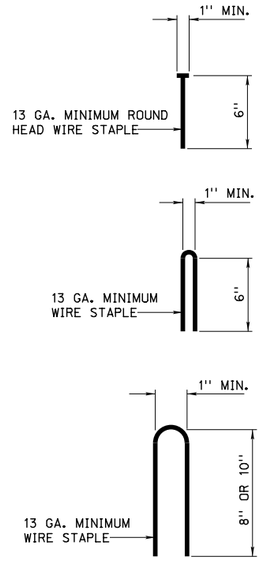
TYPE 4 SECTION



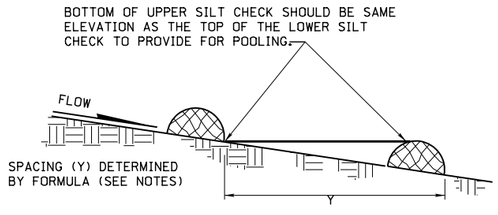
TYPE 1, 2 & 3: HIGH & LOW
USE ON ROUGH GRADED & BARE SOIL AREAS



SILT CHECK: TYPE 4



WIRE STAPLE DETAIL



SILT CHECK SPACING-DITCH

NOTES:

APPROXIMATE SPACING BETWEEN EACH DITCH CHECK SHOULD BE DETERMINED FROM THE FOLLOWING SPACING FORMULA:

APPROXIMATE SPACING OF DITCH CHECKS (FT.) = $Y = \frac{\text{SILT CHECK HEIGHT (FT.)}}{\text{\% CHANNEL SLOPE}} \times 100$

POINT A MUST BE A MINIMUM OF 6" HIGHER THAN POINT B TO ENSURE THAT WATER FLOWS OVER THE CHECK AND NOT AROUND THE ENDS.

PERMANENT ROCK CHECKS PLACED WITHIN THE CLEAR ZONE WILL NEED TO BE 18" OR LESS IN HEIGHT. A 10:1 APPROACH AND DEPARTURE SLOPE SHALL BE PROVIDED.

THE TRENCH ON THE UPSTREAM SIDE OF THE SILT CHECK IS NOT REQUIRED IF THE EROSION CONTROL BLANKET CONTINUES IN THE ENTIRE LENGTH OF THE DITCH.

THE MANUFACTURERS RECOMMENDED INSTALLATION DETAILS SHALL GOVERN OVER THE PLANS.

SEE STAKING DETAIL SHEET 1 OF 4

SPECIAL PLAN 3C

File: 09336001 Special Plan 4C - SPECIAL PLAN 3C.dgn
Scale: 1:40
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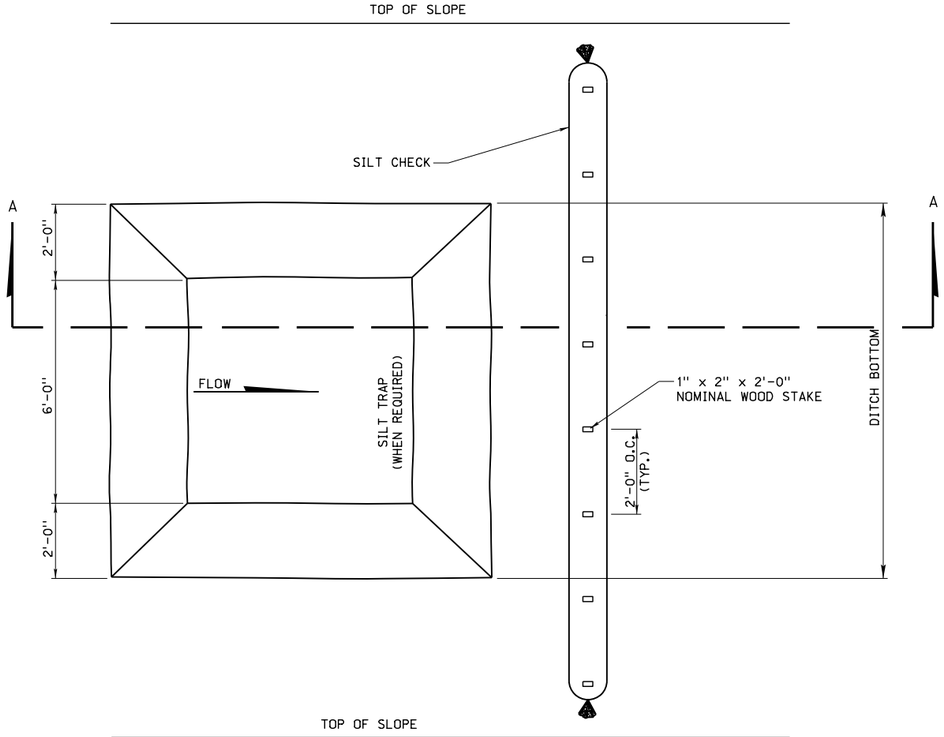
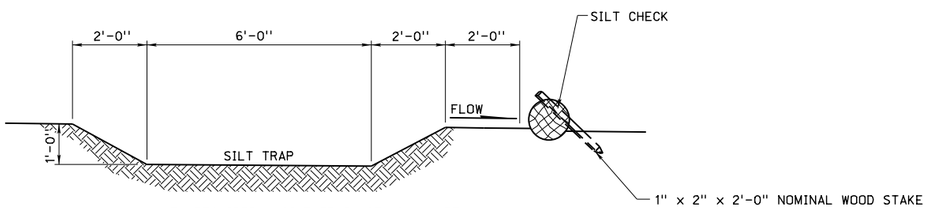
PROJECT NO.	SHEET NO.
09336.001-C	U6

ROADWAY DESIGN DIVISION.



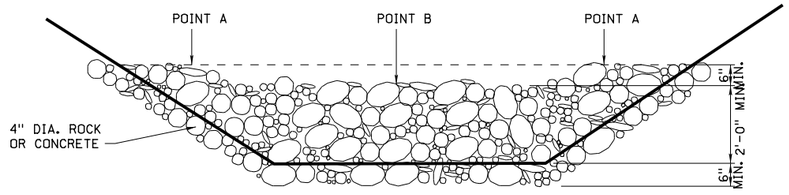
PLAN VIEW

FOR FLAT BOTTOM DITCH

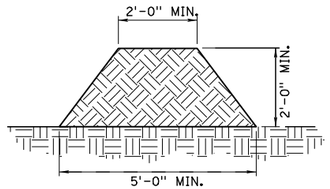


WHEN REQUIRED A SILT TRAP (ST) SHALL BE EXCAVATED TO THE WIDTH OF THE DITCH AND NO DIRECT PAYMENT WILL BE MADE.

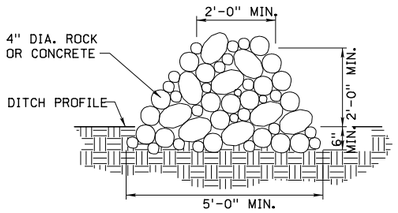
SECTION A-A



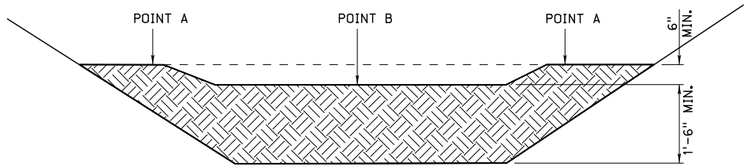
ROCK CHECK
ELEVATION VIEW



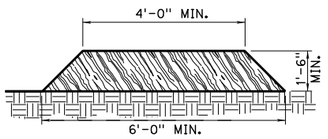
EARTH-SLASH MULCH PERIMETER BERM
CROSS SECTION



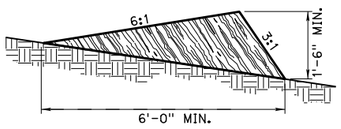
ROCK CHECK
CROSS SECTION



EARTH-SLASH MULCH CHECK
ELEVATION VIEW



CROSS SECTION
SILT CHECK-SLASH MULCH
OPTION A



CROSS SECTION
SILT CHECK-SLASH MULCH
OPTION B

SEE STAKING DETAIL SHEET 1 OF 4

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3-13-2025
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SPECIAL PLAN 3C

File: 09336001 Special Plan 4C - SPRUCE CREEK.dgn
Scale: 1:40
Computer: LINMEGANS
Date: 12-MAR-2025 10:09
LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE

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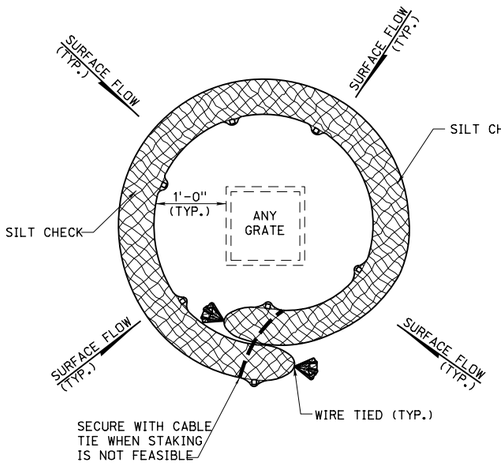
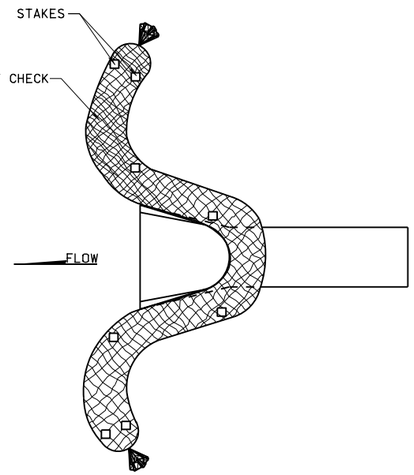
PROJECT NO.	SHEET NO.
09336.001-C	U7

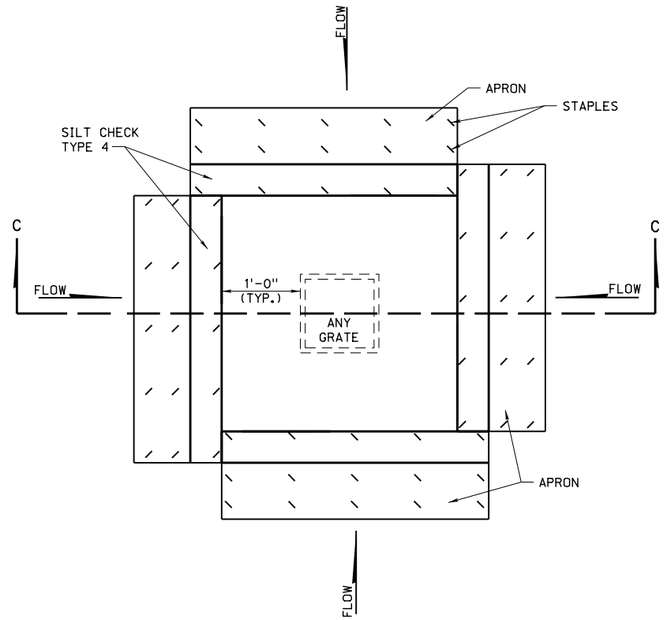
ROADWAY DESIGN DIVISION.



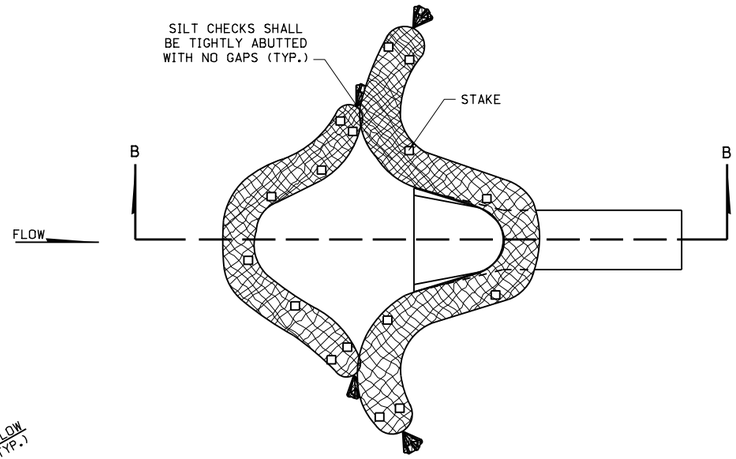
PLAN VIEW



SILT CHECK OUTLET PROTECTION

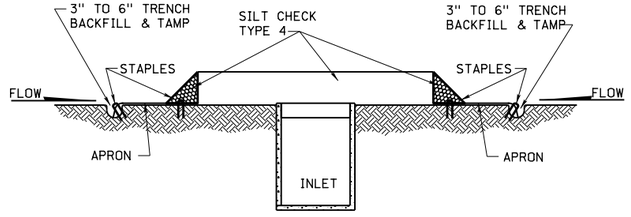


PLAN VIEW



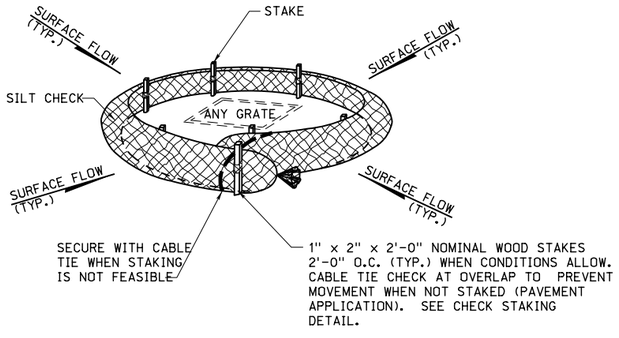
PLAN VIEW

SILT CHECK INLET PROTECTION

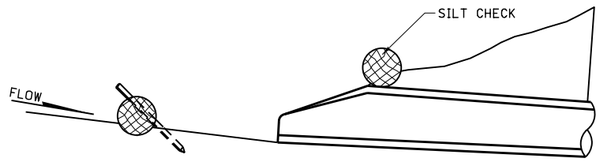


SECTION C-C

SILT CHECK TYPE 4 AT INLET



SILT CHECK INLET FILTER
PERSPECTIVE VIEW



SECTION B-B

SEE STAKING DETAIL SHEET 1 OF 4

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

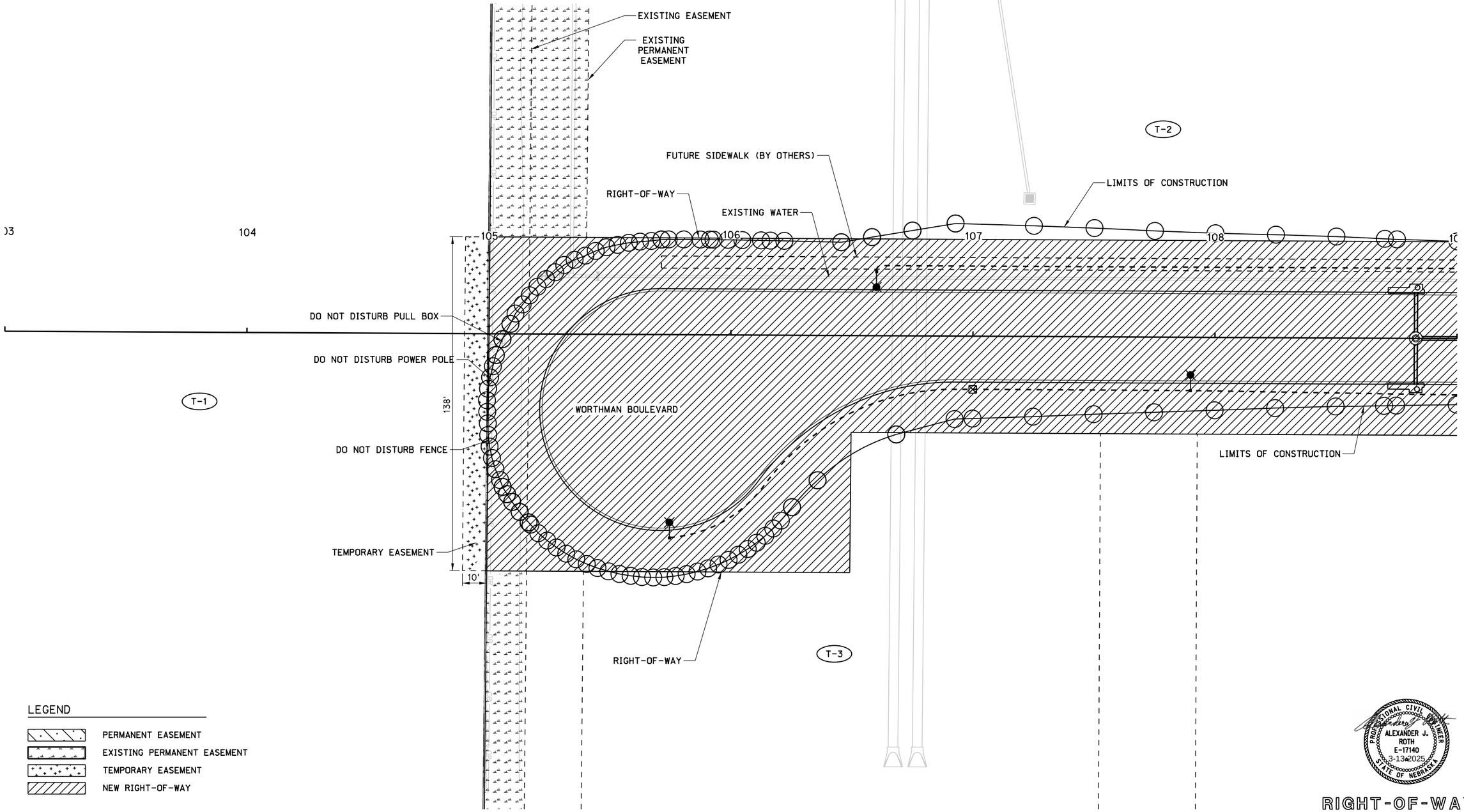
SHEET 4 OF 4

SPECIAL PLAN 3C

File: 09336001 Special Plan 4C - SPP.dgn
Scale: 1:40
PROJECTION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:09
Computer: LINMEGANS
4 OF 4 SHEETS

ROADWAY DESIGN DIVISION.

OWNERSHIP				EASEMENTS	
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-1	DENNIS & LODEEN KORANDA	29-11-3 #SW 1/4 150 AC	-	-	1,380
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-2	CITY OF SEWARD	SEWARD RAIL CAMPUS PUD SECOND ADDITION, LOT 17	-	6,440	-
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-3	CITY OF SEWARD	SEWARD RAIL CAMPUS PUD SECOND ADDITION, LOT 16	-	-	-



LEGEND

- PERMANENT EASEMENT
- EXISTING PERMANENT EASEMENT
- TEMPORARY EASEMENT
- NEW RIGHT-OF-WAY

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PROJECT NO.	SHEET NO.
09336.001-C	W1

0 20' 40'
SCALE

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

RIGHT-OF-WAY

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:09
Computer: LINMEGANS

File: 09336001 ROW01.dgn
Scale: 1:40

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CERTIFICATE OF AUTHORIZATION: CA-0666

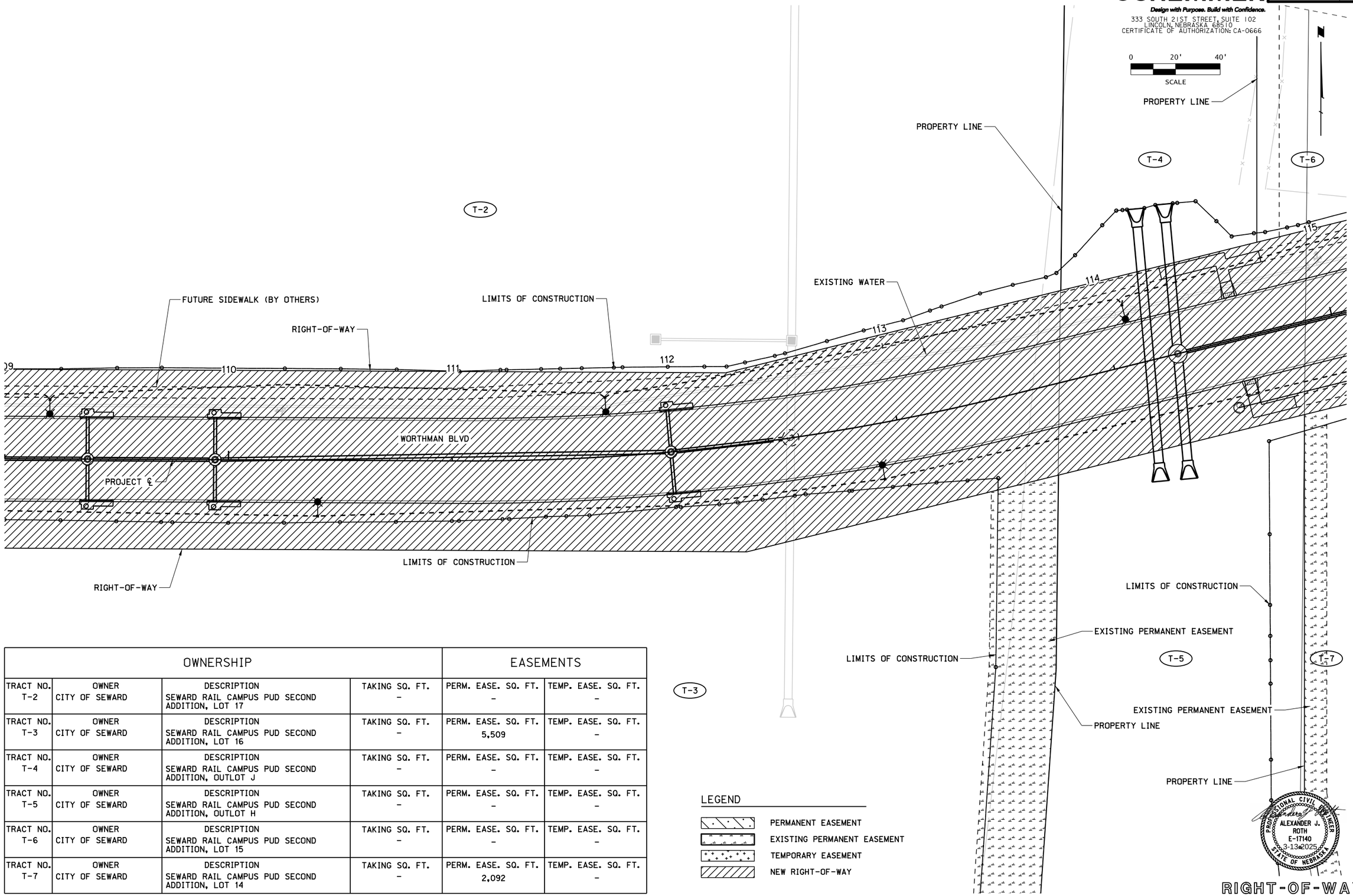
PROJECT NO.	SHEET NO.
09336.001-C	W2

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:09
Computer: LINMEGANS

File: 09336001 ROW02.dgn
Scale: 1:40

0 20' 40'
SCALE



OWNERSHIP				EASEMENTS	
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-2	CITY OF SEWARD	SEWARD RAIL CAMPUS PUD SECOND ADDITION, LOT 17	-	-	-
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-3	CITY OF SEWARD	SEWARD RAIL CAMPUS PUD SECOND ADDITION, LOT 16	-	5,509	-
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-4	CITY OF SEWARD	SEWARD RAIL CAMPUS PUD SECOND ADDITION, OUTLOT J	-	-	-
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-5	CITY OF SEWARD	SEWARD RAIL CAMPUS PUD SECOND ADDITION, OUTLOT H	-	-	-
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-6	CITY OF SEWARD	SEWARD RAIL CAMPUS PUD SECOND ADDITION, LOT 15	-	-	-
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-7	CITY OF SEWARD	SEWARD RAIL CAMPUS PUD SECOND ADDITION, LOT 14	-	2,092	-

LEGEND

- PERMANENT EASEMENT
- EXISTING PERMANENT EASEMENT
- TEMPORARY EASEMENT
- NEW RIGHT-OF-WAY

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

RIGHT-OF-WAY

SCHEMMER
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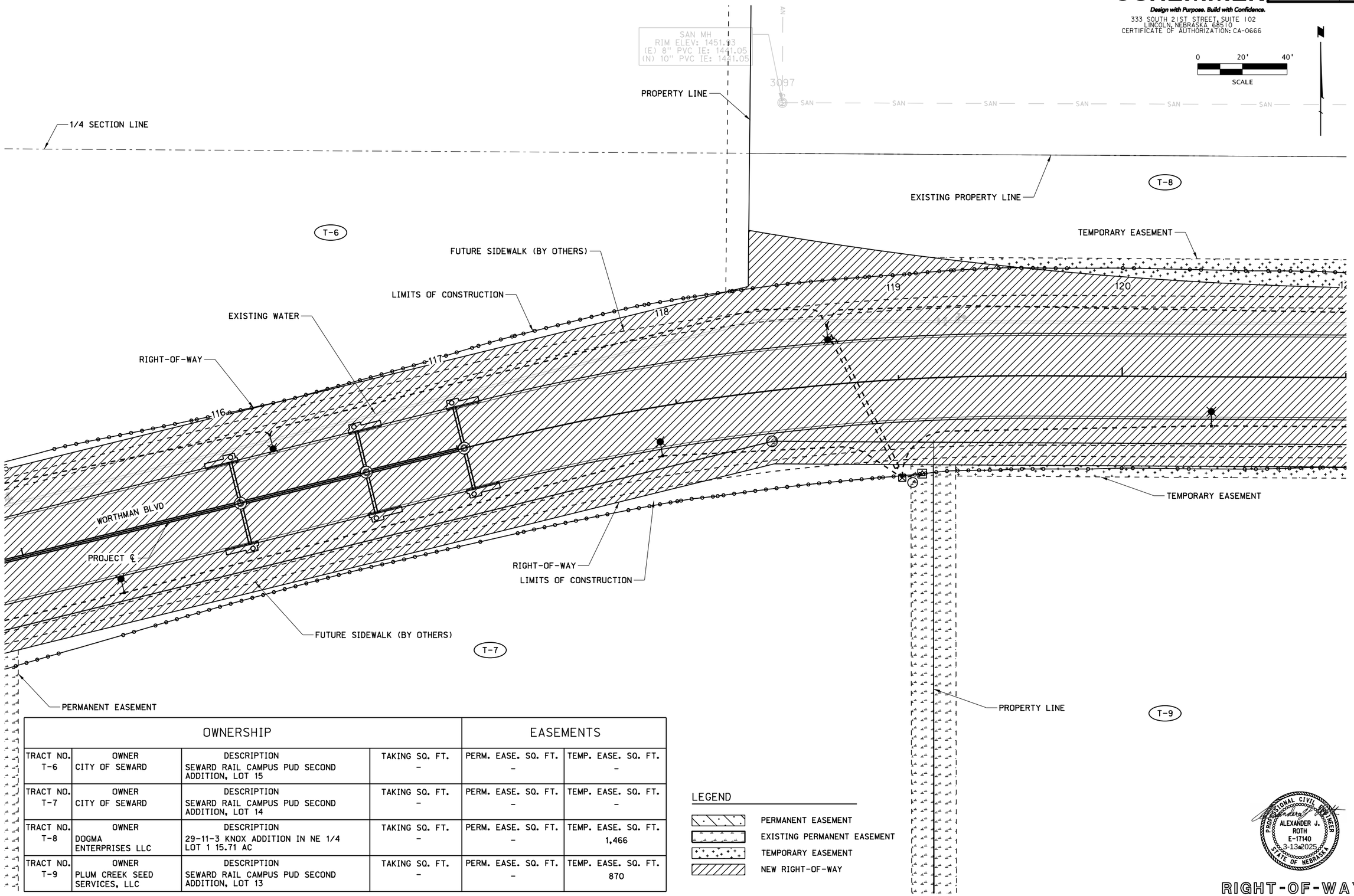
333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-C	W3

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:09
Computer: LINMEGANS

File: 09336001 ROW03.dgn
Scale: 1:40



OWNERSHIP				EASEMENTS	
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-6	CITY OF SEWARD	SEWARD RAIL CAMPUS PUD SECOND ADDITION, LOT 15	-	-	-
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-7	CITY OF SEWARD	SEWARD RAIL CAMPUS PUD SECOND ADDITION, LOT 14	-	-	-
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-8	DOGMA ENTERPRISES LLC	29-11-3 KNOX ADDITION IN NE 1/4 LOT 1 15.71 AC	-	-	1,466
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-9	PLUM CREEK SEED SERVICES, LLC	SEWARD RAIL CAMPUS PUD SECOND ADDITION, LOT 13	-	-	870

LEGEND

- PERMANENT EASEMENT
- EXISTING PERMANENT EASEMENT
- TEMPORARY EASEMENT
- NEW RIGHT-OF-WAY

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ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

RIGHT-OF-WAY

SCHEMMER
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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

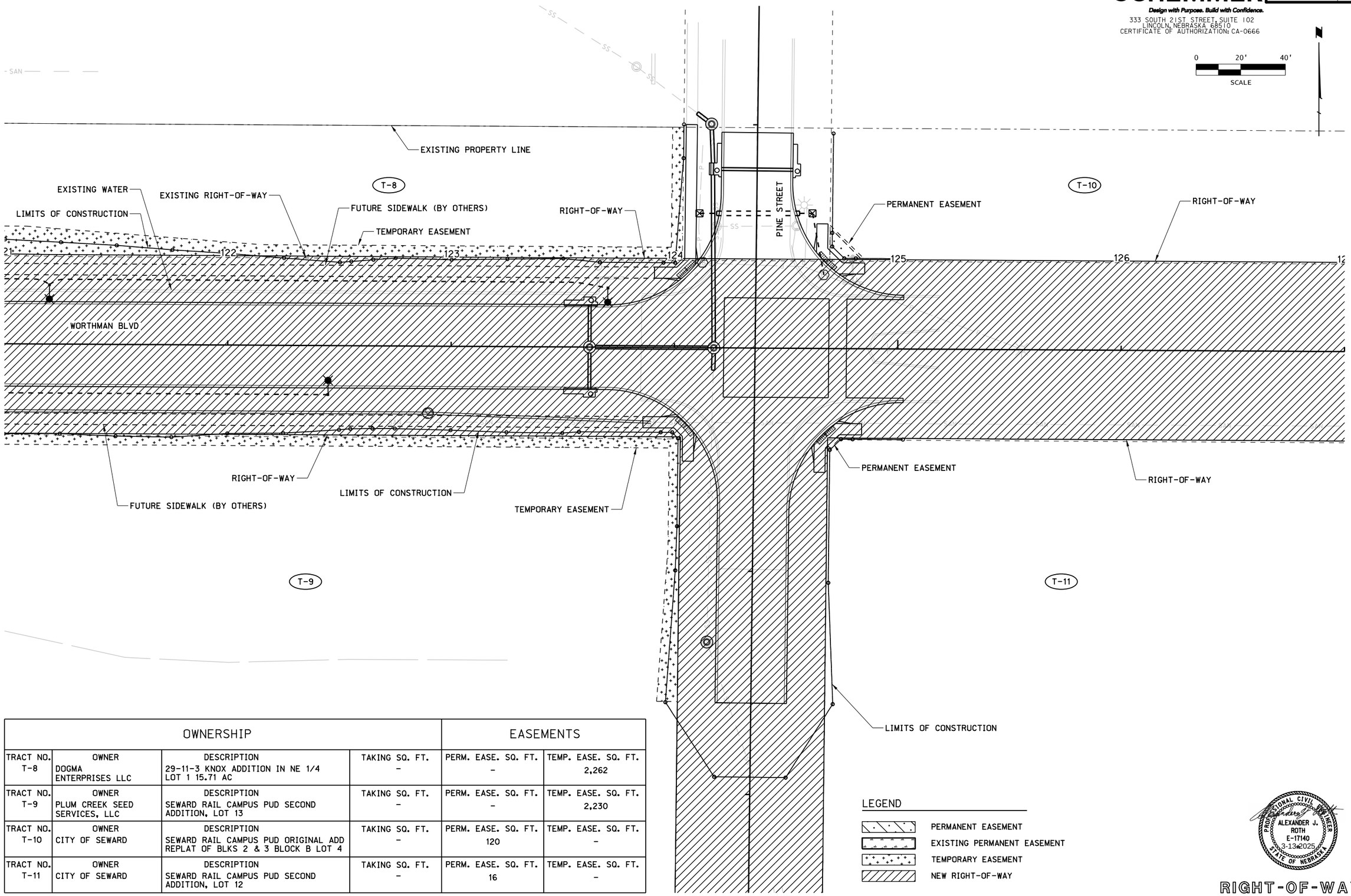
PROJECT NO.	SHEET NO.
09336.001-C	W4

ROADWAY DESIGN DIVISION.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 10:09
Computer: LINMEGANS

File: 09336001 ROW04.dgn
Scale: 1:40

0 20' 40'
SCALE



OWNERSHIP				EASEMENTS	
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-8	DOGMA ENTERPRISES LLC	29-11-3 KNOX ADDITION IN NE 1/4 LOT 1 15.71 AC	-	-	2,262
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-9	PLUM CREEK SEED SERVICES, LLC	SEWARD RAIL CAMPUS PUD SECOND ADDITION, LOT 13	-	-	2,230
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-10	CITY OF SEWARD	SEWARD RAIL CAMPUS PUD ORIGINAL ADD REPLAT OF BLKS 2 & 3 BLOCK B LOT 4	-	120	-
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-11	CITY OF SEWARD	SEWARD RAIL CAMPUS PUD SECOND ADDITION, LOT 12	-	16	-

LEGEND

- PERMANENT EASEMENT
- EXISTING PERMANENT EASEMENT
- TEMPORARY EASEMENT
- NEW RIGHT-OF-WAY

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

RIGHT-OF-WAY

SCHEMMER
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CERTIFICATE OF AUTHORIZATION: CA-0666

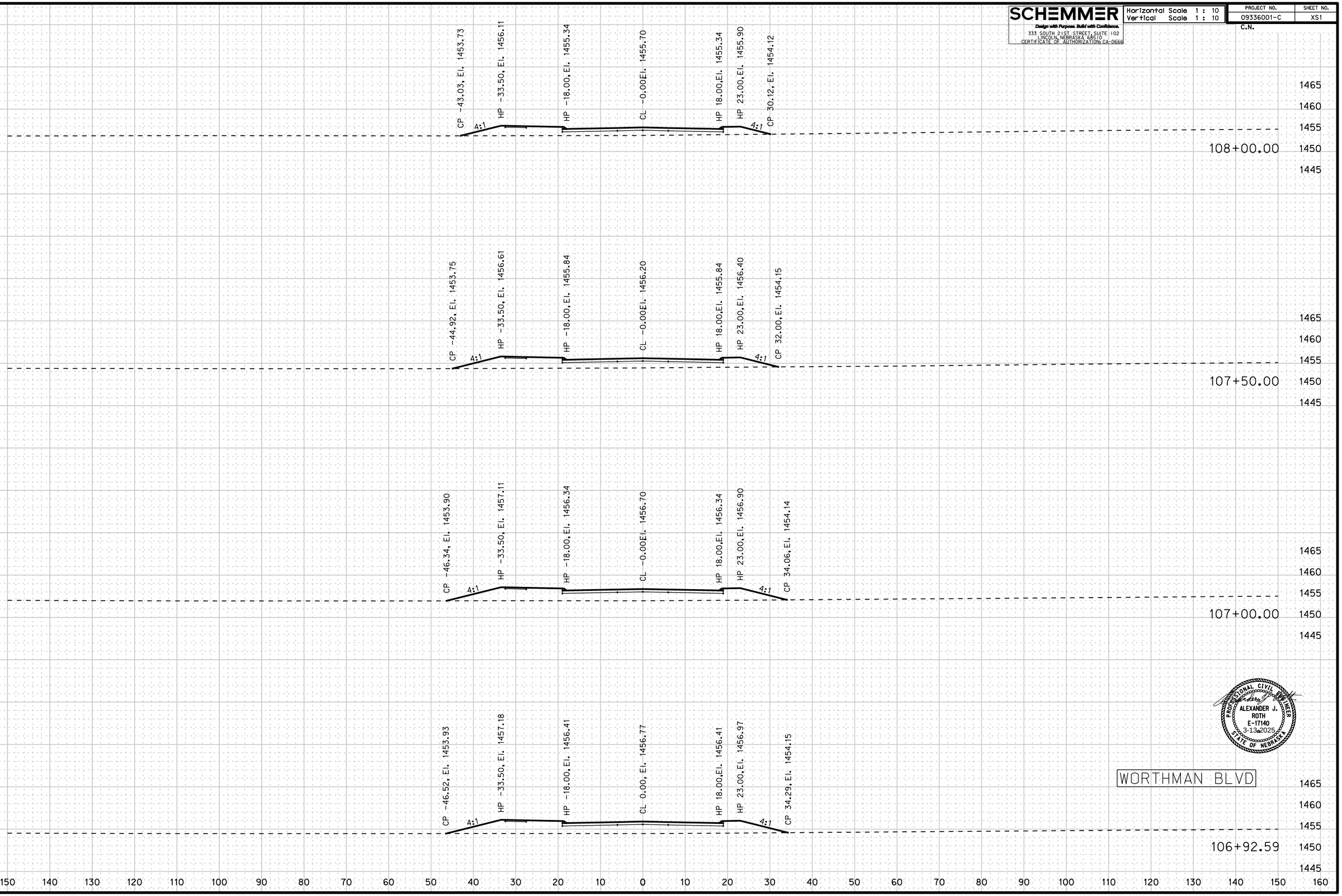
Horizontal Scale 1 : 10
Vertical Scale 1 : 10

PROJECT NO.	SHEET NO.
09336001-C	XS1

C.N.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE ROADWAY DESIGN DIVISION.

File: 09336001 Cross Sections - Worthman.dgn Computer: LINMEGANS 12-MAR-2025 10:09



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ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

WORTHMAN BLVD

SCHEMMER
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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

Horizontal Scale 1 : 10
Vertical Scale 1 : 10

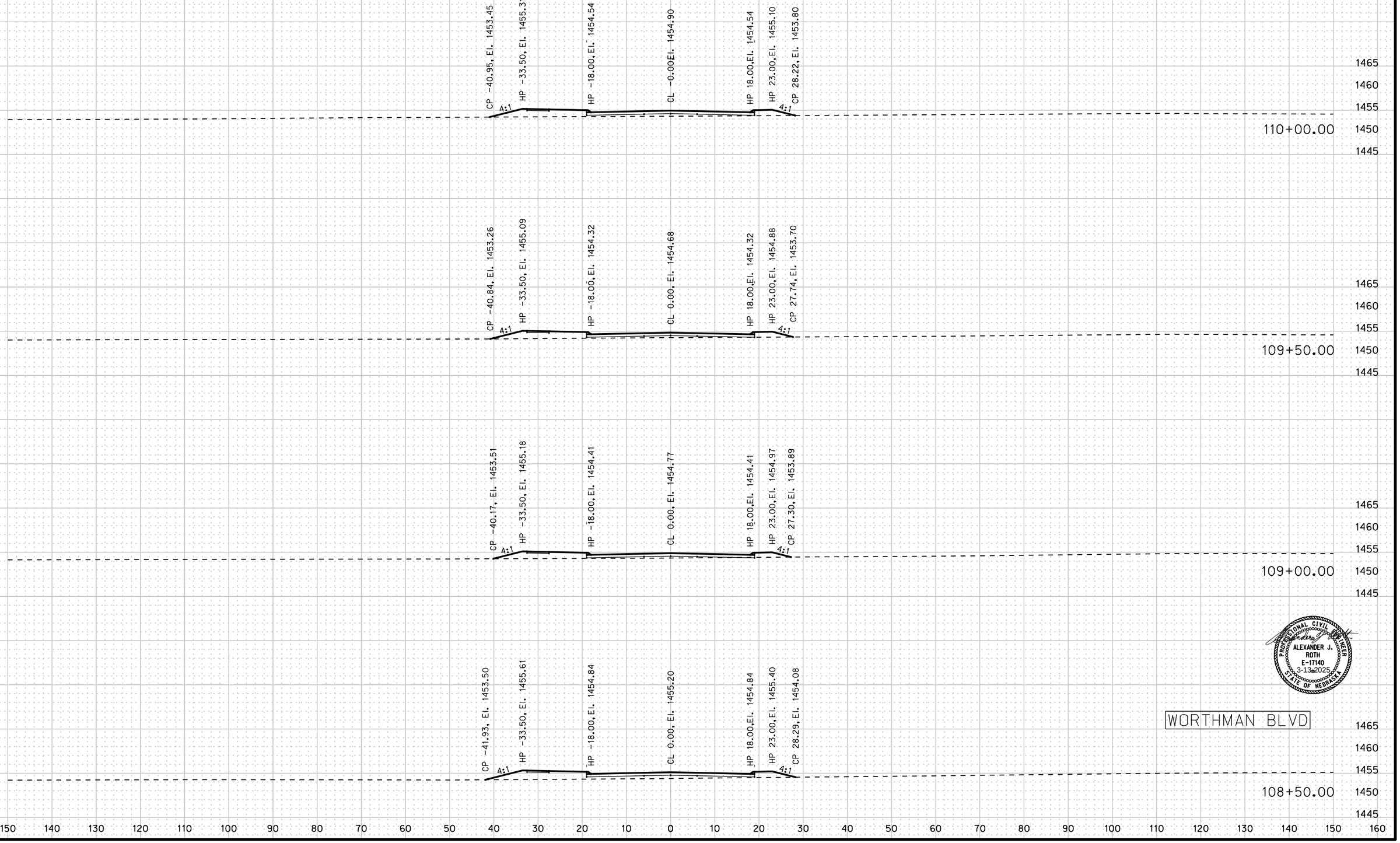
PROJECT NO.	SHEET NO.
09336001-C	XS2

C.N.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE ROADWAY DESIGN DIVISION.

Computer: LINMEGANS

File: 09336001 Cross Sections - Worthman.dgn 12-MAR-2025 10:09



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ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

WORTHMAN BLVD

SCHEMMER
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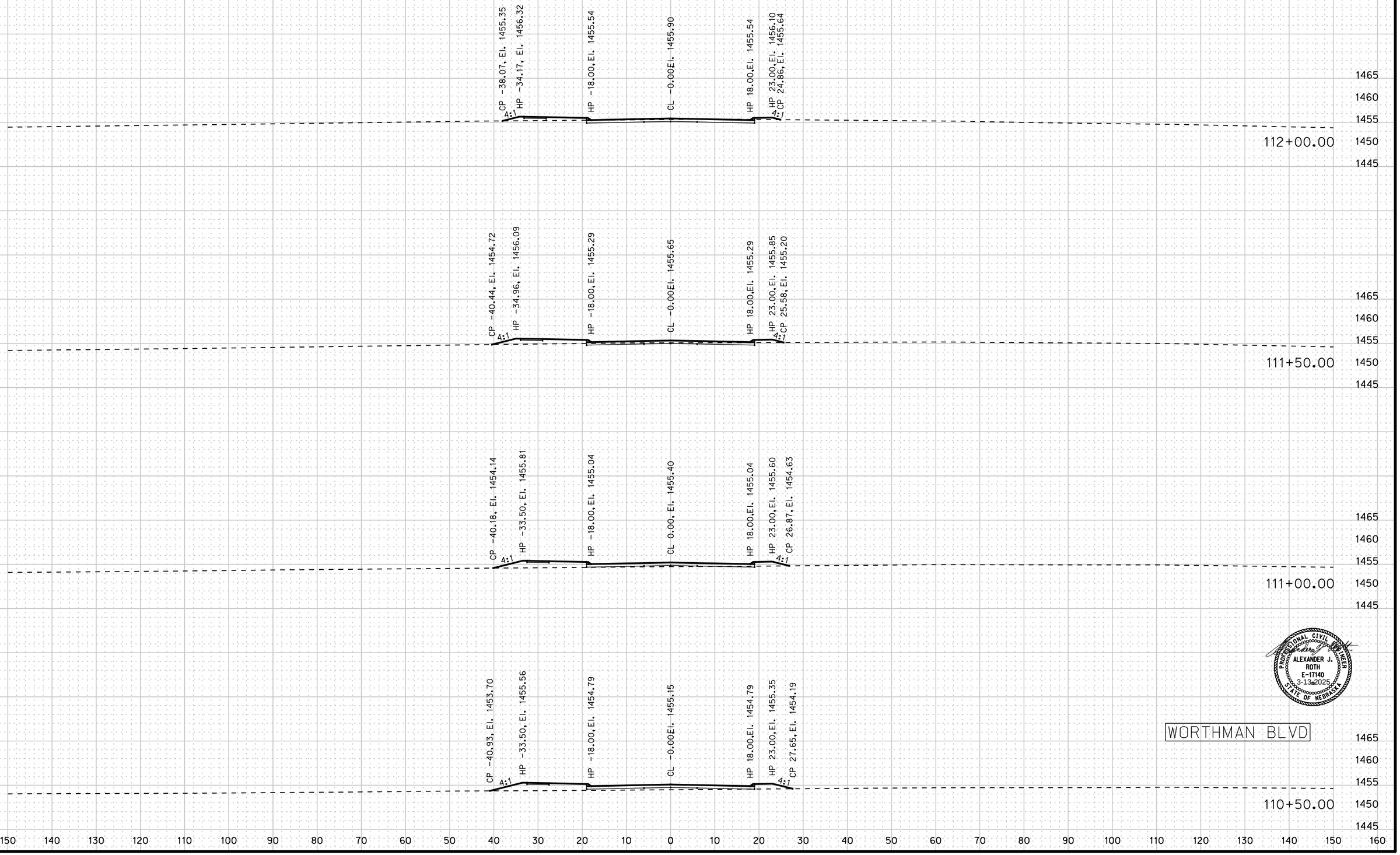
333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

Horizontal Scale	1 : 10
Vertical Scale	1 : 10

PROJECT NO.	SHEET NO.
09336001-C	XS3

C.N.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
ROADWAY DESIGN DIVISION.
Computer: LINMEGANS
File: 09336001 Cross Sections - Worthman.dgn 12-MAR-2025 10:09



PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

WORTHMAN BLVD

SCHEMMER
Design with Purpose. Build with Confidence.
333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

Horizontal Scale 1 : 10
Vertical Scale 1 : 10

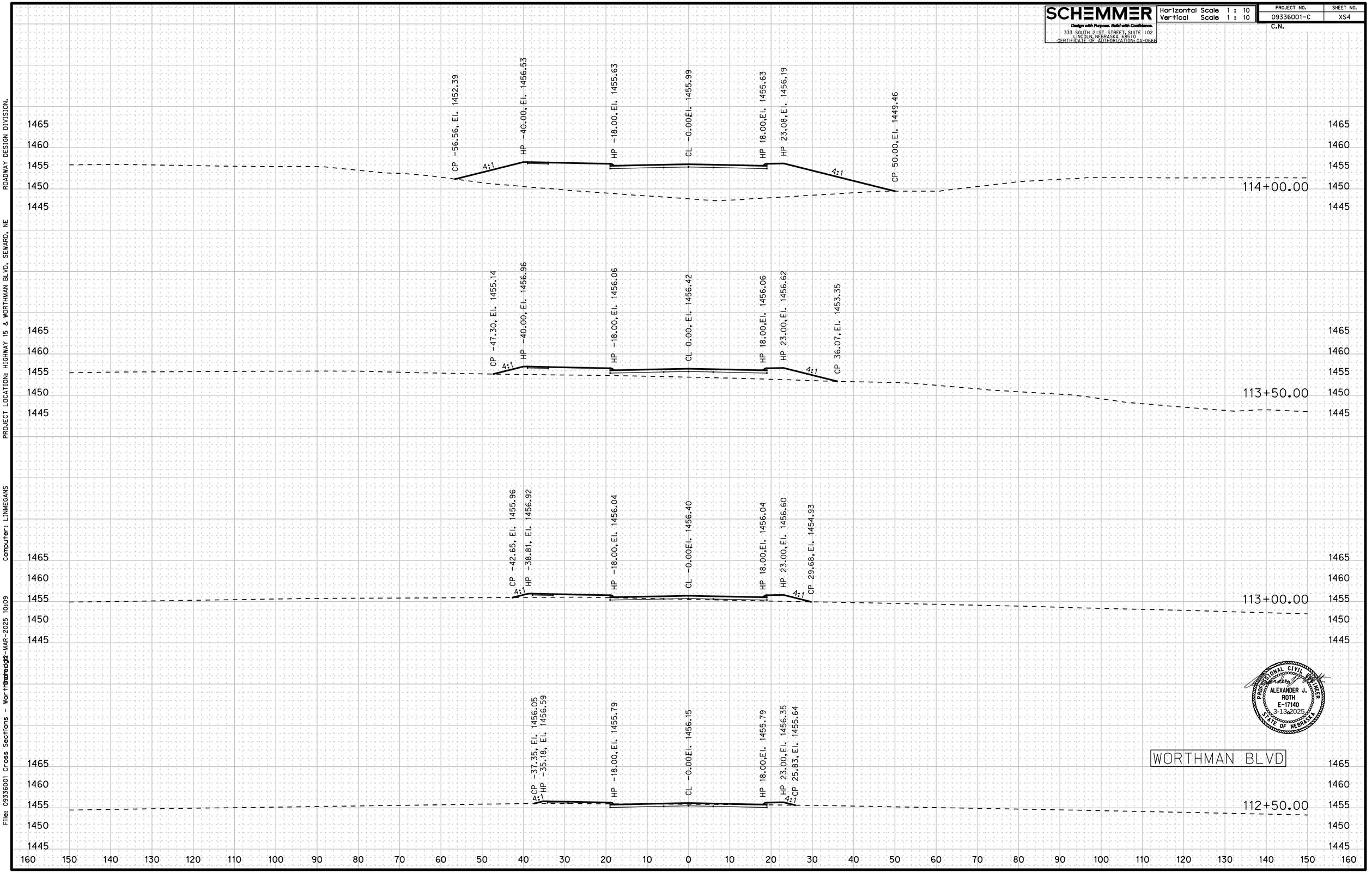
PROJECT NO.	SHEET NO.
09336001-C	XS4

C.N.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE ROADWAY DESIGN DIVISION.

Computer: LINMEGANS

File: 09336001 Cross Sections - Worthman.dgn 12-MAR-2025 10:09



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ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

WORTHMAN BLVD

SCHEMMER
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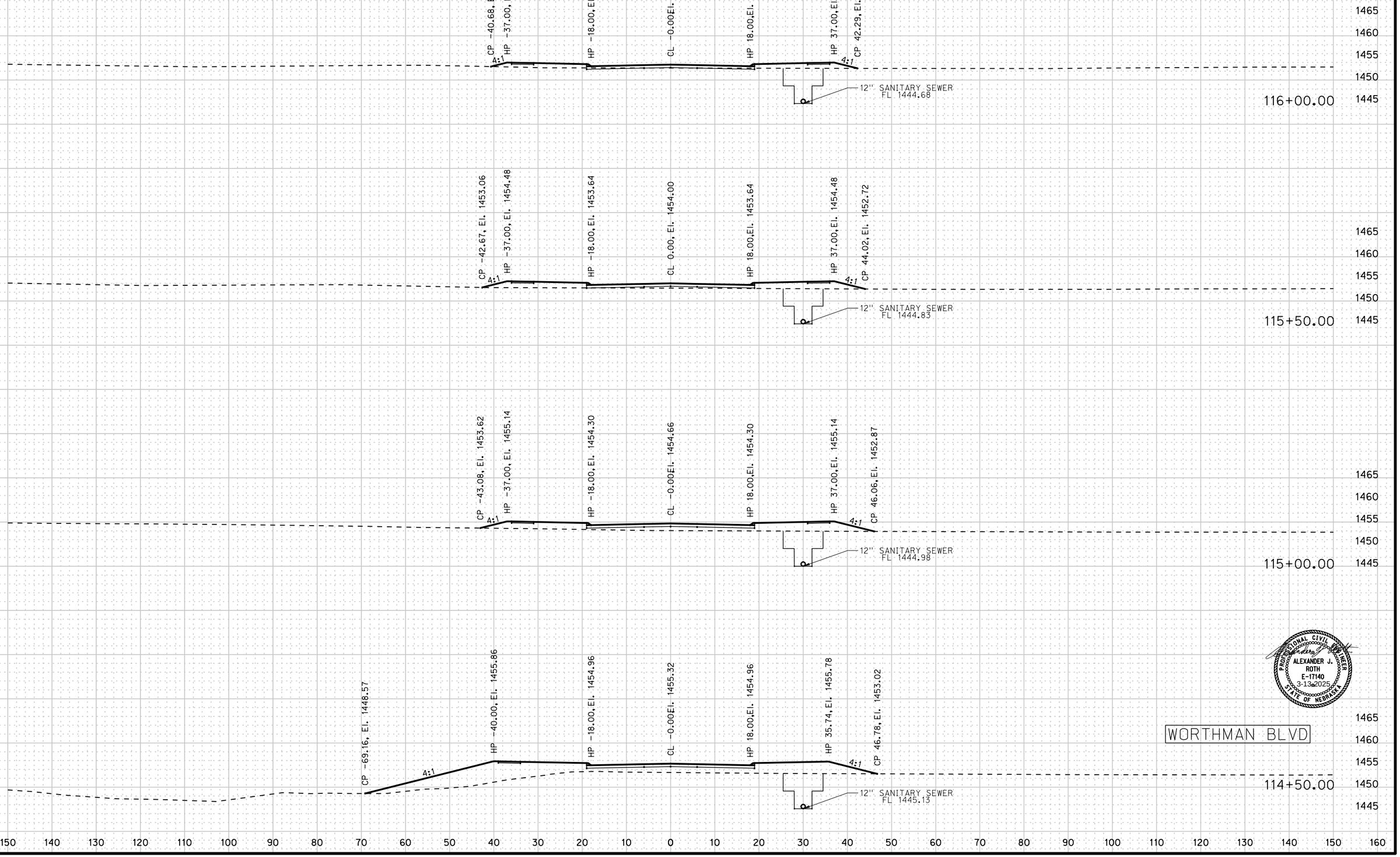
333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

Horizontal Scale	1 : 10
Vertical Scale	1 : 10

PROJECT NO.	SHEET NO.
09336001-C	XS5
C.N.	

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD. SEWARD, NE ROADWAY DESIGN DIVISION.

File: 09336001 Cross Sections - Worthman.dgn Computer: LINMEGANS 22-MAR-2025 10:09



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ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

WORTHMAN BLVD

SCHEMMER
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333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

Horizontal Scale 1 : 10
Vertical Scale 1 : 10

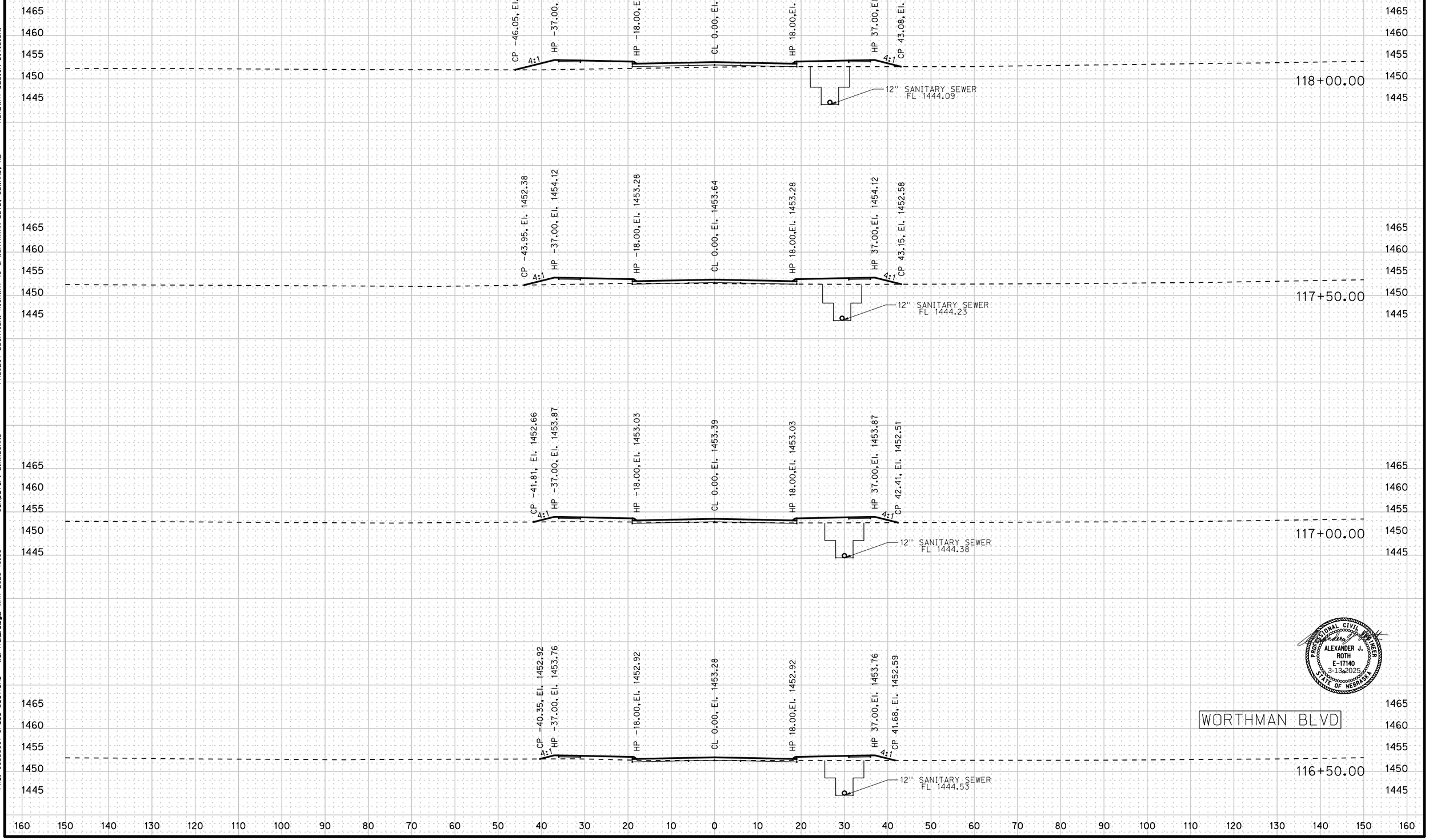
PROJECT NO.	SHEET NO.
09336001-C	XS6

C.N.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD. SEWARD, NE ROADWAY DESIGN DIVISION.

Computer: LINMEGANS

File: 09336001 Cross Sections - Worthman.dgn 12-MAR-2025 10:09



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E-17140
3-13-2025
STATE OF NEBRASKA

WORTHMAN BLVD

SCHEMMER
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333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

Horizontal Scale	1 : 10
Vertical Scale	1 : 10

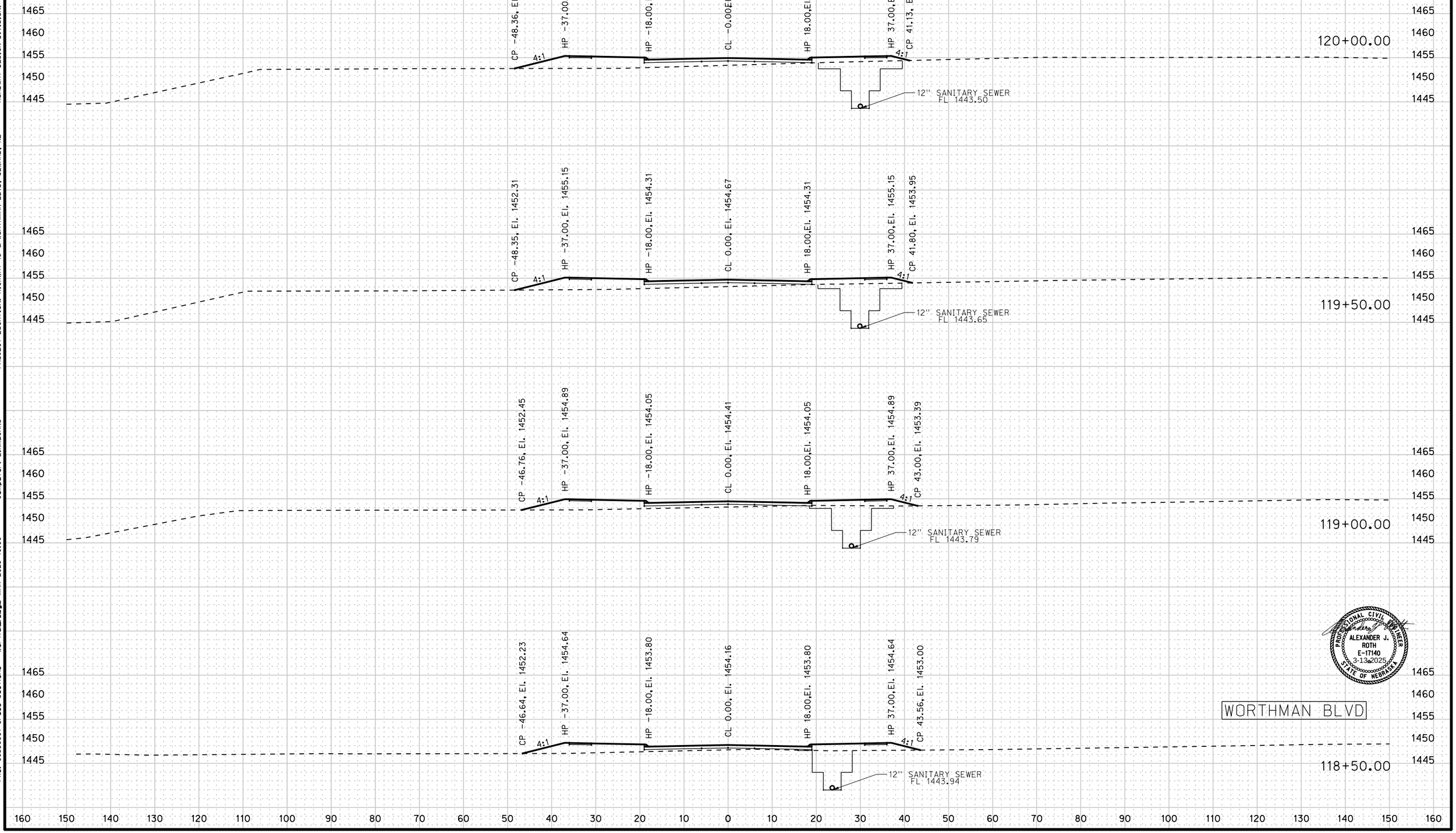
PROJECT NO.	SHEET NO.
09336001-C	XS7

C.N.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD. SEWARD, NE ROADWAY DESIGN DIVISION.

Computer: LINMEGANS

File: 09336001 Cross Sections - Worthman.dgn 12-MAR-2025 10:09



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E-17140
3-13-2025
STATE OF NEBRASKA

WORTHMAN BLVD

SCHEMMER
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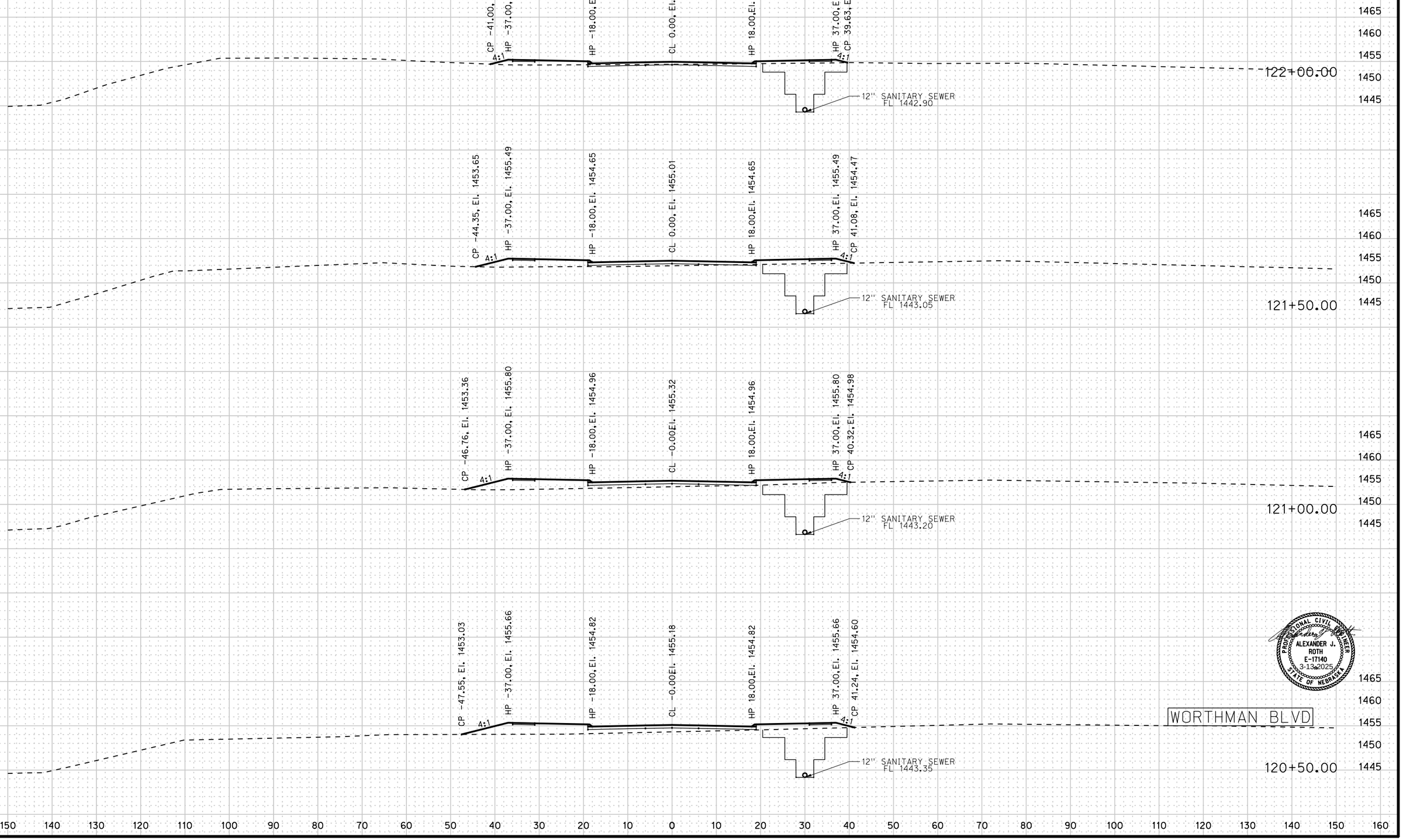
333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

Horizontal Scale 1 : 10
Vertical Scale 1 : 10

PROJECT NO.	SHEET NO.
09336001-C	XS8

C.N.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
ROADWAY DESIGN DIVISION.
Computer: LINMEGANS
File: 09336001 Cross Sections - Worthman.dgn 12-MAR-2025 10:09



PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

SCHEMMER
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333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

Horizontal Scale 1 : 10
Vertical Scale 1 : 10

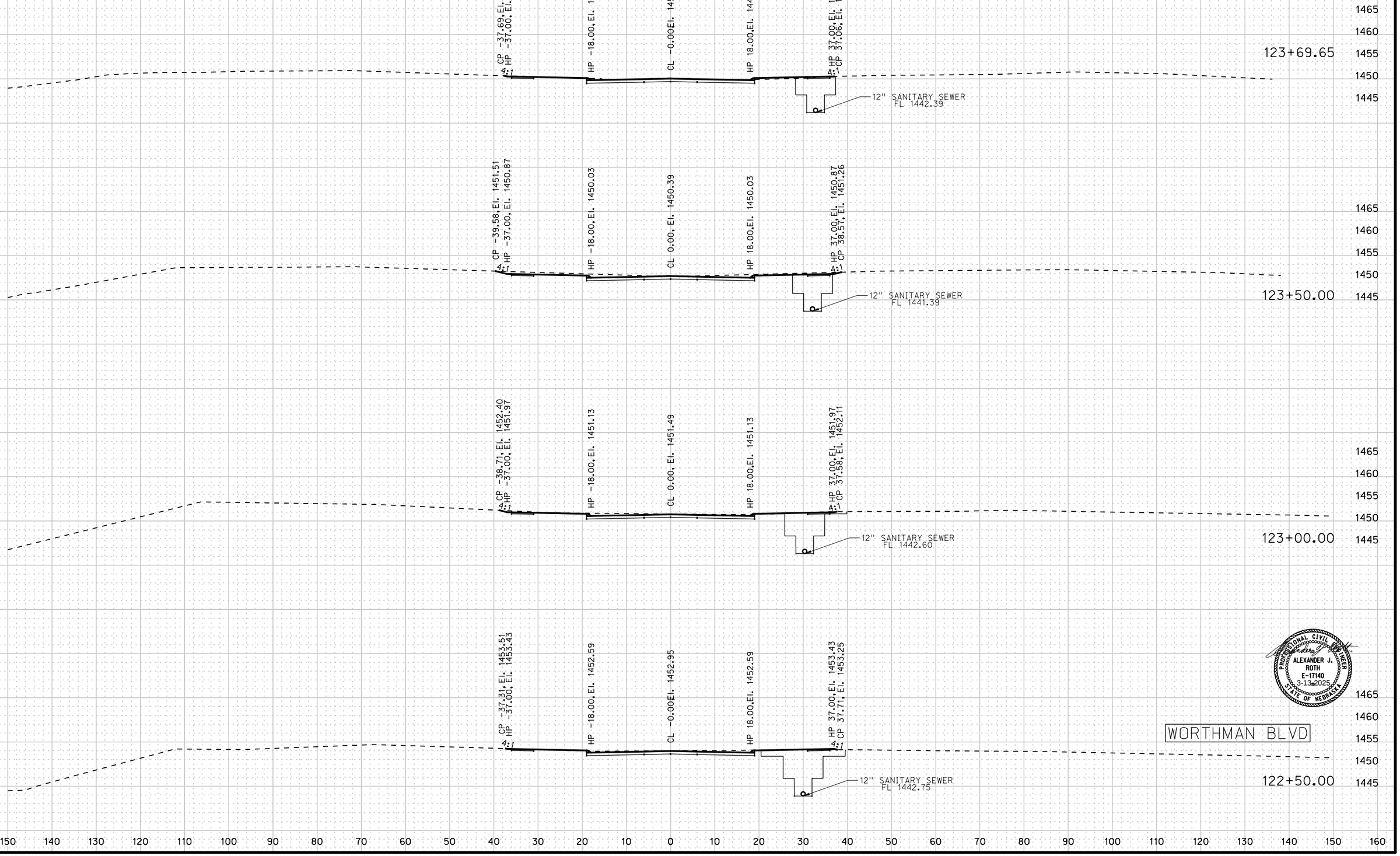
PROJECT NO.	SHEET NO.
09336001-C	XS9

C.N.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE ROADWAY DESIGN DIVISION.

Computer: LINMEGANS

File: 09336001 Cross Sections - Worthman.dgn 22-MAR-2025 10:09



PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

WORTHMAN BLVD

SCHEMMER
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333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

Horizontal Scale 1 : 10
Vertical Scale 1 : 10

PROJECT NO.	SHEET NO.
09336001-C	XS10

C.N.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE ROADWAY DESIGN DIVISION.

...\BW with Gray topo.tbl

...\09336001 Cross Sections - Pine.dgn 3/12/2025

502+25.00

CP-32.85,1450.42
HP-32.00,1450.21
4:1
HP-15.00,1449.41
CL 0.00, 1449.71
HP15.00,1449.41
HP32.00,1450.21
CP33.00,1449.96
4:1

502+00.00

CP-33.53,1450.82
HP-32.00,1450.44
4:1
HP-15.00,1449.64
CL 0.00, 1449.94
HP15.00,1449.64
HP32.00,1450.44
CP32.80,1450.24
4:1

501+75.00

CP-32.45,1450.48
HP-32.00,1450.60
4:1
HP-15.00,1449.80
CL-0.00,1450.10
HP15.00,1449.80
HP32.00,1450.60
CP32.64,1450.44
4:1

501+50.00

CP-36.44,1449.76
HP-32.00,1450.75
4:1
HP-15.00,1449.95
CL-0.00,1450.25
HP15.00,1449.95
HP32.00,1450.75
CP34.87,1450.03
4:1

PINE ST.

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

1470 1465 1460 1455 1450

160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

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LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

Horizontal Scale	1 : 10
Vertical Scale	1 : 10

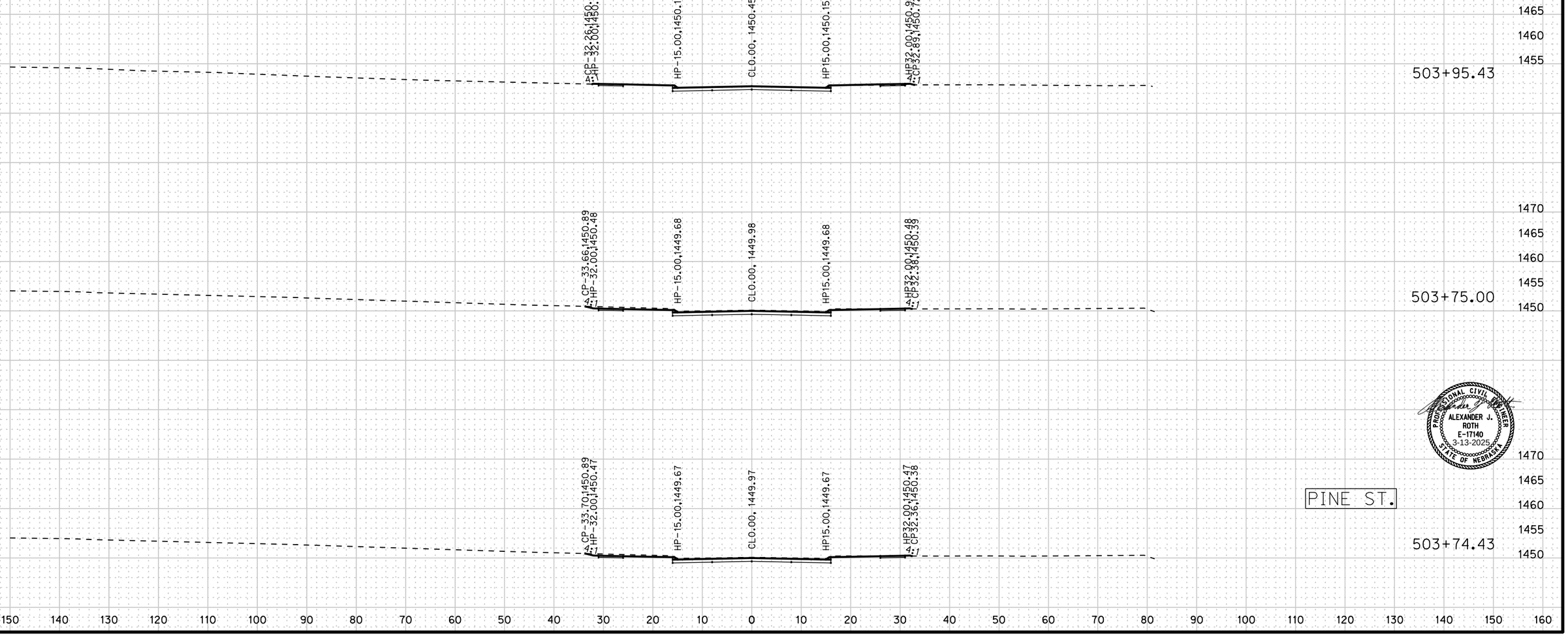
PROJECT NO.	SHEET NO.
09336001-C	XS11

C.N.

PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD. SEWARD, NE ROADWAY DESIGN DIVISION.

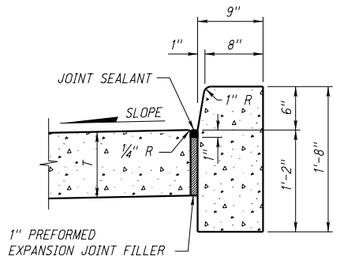
...\BW with Gray topo.tbl

...\09336001 Cross Sections - Pine.dgn 3/12/2025



PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

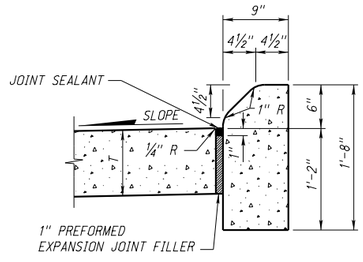
PINE ST.



CONCRETE BARRIER CURB *

QUANTITIES

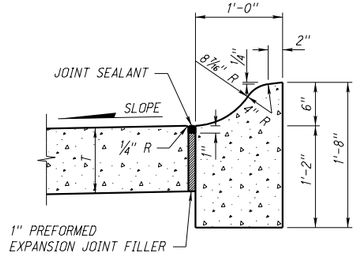
CONCRETE	4.55 CU. YDS./STA.
AREA	1.228 SQ. FT.



CONCRETE MEDIAN CURB *

QUANTITIES

CONCRETE	4.42 CU. YDS./STA.
AREA	1.192 SQ. FT.

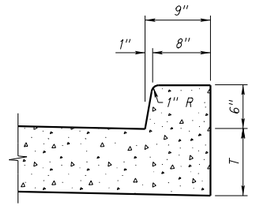


CONCRETE CURB, * TYPE I

QUANTITIES

CONCRETE	5.22 CU. YDS./STA.
AREA	1.408 SQ. FT.

NOTE: * ONE INCH PREFORMED EXPANSION JOINT FILLER SHALL BE PLACED AT INTERVALS OF NOT MORE THAN 100 FEET THRU CONCRETE BARRIER CURB, CONCRETE MEDIAN CURB, AND CONCRETE CURB, TYPE I.

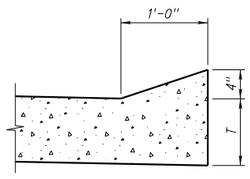


NOTE: MAY BE USED WHEN T IS LESS THAN 1 FOOT.

INTEGRAL CONCRETE BARRIER CURB

QUANTITIES

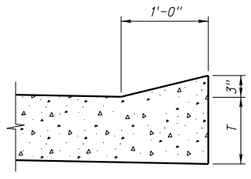
CONCRETE	1.33 CU. YDS./STA.
AREA	0.359 SQ. FT.



INTEGRAL CONCRETE SLOPING CURB

QUANTITIES

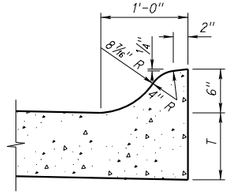
CONCRETE	0.62 CU. YDS./STA.
AREA	0.167 SQ. FT.



INTEGRAL CONCRETE SLOPING CURB

QUANTITIES

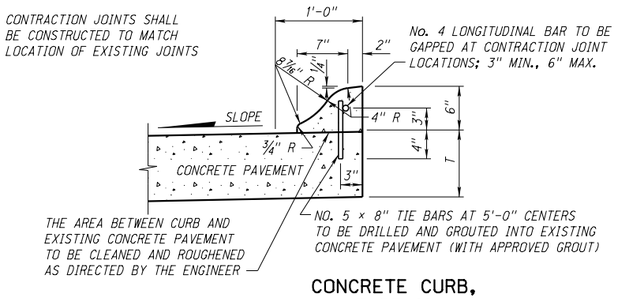
CONCRETE	0.46 CU. YDS./STA.
AREA	0.123 SQ. FT.



INTEGRAL CONCRETE CURB

QUANTITIES

CONCRETE	0.89 CU. YDS./STA.
AREA	0.239 SQ. FT.

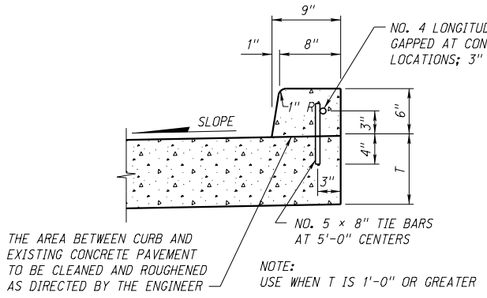


CONCRETE CURB, TYPE II

QUANTITIES

CONCRETE	0.87 CU. YDS./STA.
AREA	0.234 SQ. FT.

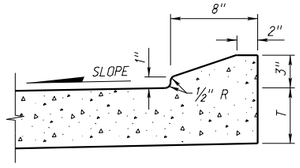
NOTE: T = PAVEMENT THICKNESS



CONCRETE BARRIER CURB ALTERNATE

QUANTITIES

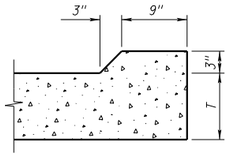
CONCRETE	1.33 CU. YDS./STA.
AREA	0.359 SQ. FT.



INTEGRAL CONCRETE TRUCK APRON CURB

QUANTITIES

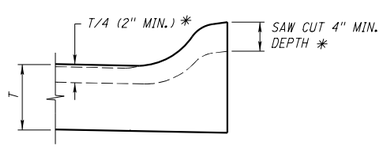
CONCRETE	0.47 CU. YDS./STA.
AREA	0.127 SQ. FT.



EROSION CONTROL CURB

QUANTITIES

CONCRETE	0.81 CU. YDS./STA.
AREA	0.219 SQ. FT.



CONTRACTION JOINT THRU CURB

* FOR NON-INTEGRAL CURB THE CONTRACTION JOINTS MAY BE MADE WITH A DOUBLE EDGER WHILE THE CONCRETE IS STILL PLASTIC.

REV. NO.	DATE	DESCRIPTION OF REVISION
R12	JAN 18	NDOR BORDER TO NDOT BORDER
R11	JUL 15	ADDED TRUCK APRON CURB
R10	FEB 09	MULTIPLE REVISIONS

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 301-R12

PAVEMENT DETAILS

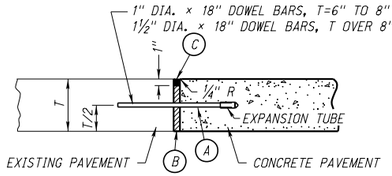
ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
MICHAEL H. OWEN
E-6515
STATE OF NEBRASKA

DATE

ORIGINAL: JANUARY 31, 1974
DATE

1
3



(A) GREASE DOWEL BAR ON EXPANSION TUB SIDE

(B) 1" PREFORMED EXPANSION JOINT FILLER

(C) JOINT SEALANT

NOTES:

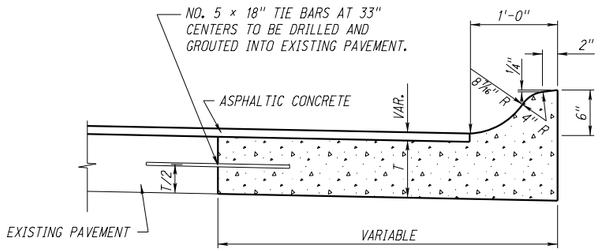
DOWEL BARS SHALL BE DRILLED TO A DEPTH OF 8" INTO EXISTING PAVEMENT AND GROUTED.

DOWEL BARS SHALL BE PLACED AT 1 FOOT CENTERS. THE OUTSIDE DOWEL BAR SHALL BE PLACED 6" FROM THE EDGE OF THE PAVEMENT.

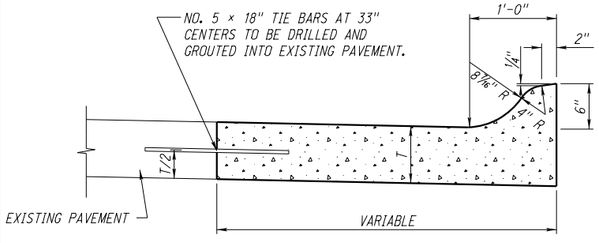
THIS JOINT SHALL BE CONSTRUCTED TRANSVERSE TO THE ROADWAY WHERE THE NEW CONCRETE ABUTS THE EXISTING CONCRETE.

DOWEL BARS SHALL BE PLACED PARALLEL TO THE ROADWAY ℄ AND TO THE ROAD BED.

EXPANSION JOINT (SUBSIDIARY)

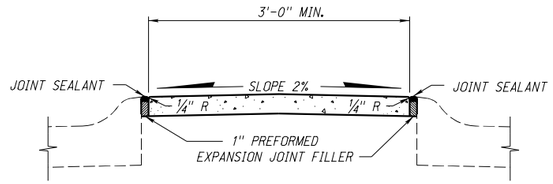


CONCRETE BASE COURSE W/INTEGRAL CURB



THE FOLLOWING NOTE IS TYPICAL FOR CONCRETE BASE COURSE WITH INTEGRAL CURB AND CONCRETE PAVEMENT WIDENING: CONTRACTION AND EXPANSION JOINTS SHALL BE CONSTRUCTED TO MATCH LOCATIONS OF EXISTING JOINTS.

CONCRETE PAVEMENT WIDENING



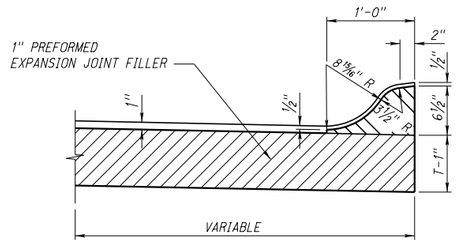
CONCRETE MEDIAN SURFACING

ONE INCH PREFORMED EXPANSION JOINT FILLER SHALL BE PLACED ACROSS THE FULL WIDTH OF THE MEDIAN SURFACING AT INTERVALS OF NOT MORE THAN 49 FEET.

LONGITUDINAL JOINTS ONE INCH DEEP SHALL BE MADE IN ALL MEDIANS WHEN SURFACING WIDTH IS 16 FEET OR GREATER.

TRANSVERSE JOINTS ONE INCH DEEP SHALL BE MADE IN ALL MEDIANS AT INTERVALS OF NOT MORE THAN 8 FEET.

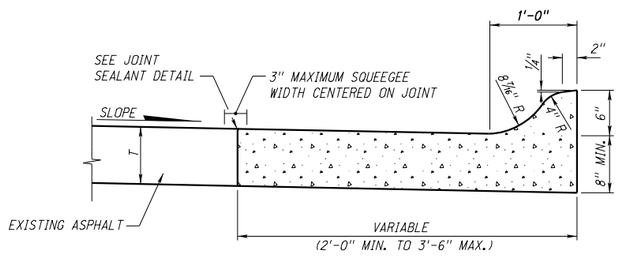
TRANSVERSE AND LONGITUDINAL JOINTS SHALL NOT BE FILLED.



ONE INCH PREFORMED EXPANSION JOINT FILLER SHALL BE PLACED AT INTERSECTION RETURNS AND WHERE SHOWN ON THE PLANS. TRANSVERSE JOINTS SHALL BE PLACED EVERY 8 FEET OR WHERE SHOWN ON THE PLANS.

NOTE:
RECESS THE EXPANSION JOINT FILLER 1/2" FROM THE TOP SURFACE OF THE CURB UNDER CONSTRUCTION

DETAIL FOR CUTTING & PLACEMENT OF EXPANSION JOINT FILLER

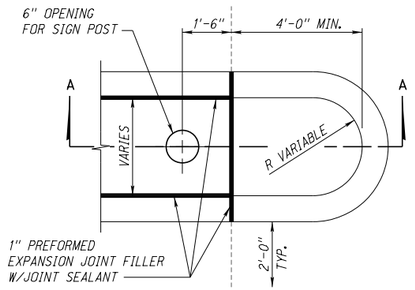


COMBINATION CONCRETE CURB & GUTTER

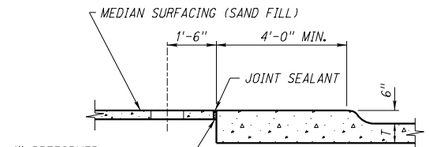
NOTE:

TRANSVERSE JOINTS SHALL BE PLACED EVERY 8 FEET AND JOINTS SHALL BE PLACED AT EACH HEADER, 2-NO. 5 x 18" TIE BARS ARE TO BE USED.

PLACE 1" PREFORMED EXPANSION JOINT FILLER AND SEAL AT THE RETURN OF RADIUS AT INTERSECTIONS.

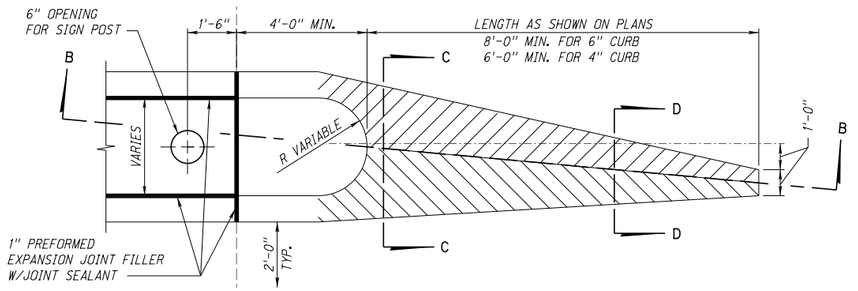


PLAN

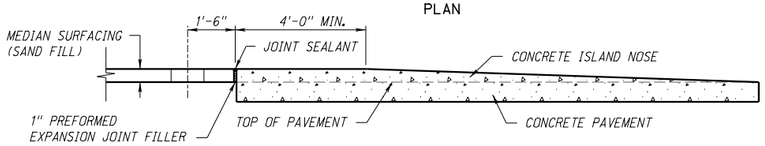


SECTION A-A

END OF MEDIAN ISLAND



PLAN

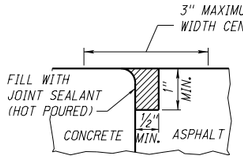


SECTION B-B

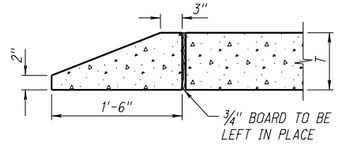
SECTION C-C SECTION D-D

CONCRETE ISLAND NOSE

NOTE:
EXISTING CONCRETE PAVEMENT IS TO BE REMOVED TO BUILD CONCRETE ISLAND NOSE.



JOINT SEALANT DETAIL



CONCRETE HEADER

NOTE: T = PAVEMENT THICKNESS

REV. NO.	DATE	DESCRIPTION OF REVISION
R12	JAN 18	NDOR BORDER TO NDOT BORDER
R11	JUL 15	ADDED TRUCK APRON CURB
R10	FEB 09	MULTIPLE REVISIONS

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 301-R12

PAVEMENT DETAILS

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

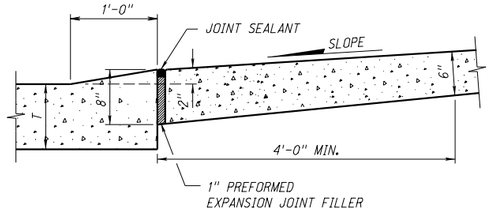
DATE

PROFESSIONAL CIVIL ENGINEER — MICHAEL H. OWEN E-6515 — STATE OF NEBRASKA

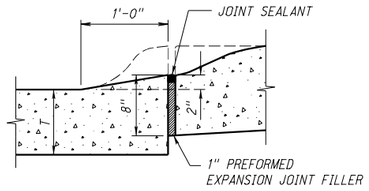
ORIGINAL: JANUARY 31, 1974
DATE

2
3

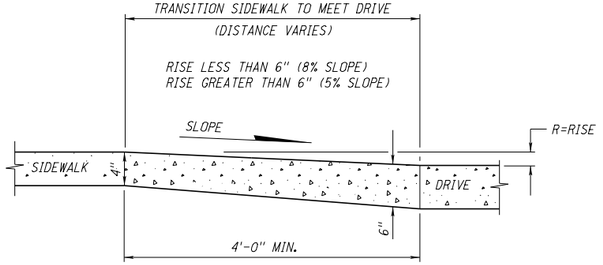
File: 30100e12.dgn
Date: 29-JUN-2021 09:17
Computer: NDOTDESIGN134



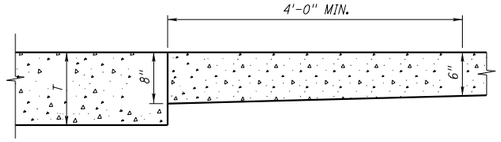
SECTION E-E



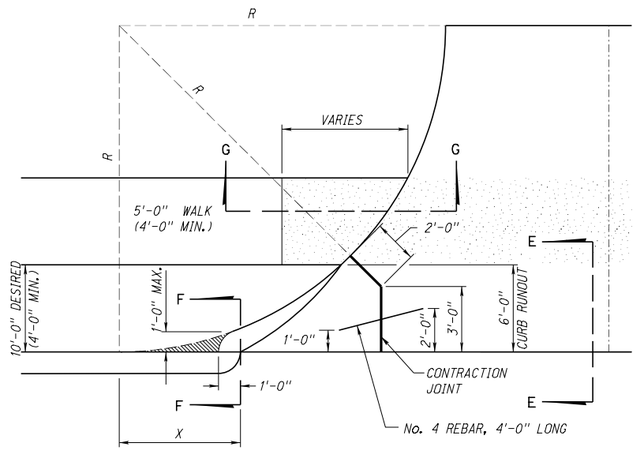
SECTION F-F



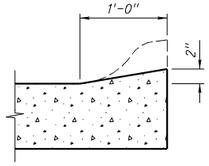
SECTION G-G



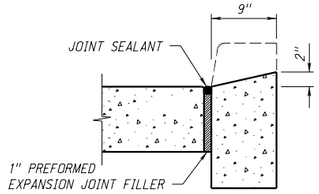
(RURAL DRIVEWAY)



URBAN DRIVEWAY PLAN



INTEGRAL CURB

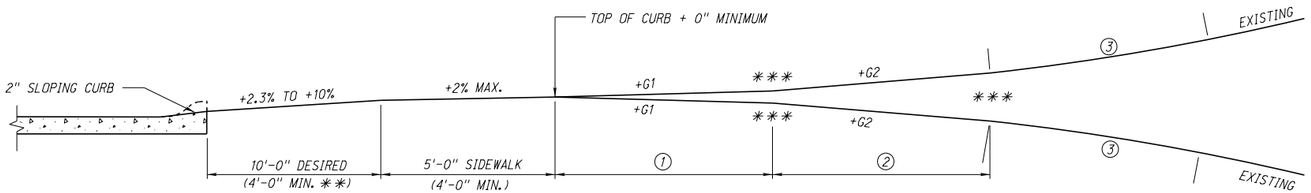


BARRIER CURB

DETAILS OF CURB DROPS

R	X
10'-0"	4.6'
15'-0"	5.6'
20'-0"	6.0'
25'-0"	7.0'
30'-0"	8.0'
35'-0"	8.6'
40'-0"	9.0'

R = RADIUS
X = $\sqrt{(2R-1)}$
(X & R IN FEET)

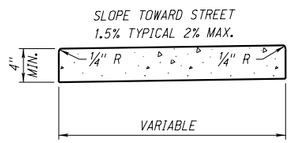


DRIVEWAY TYPE	G1 (MAX.)	G2 (MAX.)
COMMERCIAL, INDUSTRIAL	±5%	±8%
DWELLINGS (RESIDENTIAL)	±8%	±15%

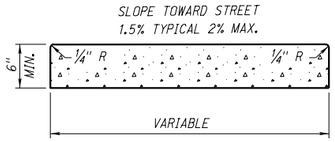
PROFILE URBAN DRIVEWAY WITH SIDEWALK
(MAXIMUM PERCENT OF GRADE)

① *10'-0" MINIMUM IS REQUIRED WHEN THE EXISTING GRADE IS GREATER THAN ±8%*
② *10'-0" MINIMUM IS REQUIRED WHEN THE EXISTING GRADE IS GREATER THAN ±15%*
③ *10'-0" MINIMUM ROUNDING IS REQUIRED WHEN THE EXISTING GRADE IS GREATER THAN ±22%*

** *0 FEET IS ALLOWED IN URBAN BUSINESS DISTRICTS WITH SIDEWALKS OF 6 FEET MINIMUM WIDTH.*
*** *10 FEET MINIMUM ROUNDING DESIRABLE FOR THE FOLLOWING GRADE CHANGES.*



SIDEWALK



SIDEWALK AT DRIVEWAY

NOTE:

1 INCH PREFORMED EXPANSION JOINT FILLER SHALL BE PLACED IN ALL SIDEWALKS OR CROSSWALKS AT INTERVALS OF NOT MORE THAN 50 FOOT, AND AT ALL POINTS WHERE SIDEWALKS OR CROSSWALKS ARE ADJACENT TO CURB. IF SIDEWALK OR CROSSWALK TO BE CONSTRUCTED IS LESS THAN 50 FOOT IN LENGTH, ONE SUCH EXPANSION JOINT SHALL BE PLACED AS DIRECTED BY THE ENGINEER.

NOTE: T = PAVEMENT THICKNESS

REV. NO.	DATE	DESCRIPTION OF REVISION
R12	JAN 18	NDOR BORDER TO NDOT BORDER
R11	JUL 15	ADDED TRUCK APRON CURB
R10	FEB 09	MULTIPLE REVISIONS

NEBRASKA DEPARTMENT OF TRANSPORTATION
STANDARD PLAN NO. 301-R12

PAVEMENT DETAILS

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

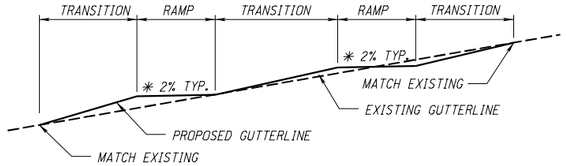
PROFESSIONAL CIVIL ENGINEER
MICHAEL H. OWEN
E-6515
STATE OF NEBRASKA

DATE

ORIGINAL:
JANUARY 31, 1974
DATE

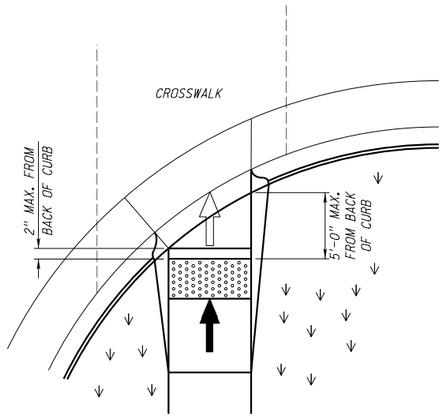
3
3

Computer: NDOTDESIGN34
Date: 29-JUN-2021 09:17
File: 301006i2.dgn

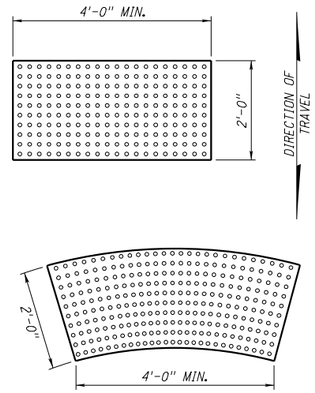


* 2% PREFERRED WHERE TRAFFIC STOPS, UP TO 5% ALLOWED WHERE TRAFFIC CONTINUES THROUGH THE CROSSWALK WITHOUT STOPPING (INCLUDING TRAFFIC SIGNALS).

GUTTER PROFILE DETAIL



DETECTABLE WARNING PANEL PLACEMENT DETAIL

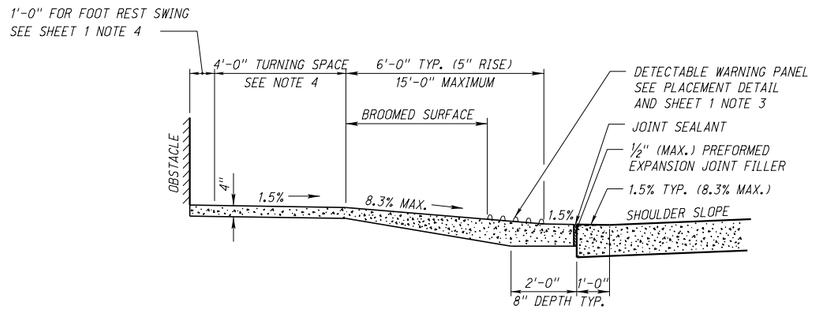


DETECTABLE WARNING PANELS

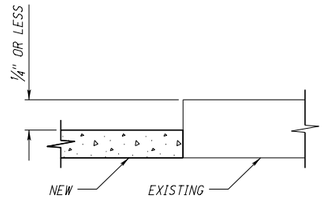
NOTES:

1. THE SURFACE OF ALL CURB RAMPS SHALL BE BROOMED PERPENDICULAR TO THE SLOPE OF THE CURB RAMP.
2. CARE SHALL BE TAKEN TO ASSURE A UNIFORM GRADE ON THE CURB RAMP, FREE OF SAGS AND SHORT GRADE CHANGES.
3. DETECTABLE WARNING PANELS SHALL CONTRAST VISUALLY AND EXTEND 2 FT. MINIMUM IN THE DIRECTION OF PEDESTRIAN TRAVEL FOR THE WIDTH OF THE RAMP. TYPE C RAMP; DETECTABLE WARNING PANELS SHALL EXTEND THE FULL LENGTH OF THE TRAVERSABLE CURB.

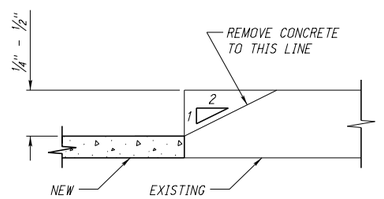
   NEW CURB RAMPS SHALL HAVE CAST IN CONCRETE DETECTABLE WARNING PANELS.
4. TURNING SPACE SHALL HAVE MINIMUM DIMENSIONS OF 4 FT. × 4 FT. AND SHALL BE A MINIMUM OF 1 FT. FROM ANY OBSTACLE SUCH AS A CURB OR RETAINING WALL FOR SWING OF WHEELCHAIR FOOT REST. THE SLOPE SHALL BE 2% MAXIMUM IN ANY DIRECTION.
5. THE WORK OF CONSTRUCTING CURB RAMPS SHALL BE INCLUDED IN THE QUANTITIES FOR "CONCRETE SIDEWALKS", "CONCRETE MEDIAN SURFACING" OR "CONCRETE BIKEWAY". THE WORK OF MODIFICATION OF NEW OR EXISTING CURB WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS OF WORK FOR WHICH DIRECT PAYMENT IS MADE.



TYPICAL RAMP PROFILE



NO BEVELING



BEVEL AS REQUIRED

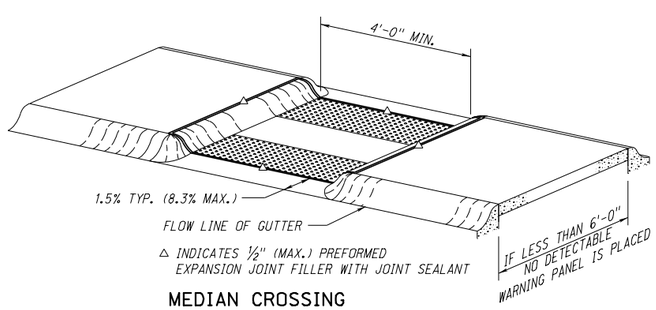
WHEN EXISTING SIDEWALK DOES NOT MEET THE 2% CROSS SLOPE, BEVELING TO MEET PROPOSED GUIDELINES IS REQUIRED.

THE SIDEWALK PANEL ABUTTING THE EXISTING SIDEWALK (WHICH MAY NOT BE 2% SLOPE): BUILD FULL WIDTH OF THE NEW SIDEWALK, ON 2% MAXIMUM CROSS SLOPE AND BEVEL THE EXISTING SIDEWALK EDGE WHERE IT DOES NOT MEET THE NEW WITHIN ¼", THIS WORK IS SUBSIDIARY.

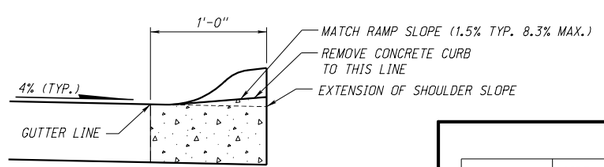
BEVELING DETAIL

LEGEND

- DETECTABLE WARNING PANEL
- BROOMED CURB RAMP WHEN 5% TO 8.3%
- RAMP FLARE
- GRASS OR NON WALKING SURFACE
- CURB TRANSITION
- CURB FACE SLOPE 1 VERT. : 2 HORZ.



MEDIAN CROSSING



NOTE:
COMBINATION CONCRETE CURB AND GUTTER MAY BE REMOVED AND REPLACED IN LIEU OF MILLING.

CURB DETAIL

SLOPE LEGEND

⇦	SIDEWALK/TURNING SPACE AND RAMP CROSS SLOPE 1.5% TYPICAL, 2.0% MAX. SLOPE
⬅	RAMP RUNNING SLOPE 8.0% TYPICAL, 8.3% MAX. SLOPE
⇦	FLARE 90° TO RAMP 9.0% TYPICAL, 10.0% MAX. SLOPE

THE CONTRACTOR SHOULD ACCOUNT FOR CONSTRUCTION TOLERANCES TO PREVENT EXCEEDING THE MAXIMUM SLOPES. ANY SLOPES EXCEEDING THE MAXIMUMS SHALL NOT BE ACCEPTED WITHOUT PRIOR APPROVAL FROM THE ROADWAY DESIGN ENGINEER. AN EXCEPTION TO THIS IS THE TRANSITIONAL SEGMENT TO EXISTING SIDEWALK MUST CONNECT TO THE EXISTING SIDEWALK PANEL; THIS DOES NOT REQUIRE A STATEMENT OF TECHNICAL INFEASIBILITY. (REF. PROWAG CHAPTER R3 TECHNICAL REQUIREMENTS)

REV. NO.	DATE	DESCRIPTION OF REVISION
R3	JAN 18	NDOR BORDER TO NDOT BORDER
R2	OCT 14	CHANGE PM TO ROADWAY DESIGN ENGINEER
R1	FEB 13	ALL OF PLAN REWORKED (PROWAG)

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 303-R3

CURB RAMPS

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

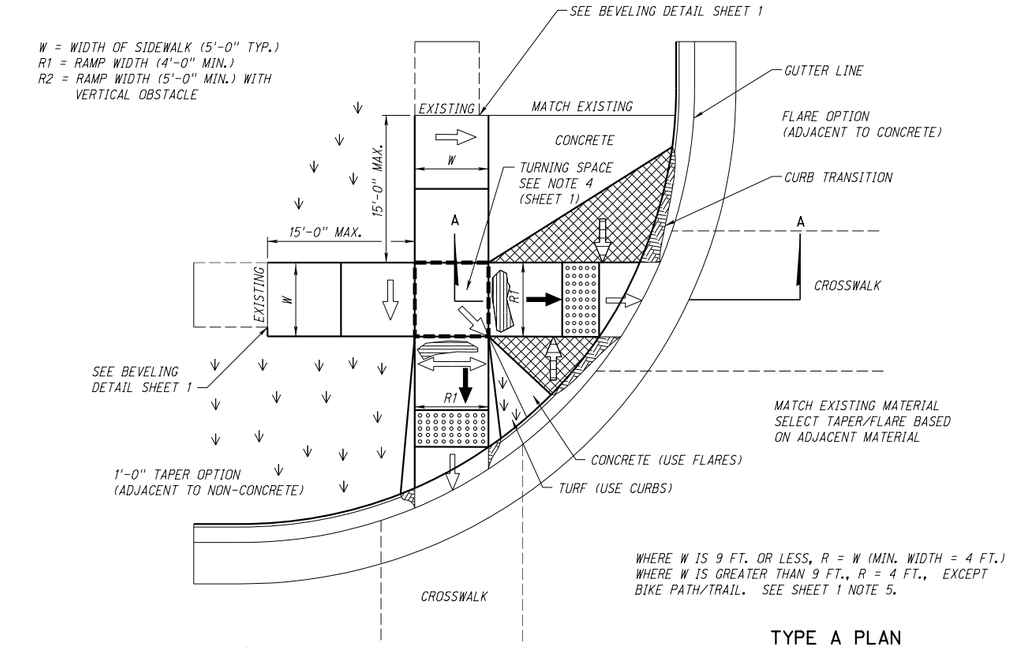
PROFESSIONAL CIVIL ENGINEER
MICHAEL H. OWEN
E-6515
STATE OF NEBRASKA

DATE

ORIGINAL: MARCH 22, 2010
DATE

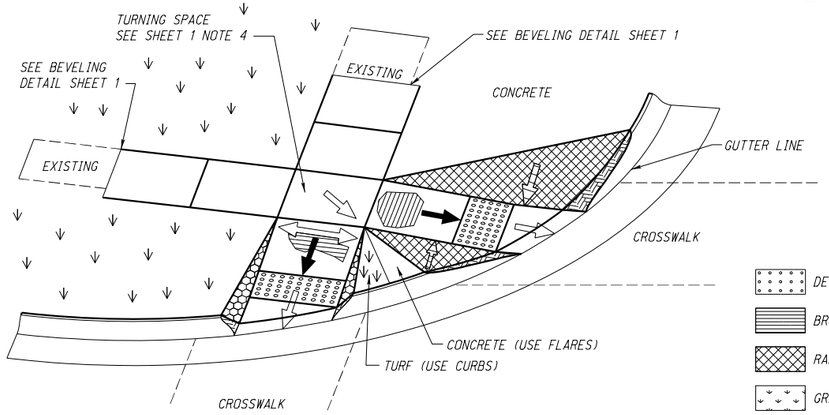
1/5

Computer: NDOTDESIGN134
Date: 29-JUN-2021 09:18
File: 30300603.dgn

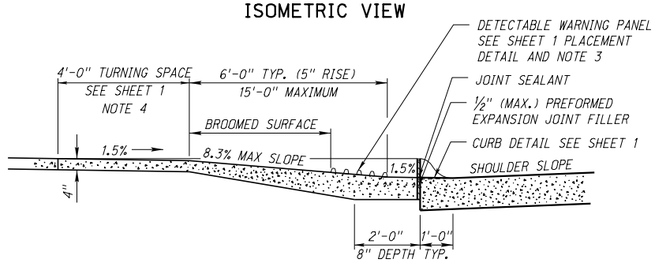


WHERE W IS 9 FT. OR LESS, R = W (MIN. WIDTH = 4 FT.)
WHERE W IS GREATER THAN 9 FT., R = 4 FT., EXCEPT BIKE PATH/TRAIL. SEE SHEET 1 NOTE 5.

TYPE A PLAN



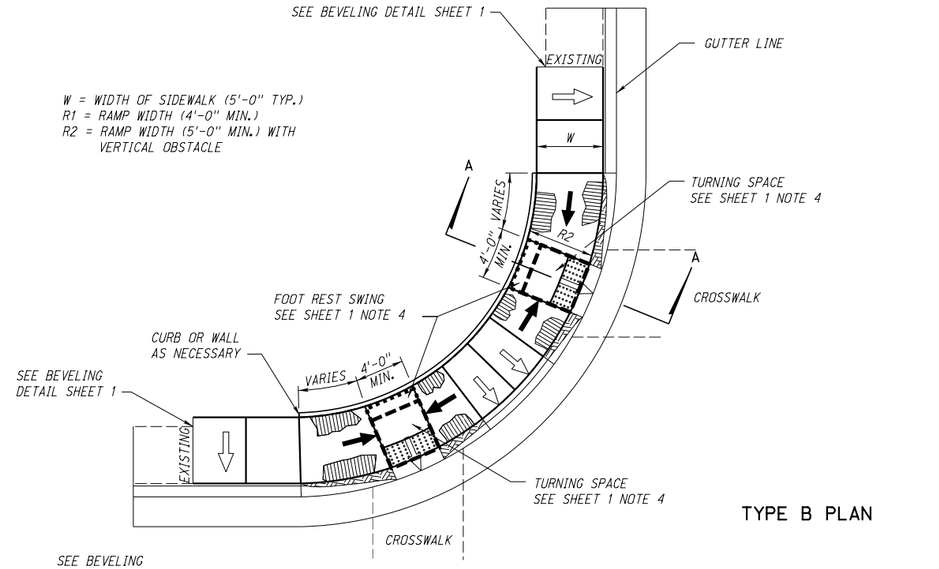
ISOMETRIC VIEW



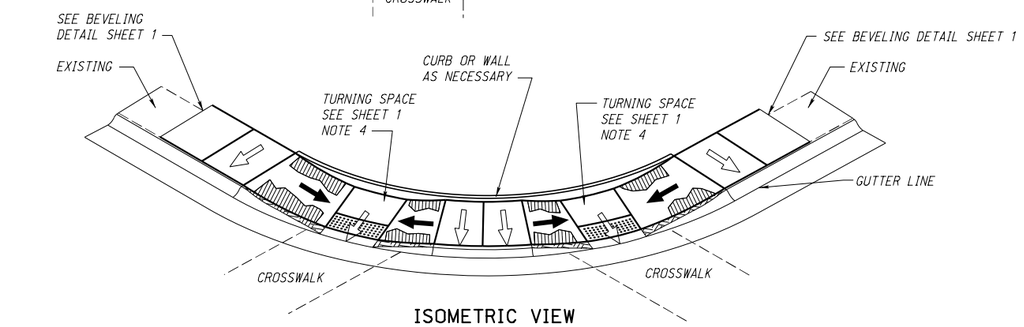
TYPE A CROSS SECTION
SECTION A-A

LEGEND

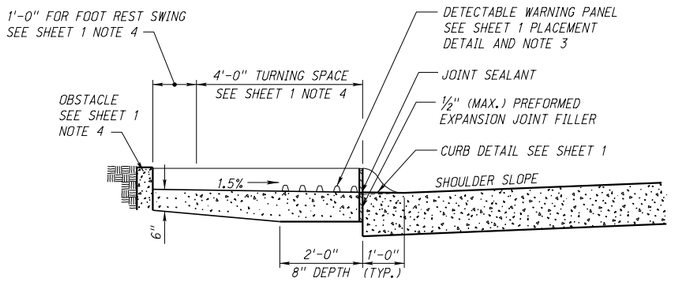
- DETECTABLE WARNING PANEL
- BROOMED CURB RAMP WHEN 5% TO 8.3%
- RAMP FLARE
- GRASS OR NON WALKING SURFACE
- CURB TRANSITION
- CURB FACE SLOPE 1 VERT. : 2 HORZ.



TYPE B PLAN



ISOMETRIC VIEW



TYPE B CROSS SECTION
SECTION A-A

SLOPE LEGEND

⇦	SIDEWALK/TURNING SPACE AND RAMP CROSS SLOPE 1.5% TYPICAL, 2.0% MAX. SLOPE
⬅	RAMP RUNNING SLOPE 8.0% TYPICAL, 8.3% MAX. SLOPE
⇦	FLARE 90° TO RAMP 9.0% TYPICAL, 10.0% MAX. SLOPE

THE CONTRACTOR SHOULD ACCOUNT FOR CONSTRUCTION TOLERANCES TO PREVENT EXCEEDING THE MAXIMUM SLOPES. ANY SLOPES EXCEEDING THE MAXIMUMS SHALL NOT BE ACCEPTED WITHOUT PRIOR APPROVAL FROM THE ROADWAY DESIGN ENGINEER. AN EXCEPTION TO THIS IS THE TRANSITIONAL SEGMENT TO EXISTING SIDEWALK MUST CONNECT TO THE EXISTING SIDEWALK PANEL; THIS DOES NOT REQUIRE A STATEMENT OF TECHNICAL INFEASIBILITY. (REF. PROWAG CHAPTER R3 TECHNICAL REQUIREMENTS)

REV. NO.	DATE	DESCRIPTION OF REVISION
R3	JAN 18	NDOR BORDER TO NDOT BORDER
R2	OCT 14	CHANGE PM TO ROADWAY DESIGN ENGINEER
R1	FEB 13	ALL OF PLAN REWORKED (PROWAG)

NEBRASKA DEPARTMENT OF TRANSPORTATION
STANDARD PLAN NO. 303-R3

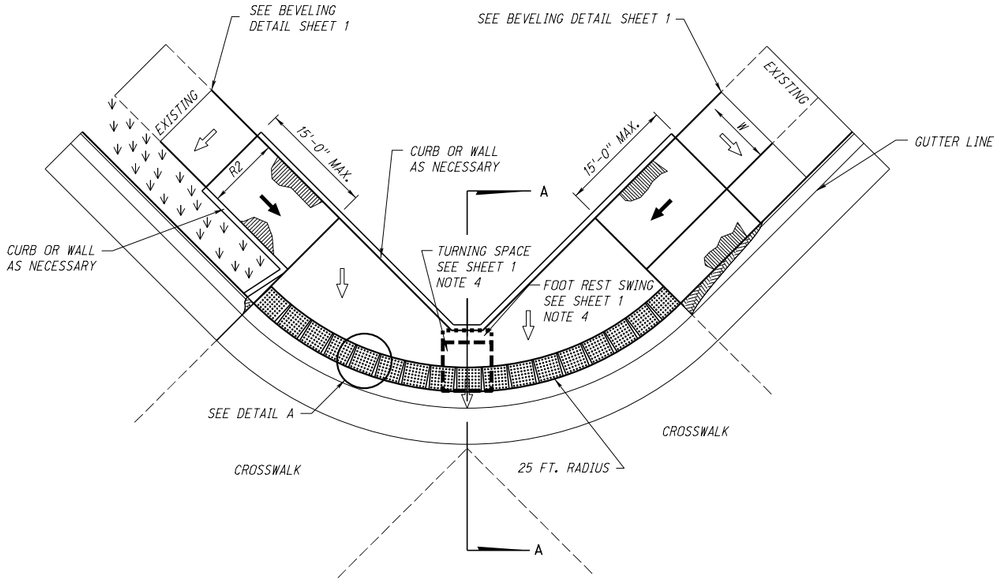
CURB RAMPS

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

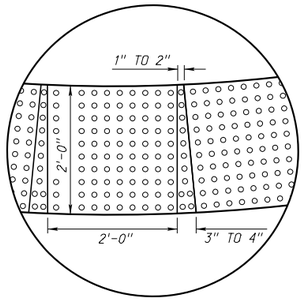
PROFESSIONAL CIVIL ENGINEER
MICHAEL H. OWEN
E-6515
STATE OF NEBRASKA

DATE

ORIGINAL: MARCH 22, 2010
DATE



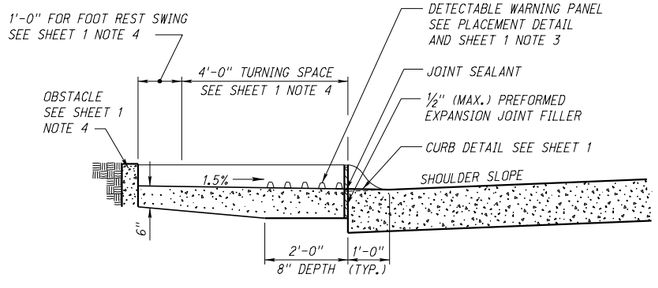
TYPE C PLAN



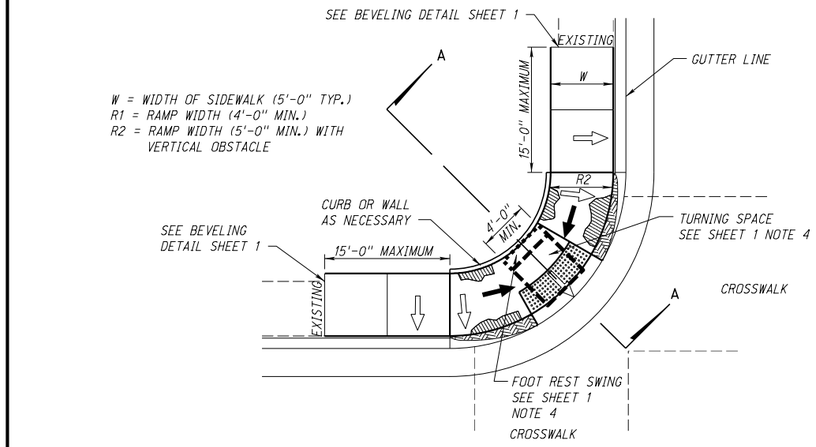
DETAIL A

LEGEND

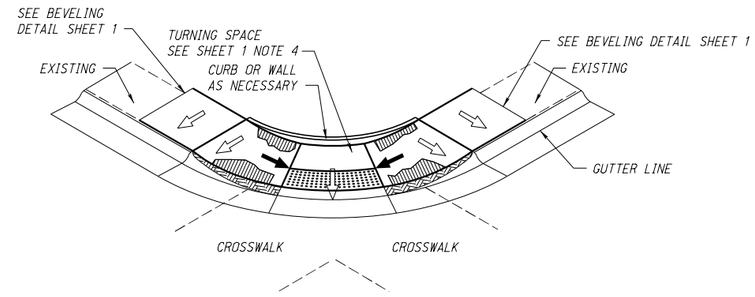
- DETECTABLE WARNING PANEL
- BROOMED CURB RAMP WHEN 5% TO 8.3%
- RAMP FLARE
- GRASS OR NON WALKING SURFACE
- CURB TRANSITION
- CURB FACE SLOPE 1 VERT. : 2 HORZ.



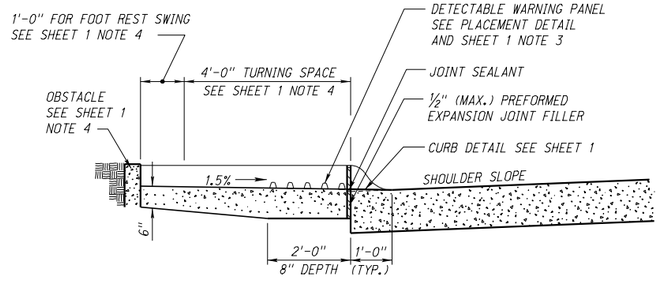
TYPE C CROSS SECTION
SECTION A-A



TYPE D PLAN



ISOMETRIC VIEW



TYPE D CROSS SECTION
SECTION A-A

SLOPE LEGEND

⇦	SIDEWALK/TURNING SPACE AND RAMP CROSS SLOPE 1.5% TYPICAL, 2.0% MAX. SLOPE
⬅	RAMP RUNNING SLOPE 8.0% TYPICAL, 8.3% MAX. SLOPE
⇦	FLARE 90° TO RAMP 9.0% TYPICAL, 10.0% MAX. SLOPE

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REV. NO.	DATE	DESCRIPTION OF REVISION
R3	JAN 18	NDOR BORDER TO NDOT BORDER
R2	OCT 14	CHANGE PM TO ROADWAY DESIGN ENGINEER
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NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 303-R3

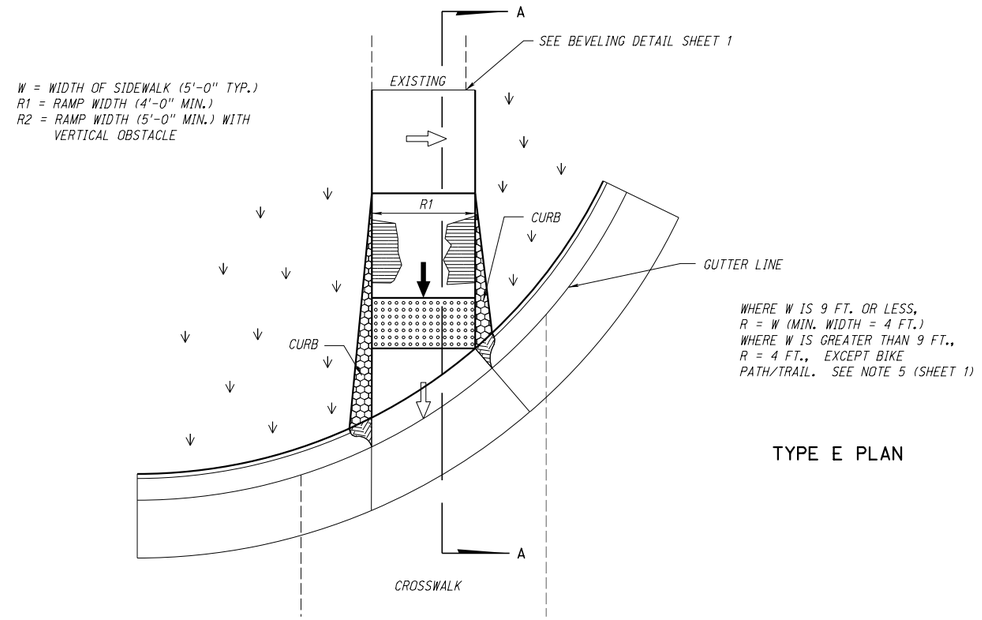
CURB RAMPS

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

DATE

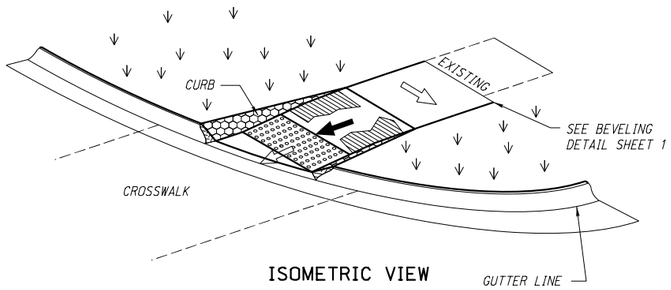
PROFESSIONAL CIVIL ENGINEER ★ MICHAEL H. OWEN E-6515 ★ STATE OF NEBRASKA

ORIGINAL: MARCH 22, 2010
DATE



WHERE W IS 9 FT. OR LESS, R = W (MIN. WIDTH = 4 FT.) WHERE W IS GREATER THAN 9 FT., R = 4 FT., EXCEPT BIKE PATH/TRAIL. SEE NOTE 5 (SHEET 1)

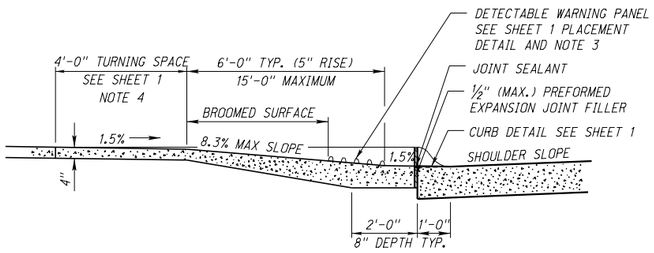
TYPE E PLAN



ISOMETRIC VIEW

LEGEND

- DETECTABLE WARNING PANEL
- BROOMED CURB RAMP WHEN 5% TO 8.3%
- RAMP FLARE
- GRASS OR NON WALKING SURFACE
- CURB TRANSITION
- CURB FACE SLOPE 1 VERT. : 2 HORZ.



TYPE E CROSS SECTION

SECTION A-A

SLOPE LEGEND

⇦	SIDEWALK/TURNING SPACE AND RAMP CROSS SLOPE 1.5% TYPICAL, 2.0% MAX. SLOPE
⬅	RAMP RUNNING SLOPE 8.0% TYPICAL, 8.3% MAX. SLOPE
⇦	FLARE 90° TO RAMP 9.0% TYPICAL, 10.0% MAX. SLOPE

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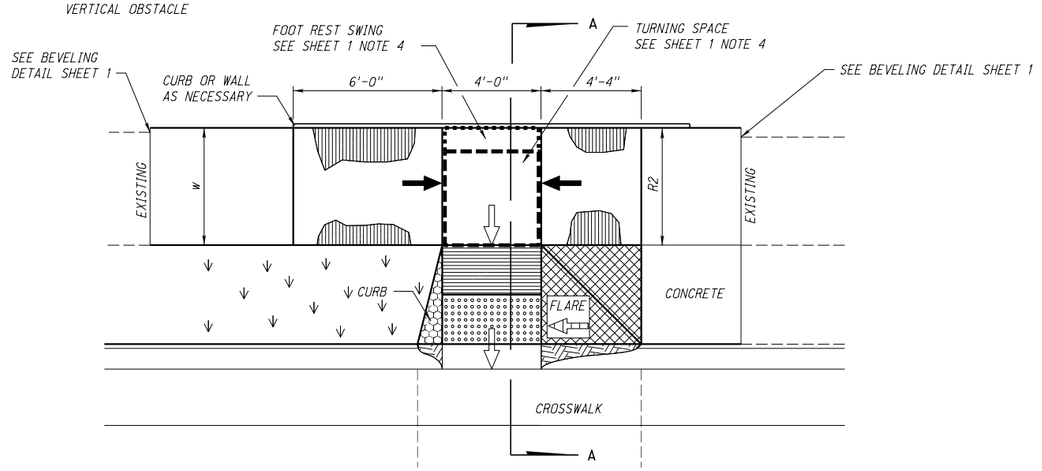
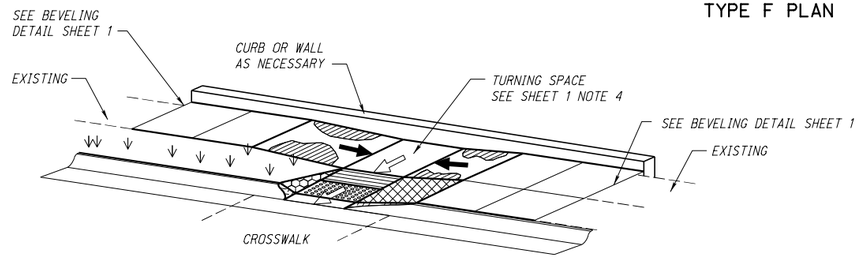
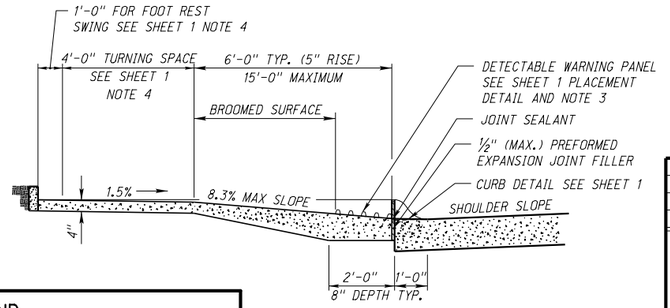
W = WIDTH OF SIDEWALK (5'-0" TYP.)
R1 = RAMP WIDTH (4'-0" MIN.)
R2 = RAMP WIDTH (5'-0" MIN.) WITH VERTICAL OBSTACLE



TYPE F PLAN



ISOMETRIC VIEW



TYPE F CROSS SECTION

SECTION A-A

REV. NO.	DATE	DESCRIPTION OF REVISION
R3	JAN 18	NDOR BORDER TO NDOT BORDER
R2	OCT 14	CHANGE PM TO ROADWAY DESIGN ENGINEER
R1	FEB 13	ALL OF PLAN REWORKED (PROWAG)

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 303-R3

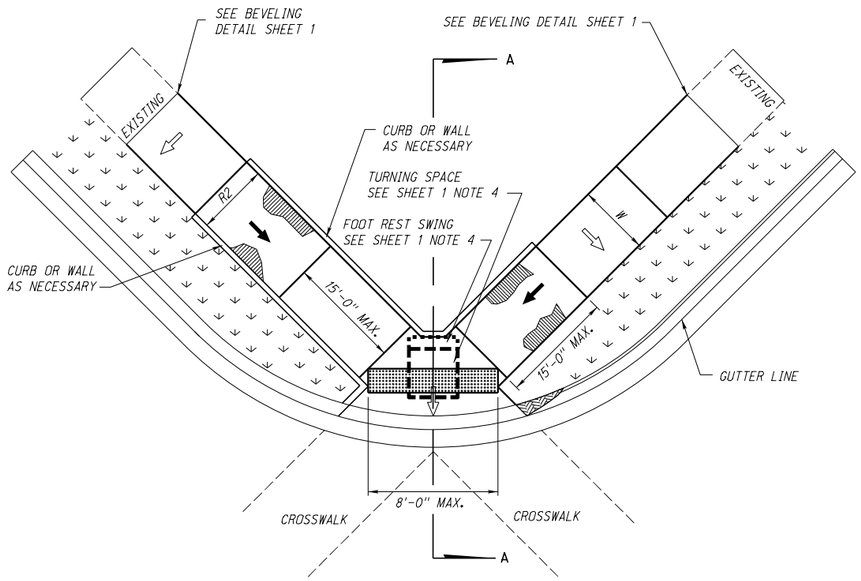
CURB RAMPS

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

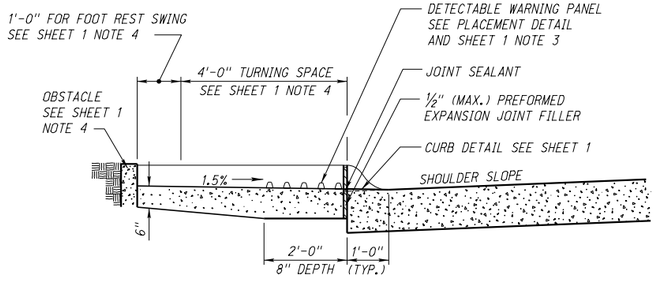
PROFESSIONAL CIVIL ENGINEER
MICHAEL H. OWEN
E-6515
STATE OF NEBRASKA

DATE

ORIGINAL: MARCH 22, 2010
DATE



TYPE G PLAN



TYPE G CROSS SECTION
SECTION A-A

LEGEND

- DETECTABLE WARNING PANEL
- BROOMED CURB RAMP WHEN 5% TO 8.3%
- RAMP FLARE
- GRASS OR NON WALKING SURFACE
- CURB TRANSITION
- CURB FACE SLOPE 1 VERT. : 2 HORZ.

SLOPE LEGEND

⇦	SIDEWALK/TURNING SPACE AND RAMP CROSS SLOPE 1.5% TYPICAL, 2.0% MAX. SLOPE
⬅	RAMP RUNNING SLOPE 8.0% TYPICAL, 8.3% MAX. SLOPE
⇦	FLARE 90° TO RAMP 9.0% TYPICAL, 10.0% MAX. SLOPE

THE CONTRACTOR SHOULD ACCOUNT FOR CONSTRUCTION TOLERANCES TO PREVENT EXCEEDING THE MAXIMUM SLOPES. ANY SLOPES EXCEEDING THE MAXIMUMS SHALL NOT BE ACCEPTED WITHOUT PRIOR APPROVAL FROM THE ROADWAY DESIGN ENGINEER. AN EXCEPTION TO THIS IS THE TRANSITIONAL SEGMENT TO EXISTING SIDEWALK MUST CONNECT TO THE EXISTING SIDEWALK PANEL; THIS DOES NOT REQUIRE A STATEMENT OF TECHNICAL INFEASIBILITY. (REF. PROWAG CHAPTER R3 TECHNICAL REQUIREMENTS)

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NEBRASKA DEPARTMENT OF TRANSPORTATION
STANDARD PLAN NO. 303-R3

CURB RAMPS

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

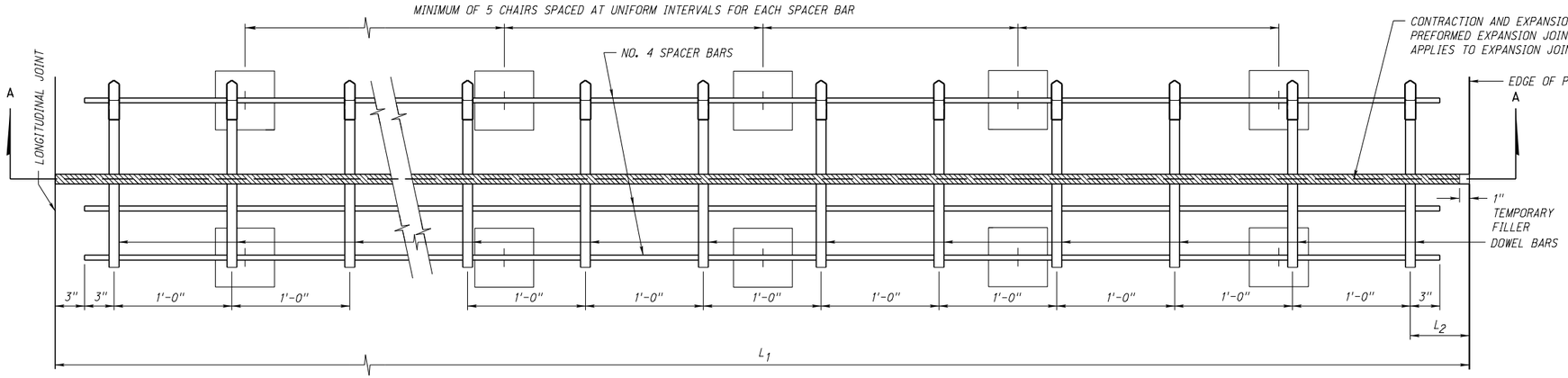
PROFESSIONAL CIVIL ENGINEER
MICHAEL H. OWEN
E-6515
STATE OF NEBRASKA

DATE

ORIGINAL:
MARCH 22, 2010
DATE

5
5

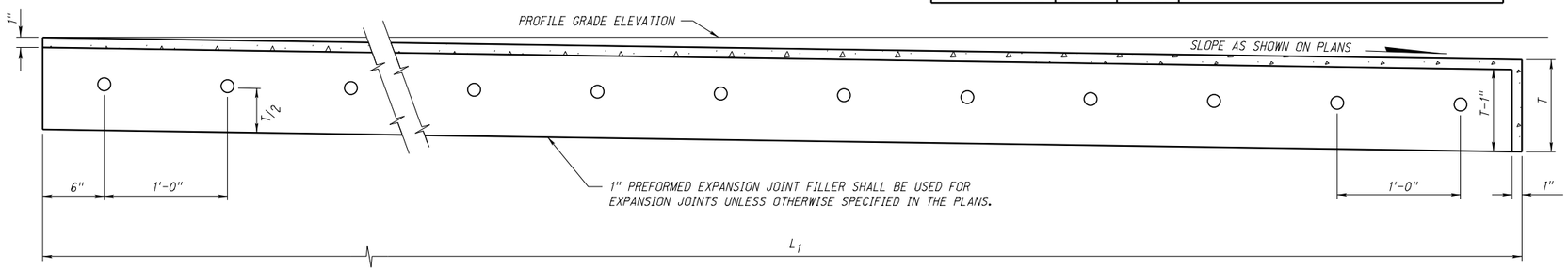
ROADWAY DESIGN DIVISION



ASSEMBLY PLAN

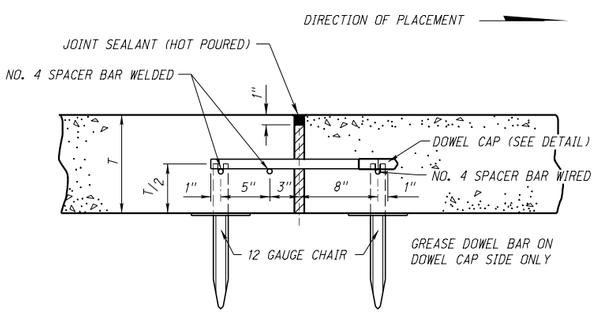
DOWEL BAR HEIGHT AND DIAMETER			
PAVEMENT THICKNESS (T)	MINIMUM BAR DIA.	DOWEL BAR HEIGHT (T/2)	SKEW TOLERANCE
LESS THAN 10"	1¼"	T/2 ± ½"	¼"
10" OR MORE	1½"	T/2 ± ½"	¼"

DOWEL BAR LOCATION TABLE			
L_1	L_2	#BARS	DESCRIPTION
* LESS THAN 12'-0'	6"	VARIES	IRREGULAR AREAS (WIDEN, FILLETS, GORE....)
12'-0"	6"	12	12'-0" PAVEMENT
14'-0"	2'-6"	12	14'-0" PAVEMENT
15'-0"	2'-6"	13	15'-0' PAVEMENT (INCLUDES 3'-0" SHOULDER)
16'-0"	3'-6"	13	16'-0" PAVEMENT (INCLUDES 4'-0" SHOULDER)
16'-0"	6"	16	16'-0" RAMP & LOOPS
LESS THAN 14'-6"	1'-6"	VARIES	PAVEMENT WITH CURB
14'-6" OR MORE	2'-6"	VARIES	

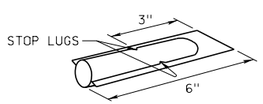


SECTION A-A

CONTRACTION AND EXPANSION JOINTS (PREFORMED EXPANSION JOINTS FILLER APPLIES TO EXPANSION JOINTS ONLY)

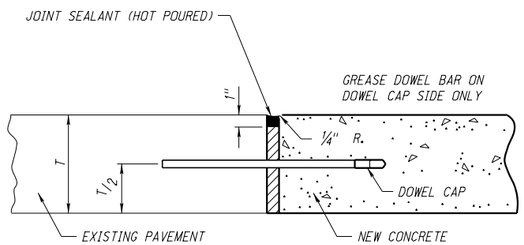


SECTION



DOWEL CAP

EXPANSION JOINT
(SUBSIDIARY)



NOTES:
DOWEL BARS SHALL BE DRILLED TO A DEPTH OF 8" INTO EXISTING PAVEMENT AND EPOXIED.

SECTION

NOTES:

THE CONTRACTOR MAY SUBSTITUTE OTHER DESIGNS FOR EXPANSION AND CONTRACTION JOINT SUPPORTS IN LIEU OF THE TYPE SHOWN WITH PRIOR WRITTEN APPROVAL BY THE ENGINEER.

DOWEL BARS SHALL BE A MINIMUM OF 17¾" IN LENGTH, CENTERED ON JOINTS AND BE SMOOTH BARS.

TIE BARS SHALL BE DEFORMED BARS.

FOR LOAD TRANSFER DEVICES AT EXPANSION JOINTS IN LANES OTHER THAN THE LANES SHOWN, MAINTAIN THE SPACING OF THE 1'-6" DOWEL BARS AT 1 FT. INTERVALS.

THE ENDS OF THE NO. 4 SPACER BARS SHALL NOT BE LESS THAN 3" FROM THE EDGES OF THE PAVEMENT OR THE LONGITUDINAL JOINT.

TIE, DOWEL & SPACER BARS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

KEY TYPE LONGITUDINAL JOINTS AND TRANSVERSE CONSTRUCTION JOINTS SHALL BE EDGED WITH ¼" R. AT TIME OF CONCRETE PLACEMENT.

CONCRETE PAVEMENT SHALL BE TINED UNLESS OTHERWISE SHOWN IN THE PLANS.

EXPANSION JOINTS SHALL BE INSTALLED AT LOCATIONS SHOWN IN THE PLANS.

PAVEMENT PLACED ADJACENT TO R.R. TRACKS REQUIRES 3-EXPANSION JOINTS SPACED AT APPROXIMATELY 49'-6" INTERVALS.

EXPANSION JOINTS SHALL NOT BE SKEWED.

T= PAVEMENT THICKNESS

* THE DEPARTMENT REQUIRES THAT DOWEL BASKETS BE PLACED IN ALL CONTRACTION JOINTS WHICH ARE 6'-0" OR WIDER. THE DOWEL BASKETS SHALL BE PLACED TRANSVERSE TO THE DIRECTION OF THE PREDOMINANT TRAFFIC DIRECTION.

REV. NO.	DATE	DESCRIPTION OF REVISION
R11	JUL 20	CHANGED TINING INFORMATION
R10	JAN 18	CHANGED DOWEL BAR LOCATION TABLE
R9	JUL 11	JOINT: EARLY SAW CUT

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 329-R11

8 TO 16 INCH CONCRETE PAVEMENT

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER * MICK S. SYSLO E-10043 * STATE OF NEBRASKA

DATE

ORIGINAL: OCTOBER 25, 1994
DATE

1/4

Computer: NDOTDESIGN134
Date: 29-JUN-2021 09:18
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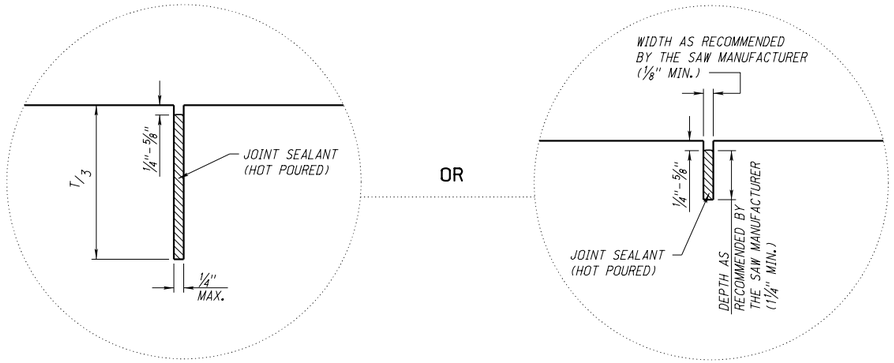
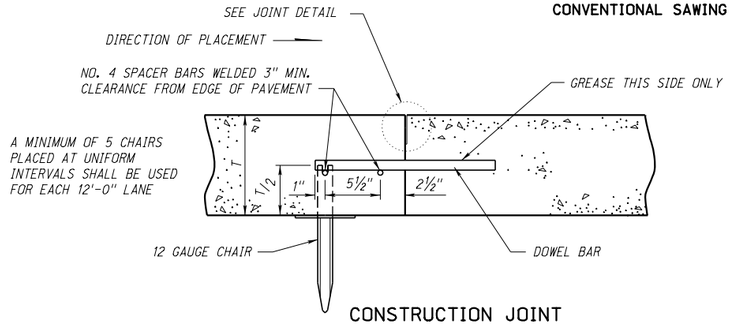


CONVENTIONAL SAWING | **EARLY-SAW CUT**

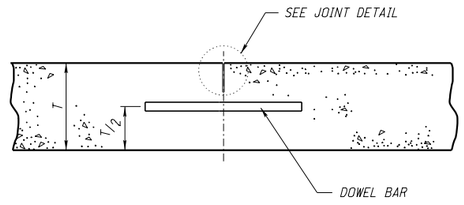
JOINT DETAIL



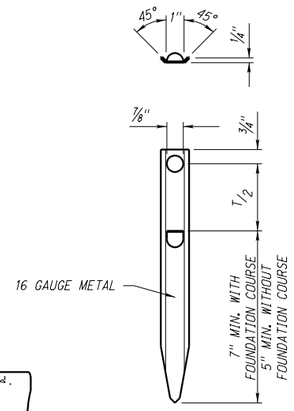
CONSTRUCTION JOINT

(BARS ARE SUBSIDIARY) TO PAVEMENT

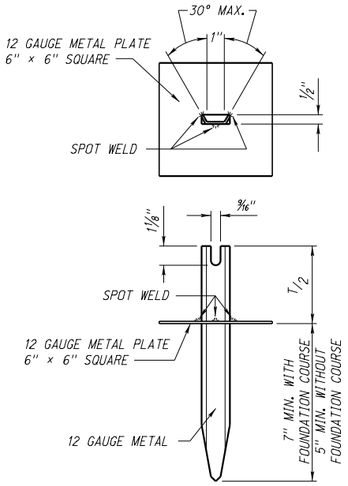
THE DOWEL BAR SPACING SHALL BE THE SAME AS SHOWN FOR THE EXPANSION JOINT. REFER TO DOWEL BAR LOCATION TABLE AND THE DOWEL BAR HEIGHT AND DIAMETER TABLE ON SHEET 1 OF 4.



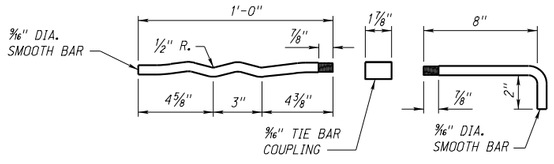
CONTRACTION JOINT



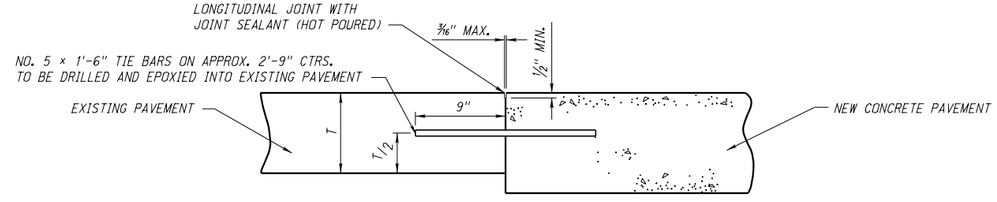
TIE BAR PIN



CHAIR

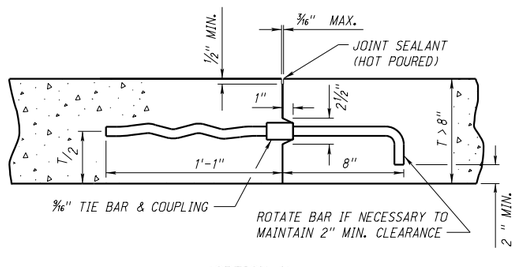


DETAILS OF "W" BAR



TIE BARS ARE TO BE INSTALLED WHERE NEW CONCRETE PAVEMENT IS PLACED ADJACENT TO EXISTING CONCRETE PAVEMENT

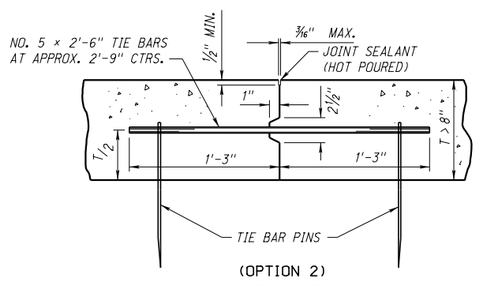
DETAILS OF TIE BAR



(OPTION 1)

KEY TYPE

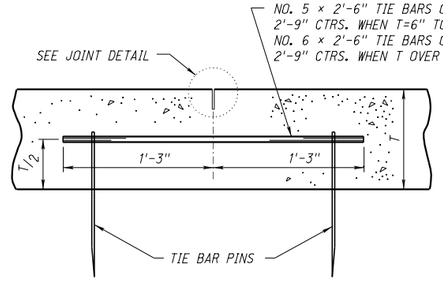
NO. 5 HOOK AND W-BARS AT APPROX. 2'-9" CTRS. OR 3/16" HOOK AND W-BARS AT APPROX. 2'-9" CTRS.



(OPTION 2)

KEY TYPE

KEY TYPE JOINT SHALL BE USED ON ALL LONGITUDINAL CONSTRUCTION JOINTS WHEN THE ADJACENT LANE IS NOT PLACED AT THE SAME TIME



SAWED

WHEN TWO ADJACENT LANES ARE PLACED AT THE SAME TIME, THE LONGITUDINAL JOINT COMMON TO THE LANES SHALL BE SAWED

LONGITUDINAL JOINTS

NOTE:
NO TIE BARS SHALL BE CLOSER THAN 1'-3" TO A TRANSVERSE JOINT. ALL LONGITUDINAL JOINTS BETWEEN LANES AND BETWEEN LANES AND SHOULDERS MUST BE TIED. MEDIAN SHOULD NOT BE TIED.

NOTE: T = PAVEMENT THICKNESS

REV. NO.	DATE	DESCRIPTION OF REVISION
R11	JUL 20	CHANGED TINING INFORMATION
R10	JAN 18	CHANGED DOWEL BAR LOCATION TABLE
R9	JUL 11	JOINT: EARLY SAW CUT

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 329-R11

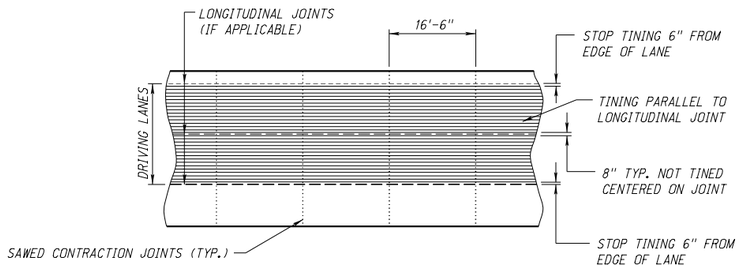
8 TO 16 INCH CONCRETE PAVEMENT

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

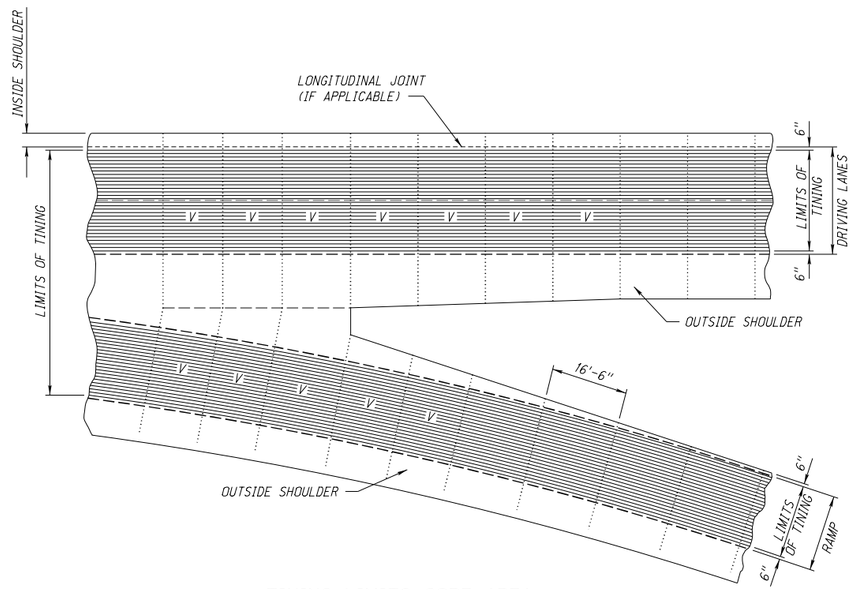
DATE

PROFESSIONAL CIVIL ENGINEER
MICK S. SYSLO
E-10043
STATE OF NEBRASKA

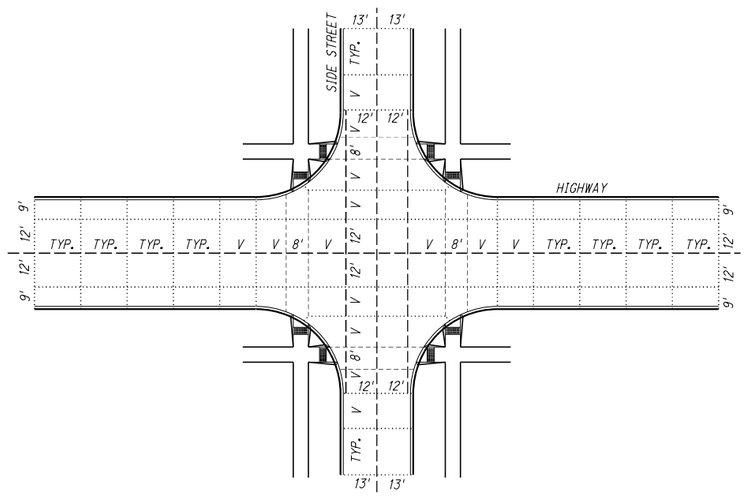
ORIGINAL: OCTOBER 25, 1994
DATE



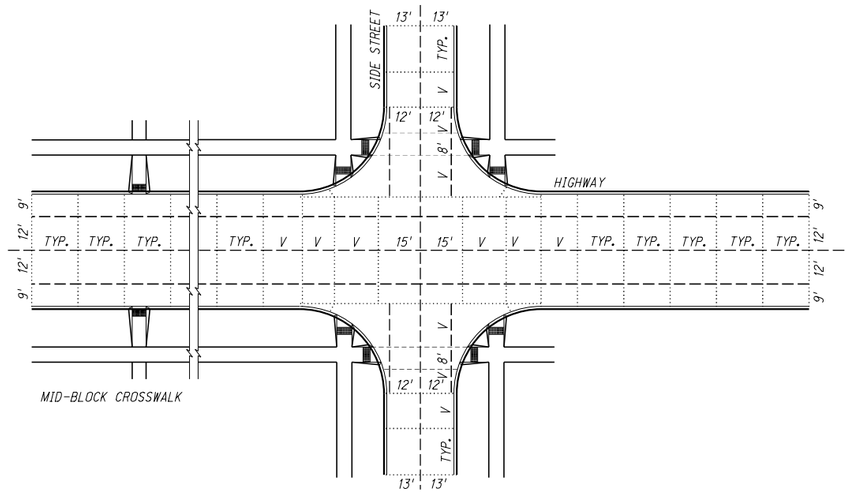
TINING WITH CONCRETE SHOULDER



TINING LIMITS GORE AREA



STOP OR YIELD CONTROL ON ALL FOUR LEGS



STOP OR YIELD CONTROL ON THE SIDE STREETS ONLY

NOTES:

TINING IS REQUIRED FOR PAVEMENT WITH POSTED SPEEDS GREATER THAN 40 MPH (INCLUDING TURN LANES).

16'-6" TRANSVERSE JOINT SPACING IS THE STANDARD JOINT SPACING REGARDLESS OF THE PAVEMENT THICKNESS.

V VARIES FROM 10'-0" TO MAX. 16'-6".

THE LONGITUDINAL JOINT BETWEEN THE SHOULDER AND THE 12'-0" DRIVING LANE IS NOT REQUIRED FOR SHOULDER WIDTHS OF 4'-0" OR LESS.

TRANSVERSE JOINTS FOR DOWELED CONCRETE PAVEMENT SHALL BE CONSTRUCTED PERPENDICULAR TO THE ROADWAY.

REV. NO.	DATE	DESCRIPTION OF REVISION
R11	JUL 20	CHANGED TINING INFORMATION
R10	JAN 18	CHANGED DOWEL BAR LOCATION TABLE
R9	JUL 11	JOINT: EARLY SAW CUT

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 329-R11

8 TO 16 INCH CONCRETE PAVEMENT

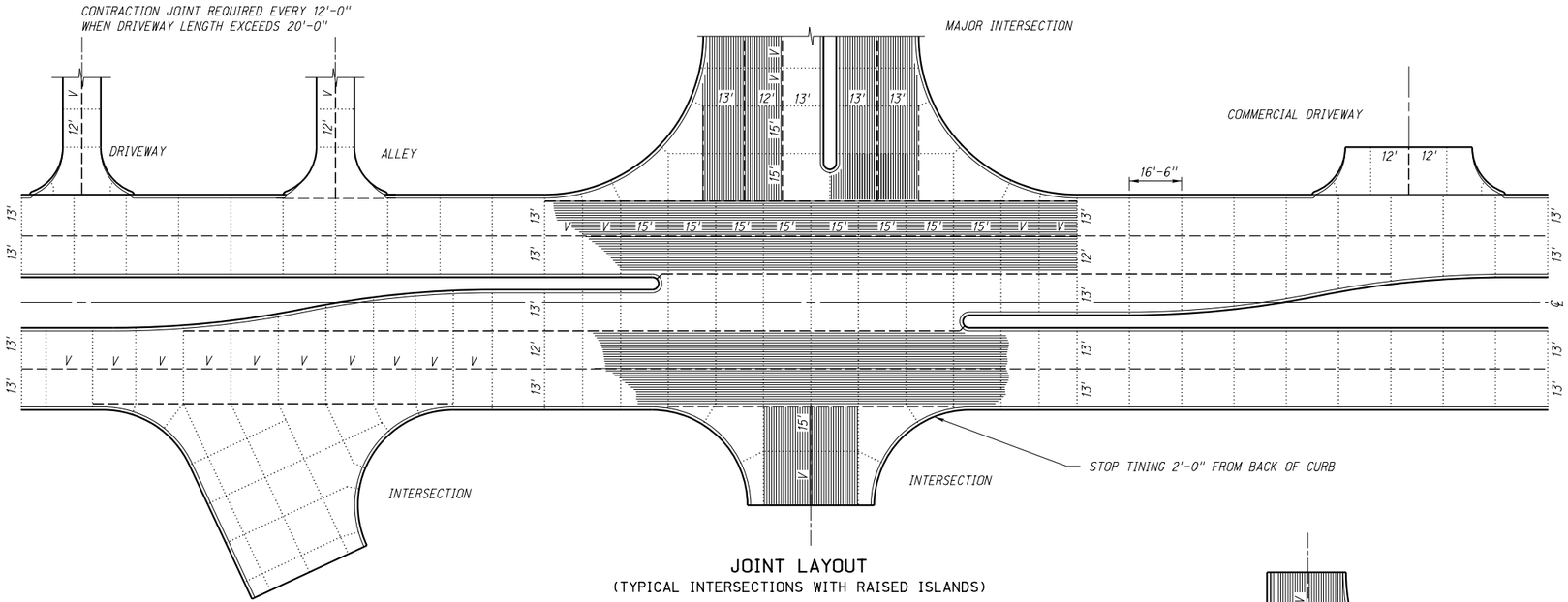
ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
MICK S. SYSLO
E-10043
STATE OF NEBRASKA

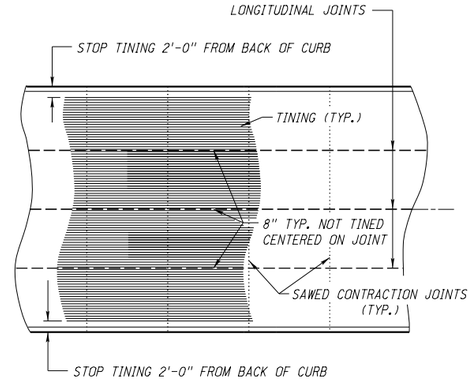
DATE

ORIGINAL:
OCTOBER 25, 1994
DATE

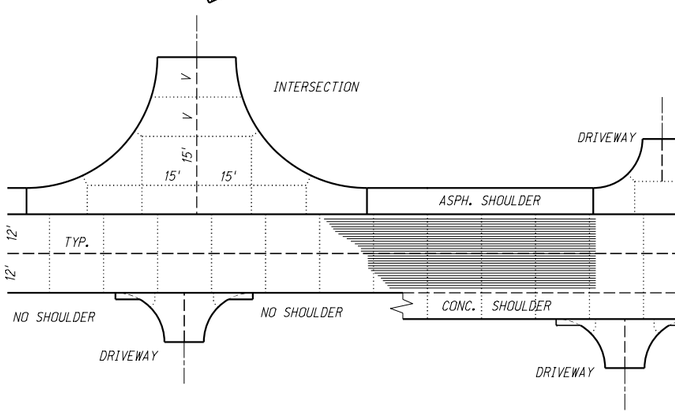
File: 32900e11.dgn Date: 29-JUN-2021 09:18 Computer: NDOTDESIGN134

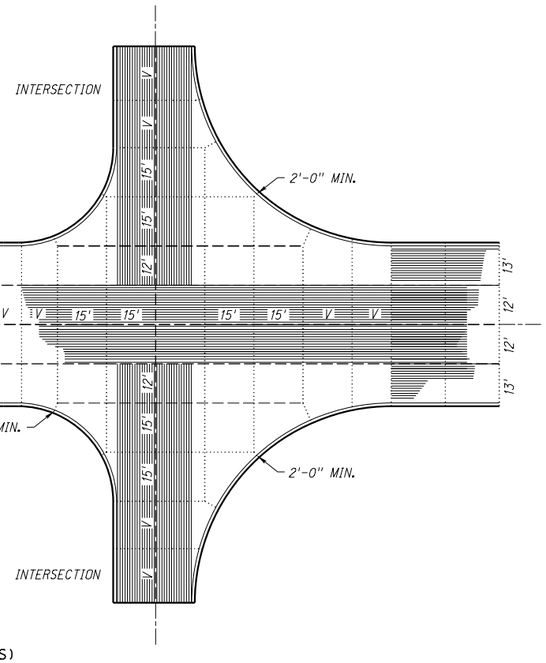


JOINT LAYOUT
(TYPICAL INTERSECTIONS WITH RAISED ISLANDS)

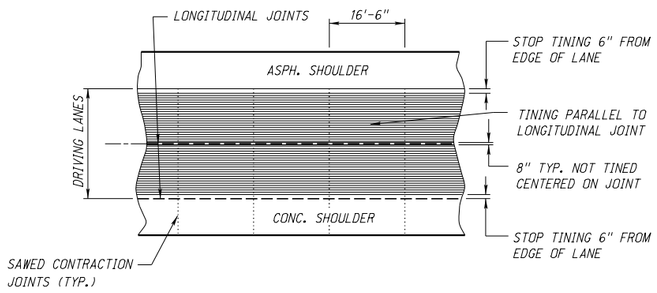


TINING LIMITS





JOINT LAYOUT
(TYPICAL INTERSECTIONS & DRIVES)



RURAL TINING LIMITS WITH SURFACED SHOULDERS

LEGEND
- SAWED CONTRACTION JOINT
- LONGITUDINAL JOINT

NOTES:

TINING IS REQUIRED FOR PAVEMENT WITH POSTED SPEEDS GREATER THAN 40 MPH (INCLUDING TURN LANES).

16'-6" TRANSVERSE JOINT SPACING IS THE STANDARD JOINT SPACING REGARDLESS OF THE PAVEMENT THICKNESS.

V VARIES FROM 10'-0" TO MAX. 16'-6".

VARIABLE SPACING IS USED AROUND INTERSECTIONS AND LARGE DRIVEWAYS WHICH IS TIED TO THE CONCRETE LANES OR SHOULDERS TO MATCH THE JOINTS.

REV. NO.	DATE	DESCRIPTION OF REVISION
R11	JUL 20	CHANGED TINING INFORMATION
R10	JAN 18	CHANGED DOWEL BAR LOCATION TABLE
R9	JUL 11	JOINT: EARLY SAW CUT

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 329-R11

8 TO 16 INCH CONCRETE PAVEMENT

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
MICK S. SYSLO
E-10043
STATE OF NEBRASKA

DATE

ORIGINAL:
OCTOBER 25, 1994
DATE

4
4

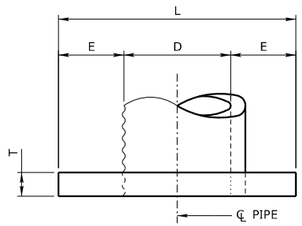
ROADWAY DESIGN DIVISION

Computer: NDOTDESIGN134

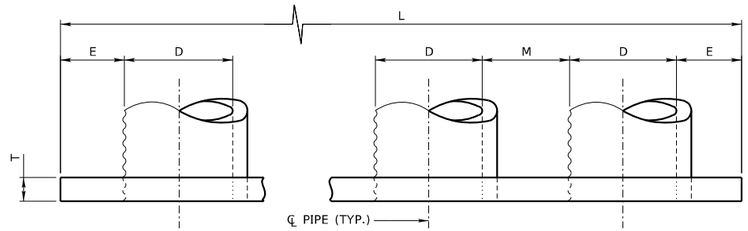
Date: 29-JUN-2021 09:18

File: 329001.dgn

PIPE DIA. (D.)	NO. OF PIPES	DIMENSIONS							REINFORCING STEEL (ALL BARS ARE NO. 4 BARS)												◪ QUANTITIES		◑ ADDITIONAL (SEE NOTES)	
		M	T	E	F (MIN.)	B	H	L	A-BAR		B-BAR		C-BAR		◭-D-BAR		◭-E-BAR		◭-F-BAR		CONCRETE (CY)	REINFORCING STEEL (LB)	CONCRETE (CY)	REINFORCING STEEL (LB)
									NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH				
36"	1	--	8"	2'-7"	1'-1"	3'-0"	7'-1"	8'-2"	12	7'-10"	16	6'-9"	8	3'-0"	16	1'-11"	8	2'-4"	--	--	1.2	185	0.10	5
	2	5'-8"	8"	2'-7"	1'-1"	3'-0"	7'-1"	16'-10"	12	16'-6"	28	6'-9"	16	3'-0"	16	1'-11"	16	2'-4"	8	4'-8"	2.4	360	0.21	9
	3	5'-8"	8"	2'-7"	1'-1"	3'-0"	7'-1"	25'-6"	12	25'-2"	40	6'-9"	24	3'-0"	16	1'-11"	24	2'-4"	16	4'-8"	3.7	540	0.31	13
42"	1	--	8"	2'-11"	1'-2"	3'-0"	7'-8"	9'-4"	12	9'-0"	16	7'-4"	8	3'-6"	16	2'-2"	8	2'-3"	--	--	1.4	205	0.12	5
	2	5'-9"	8"	2'-11"	1'-2"	3'-0"	7'-8"	18'-7"	12	18'-3"	28	7'-4"	16	3'-6"	16	2'-2"	16	2'-3"	8	4'-8"	2.8	395	0.23	9
	3	5'-9"	8"	2'-11"	1'-2"	3'-0"	7'-8"	27'-10"	12	27'-6"	40	7'-4"	24	3'-6"	16	2'-2"	24	2'-3"	16	4'-8"	4.2	580	0.34	13
48"	1	--	8"	3'-2"	1'-2"	3'-0"	8'-2"	10'-4"	12	10'-0"	16	7'-10"	8	4'-0"	20	2'-5"	10	2'-3"	--	--	1.6	235	0.13	5
	2	5'-10"	8"	3'-2"	1'-2"	3'-0"	8'-2"	20'-2"	12	19'-10"	28	7'-10"	16	4'-0"	20	2'-5"	20	2'-3"	10	4'-8"	3.2	440	0.25	9
	3	5'-10"	8"	3'-2"	1'-2"	3'-0"	8'-2"	30'-0"	12	29'-8"	40	7'-10"	24	4'-0"	20	2'-5"	30	2'-3"	20	4'-8"	4.7	650	0.37	13
54"	1	--	8"	3'-6"	1'-3"	3'-0"	8'-9"	11'-6"	12	11'-2"	16	8'-5"	8	4'-6"	20	2'-8"	10	2'-2"	--	--	1.9	255	0.14	5
	2	5'-11"	8"	3'-6"	1'-3"	3'-0"	8'-9"	21'-11"	12	21'-7"	28	8'-5"	16	4'-6"	20	2'-8"	20	2'-2"	10	4'-8"	3.6	475	0.27	9
	3	5'-11"	8"	3'-6"	1'-3"	3'-0"	8'-9"	32'-4"	12	32'-0"	40	8'-5"	24	4'-6"	20	2'-8"	30	2'-2"	20	4'-8"	5.3	695	0.40	13
60"	1	--	8"	3'-9"	1'-3"	3'-0"	9'-3"	12'-6"	12	12'-2"	16	8'-11"	8	5'-0"	24	2'-11"	12	2'-2"	--	--	2.2	285	0.15	5
	2	6'-0"	8"	3'-9"	1'-3"	3'-0"	9'-3"	23'-6"	12	23'-2"	28	8'-11"	16	5'-0"	24	2'-11"	24	2'-2"	12	4'-8"	4.0	525	0.29	9
	3	6'-0"	8"	3'-9"	1'-3"	3'-0"	9'-3"	34'-6"	12	34'-2"	40	8'-11"	24	5'-0"	24	2'-11"	36	2'-2"	24	4'-8"	5.8	765	0.43	13



PLAN



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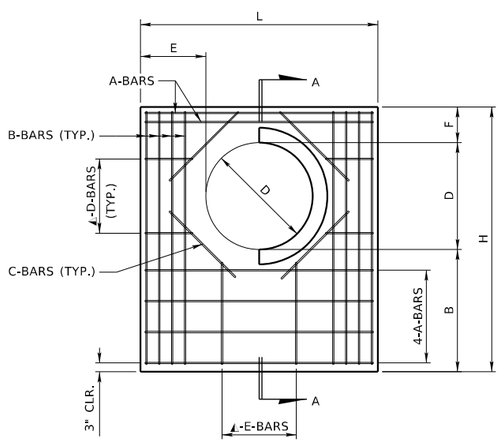
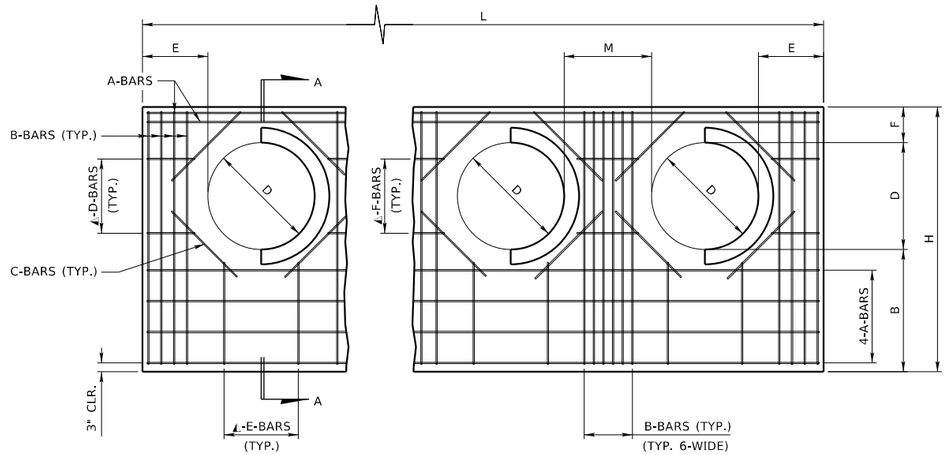


ELEVATION

SINGLE PIPE HEADWALL



ELEVATION

MULTIPLE PIPE HEADWALL

NOTES

ALL CONCRETE USED SHALL BE CLASS 47B-3000 AND SHALL BE PAID FOR UNDER THE ITEM "CLASS 47B-3000 CONCRETE FOR HEADWALL".

ALL REINFORCING STEEL USED SHALL BE NO. 4 BARS, AND SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. DESIGNATION A615, GRADE 60, AND SHALL BE PAID FOR UNDER THE ITEM "REINFORCING STEEL FOR HEADWALL".

THE MINIMUM COVERING, MEASURED FROM THE FACE OF THE CONCRETE TO THE SURFACE OF ANY REINFORCING BAR, SHALL BE 2", EXCEPT AS SHOWN. THE MAXIMUM BAR SPACING SHALL BE 12".

FIELD BEND AND/OR CLIP REINFORCING STEEL TO MAINTAIN MINIMUM CLEARANCE.

WHEN CONCRETE PIPES ARE USED THE GROOVE OR BELL ENDS SHALL BE PLACED AT THE INLET OF THE CULVERT.

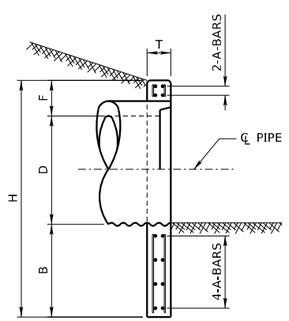
SPACING BETWEEN TWIN OR TRIPLE PIPES IS BASED ON A DISTANCE OF 5'-0" OUTSIDE OF PIPE TO OUTSIDE OF PIPE FOR CONCRETE PIPES. METAL PIPES WILL BE SPACED TO MATCH THE "M" DIMENSION.

◪ QUANTITIES SHOWN ARE FOR ONE HEADWALL.

◭ NUMBER OF BARS VARIES WITH SIZE OF PIPE.

HEADWALLS FOR PIPES 36"-60" REQUIRE A DOUBLE MAT OF REINFORCING STEEL AS SHOWN IN SECTION A-A.

◑ ADDITIONAL QUANTITIES TO BE ADDED IF THE HEIGHT OF THE HEADWALL MUST BE INCREASED TO MEET THE MINIMUM "F" DIMENSION DUE TO A VERTICAL SKEW OF THE CULVERT PIPE. AMOUNTS SHOWN ARE FOR A 6" INCREASE ONLY.



SECTION A-A

REV. NO.	DATE	DESCRIPTION OF REVISION

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 408

CONCRETE HEADWALL (FOR 36"-60" PIPES)

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

DATE

ORIGINAL: FEBRUARY 21, 2023

DATE

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1

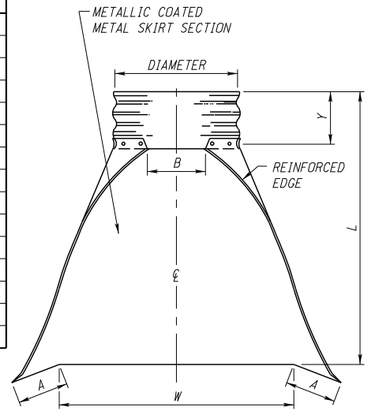
COMPUTER: BG0419M187

DATE: 25-JUN-2024 10:05

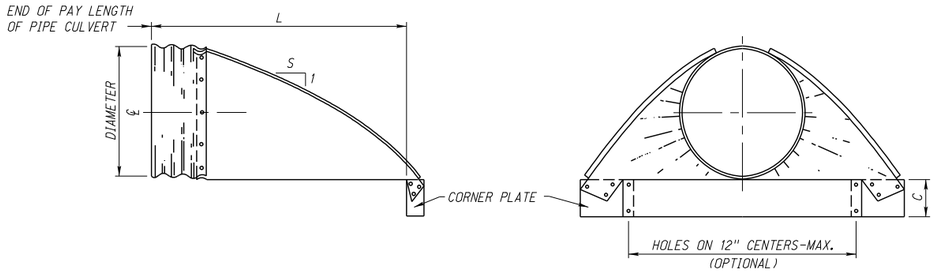
FILE: 4080 0 RO.dgn

ROADWAY DESIGN DIVISION

PIPE DIA.	GAUGE	NOMINAL DIMENSIONS						
		L ± 6"	W ± 2"	A MIN.	B MAX.	C MIN.	Y ± 4½"	S APPROX.
12"	16	6'-0⅞"	2'-0"	4¾"	6"	6"	4'-3⅜"	2½
15"	16	6'-1"	2'-6"	6"	8"	6"	3'-11"	2½
18"	16	6'-1"	3'-0"	7"	10"	6"	3'-8"	2½
21"	16	6'-1"	3'-8"	8¼"	1'-0"	6"	3'-1"	2½
24"	16	6'-1½"	4'-0"	9"	1'-1"	6"	2'-8½"	2½
30"	14	6'-1¾"	5'-0"	11"	1'-4"	6"	1'-10¾"	2½
36"	14	8'-1¾"	6'-0"	1'-2"	1'-7"	6"	3'-1¾"	2½
42"	12	8'-2"	7'-0"	1'-4"	1'-10"	6"	2'-5"	2½
48"	12	8'-2"	7'-6"	1'-6"	2'-3"	6"	1'-8"	2¼
54"	12	8'-4"	8'-6"	1'-6"	2'-6"	6"	1'-4"	2
60"	12	8'-3"	9'-6"	1'-6"	2'-9"	6"	1'-0"	1¾
66"	12	8'-3"	10'-0"	1'-6"	3'-0"	6"	1'-0"	1½
72"	12	8'-3"	10'-6"	1'-6"	3'-3"	6"	1'-0"	1⅓
78"	12	8'-3"	11'-0"	1'-6"	3'-6"	6"	1'-0"	1¼
84"	12	8'-3"	11'-6"	1'-6"	3'-9"	6"	1'-0"	1⅙

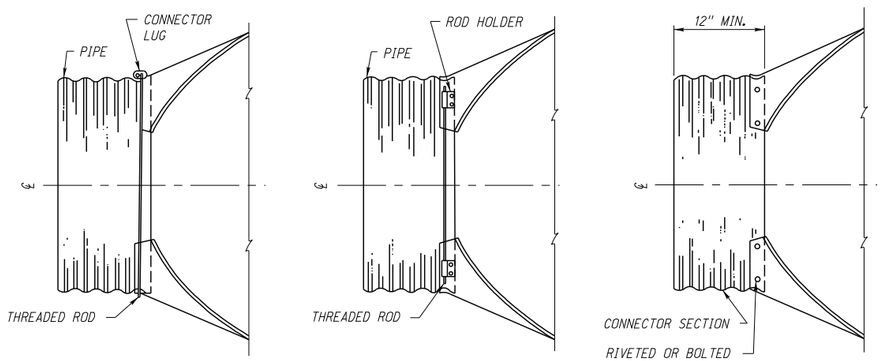


PLAN



SECTION ELEVATION

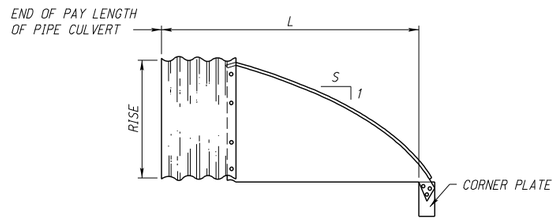
DETAILS OF METAL FLARED END SECTION
(FOR CORRUGATED METAL PIPE)



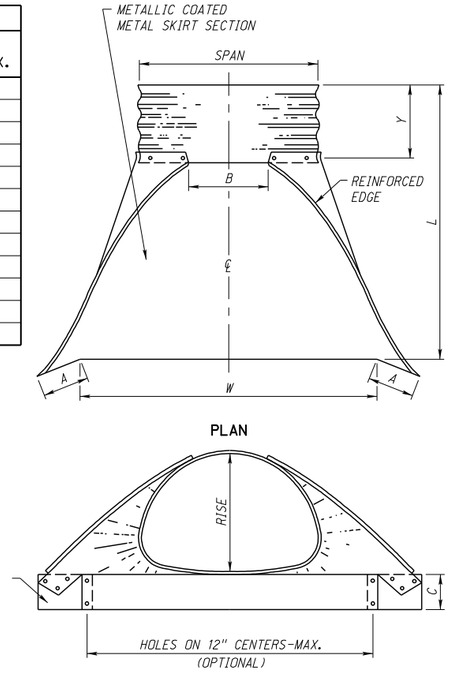
TYPICAL CONNECTIONS

FOR CORRUGATED METAL PIPE DIAMETERS OF 12" TO 24" INCLUSIVE AND CORRUGATED METAL PIPE-ARCHES WITH RISE OF 11" TO 18" INCLUSIVE, THE SKIRT SECTION MAY BE ATTACHED WITH A 1" WIDE, 12 GAUGE METAL CONNECTOR STRAP AND ½" × 6" BOLT AND NUT. THIS STRAP MAY BE USED ON PIPE WITH ANNULAR ENDS ONLY.

EQUIV. DIA.	SPAN	RISE	GAUGE	NOMINAL DIMENSIONS						
				L ± 6"	W MIN.	A MIN.	B MAX.	C MIN.	Y ± 4½"	S APPROX.
15"	17"	13"	16	6'-0"	2'-6"	4½"	9"	6"	4'-5"	2½
18"	21"	15"	16	6'-0"	3'-0"	5¼"	10"	6"	4'-1"	2½
21"	24"	18"	16	6'-0"	3'-6"	6¼"	11½"	6"	3'-8"	2½
24"	28"	20"	16	6'-0"	4'-0"	7"	1'-2"	6"	3'-4½"	2½
30"	35"	24"	14	8'-0"	5'-0"	8¾"	1'-4"	6"	4'-9½"	2½
36"	42"	29"	14	8'-0"	6'-3"	10¾"	1'-5½"	6"	4'-2"	2½
42"	49"	33"	12	8'-0"	7'-1"	1'-0¼"	1'-8"	6"	3'-7"	2½
48"	57"	38"	12	8'-0"	7'-6"	1'-2"	2'-3"	6"	2'-9"	2½
54"	64"	43"	12	8'-0"	8'-6"	1'-3¾"	2'-6"	6"	2'-2"	2¼
60"	71"	47"	12	8'-0"	9'-6"	1'-5¼"	2'-9"	6"	1'-7"	2¼
66"	77"	52"	12	8'-0"	10'-6"	1'-6"	3'-0"	6"	1'-7"	2
72"	83"	57"	12	8'-0"	11'-6"	1'-6"	3'-3"	6"	1'-7"	2



SECTION



PLAN ELEVATION

DETAILS OF METAL FLARED END SECTION
(FOR CORUGATED METAL PIPE-ARCH)

NOTES:

CONNECTOR STRAP, STIFFENER ANGLES AND MISCELLANEOUS HARDWARE SHALL BE METALLIC COATED.

THE "Y" LENGTH MAY BE FABRICATED AS PART OF THE CULVERT.

CONNECTOR SECTIONS AND CORNER PLATES FOR CORRUGATED METAL PIPE AND PIPE-ARCH FLARED END SECTIONS SHALL BE METALLIC COATED AND OF THE SAME GAUGE AS SKIRTS AND EACH SHALL BE METALLIC COATED.

SKIRT SECTION FOR CORRUGATED METAL PIPE DIA. OF 12" TO 24" INCLUSIVE SHALL BE MADE IN ONE PIECE.

SKIRT SECTION FOR CORRUGATED METAL PIPE-ARCHES WITH RISE OF 11" TO 22" INCLUSIVE SHALL BE MADE IN ONE PIECE.

SKIRT SECTION FOR CORRUGATED METAL PIPE DIA. OF 30" TO 54" INCLUSIVE AND CORRUGATED METAL PIPE-ARCHES WITH RISE OF 27" TO 40" INCLUSIVE MAY BE MADE FROM TWO SHEETS JOINED BY RIVETING OR BOLTING ON CENTERLINE.

SKIRT SECTION OF CORRUGATED METAL PIPE DIA. OF 60" AND LARGER, AND CORRUGATED METAL PIPE-ARCHES WITH RISE OF 44" AND LARGER SHALL BE MADE FROM THREE SHEETS JOINED BY RIVETING OR BOLTING AT EQUAL DISTANCES FROM CENTERLINE. THE CENTER PANEL SHALL BE FURNISHED IN 10 GAUGE MATERIAL AND THE WIDTH OF THE CENTER PANEL SHALL BE GREATER THAN 20% OF THE PIPE PERIPHERY.

MULTIPLE SHEET SKIRT SECTIONS SHALL HAVE 2" MIN. LAP SEAMS. BOLTS OR RIVETS SHALL BE ⅜" DIA. (MIN.) AND ON 6" CENTERS (MAX.).

TYPICAL CONNECTIONS SHOWN MAY BE USED FOR HELICAL CORRUGATED METAL PIPE.

FOR SKIRT SECTIONS OF 60" DIA. PIPE AND LARGER, AND CORRUGATED METAL PIPE-ARCHES WITH A RISE OF 49" AND LARGER, REINFORCED EDGES TO BE SUPPLEMENTED WTH STIFFENER ANGLES PLACED JUST BELOW THE REINFORCED EDGES ON THE OUTSIDE OF THE SKIRT SECTION. THE ANGLES WILL BE 2" × 2" × ¼". THE ANGLES TO BE ATTACHED BY ⅜" DIA. (MIN.) BOLTS AND NUTS AND ON 6" CENTERS (MAX.).

REV. NO.	DATE	DESCRIPTION OF REVISION
R4	JAN 18	NDOR BORDER TO NDOT BORDER
R3	AUG 99	CHANGED NOTES
R2	MAR 89	SPAN. RISE SIZES FOR C.M. PIPE-ARCH

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 410-R4

FLARED END SECTIONS FOR CULVERT PIPES

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

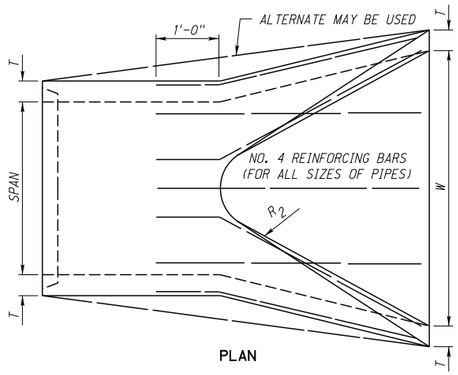
PROFESSIONAL CIVIL ENGINEER
MARK J. TRAYNOWICZ
E-8119
STATE OF NEBRASKA

DATE

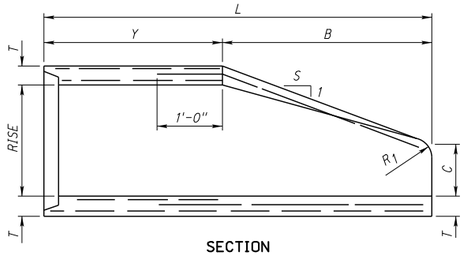
ORIGINAL:
FEBRUARY 22, 1974
DATE

1
2

Computer: NDOTDESIGN134
Date: 29-JUN-2021 09:18
File: 41000e04.dgn



PLAN



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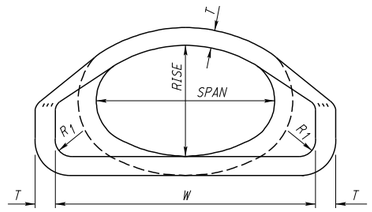
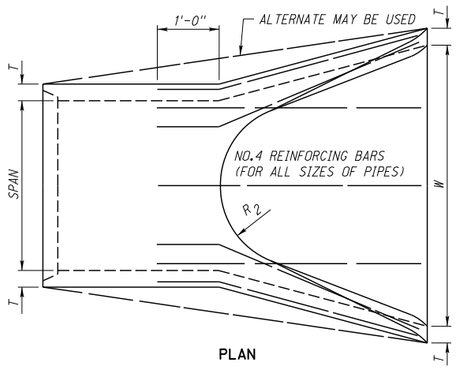


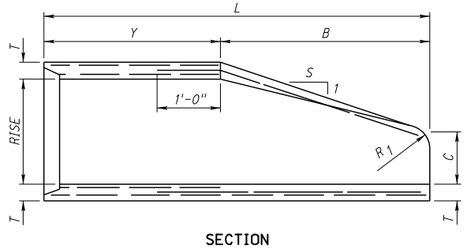
ELEVATION

EQUIV. DIA.	NOMINAL DIMENSIONS										
	SPAN	RISE	L ± 6"	B	Y ± 4½"	C	W ± 2"	R_1	R_2	S APPROX.	T MIN.
18"	23"	14"	6'-0"	2'-3"	3'-9"	8½"	3'-0"	3"	6"	2.3	2½"
24"	30"	19"	6'-0"	3'-3"	2'-9"	9"	4'-0"	3"	7"	2.9	3"
30"	38"	24"	6'-0"	4'-6"	1'-6"	10"	5'-0"	3"	9"	3	3½"
36"	45"	29"	8'-0"	5'-0"	3'-0"	11"	6'-0"	3"	1'-0"	2.7	4"
42"	53"	34"	8'-0"	5'-0"	3'-0"	1'-4"	6'-6"	6"	1'-1"	2.6	4½"
48"	60"	38"	8'-0"	5'-0"	3'-0"	1'-9"	7'-0"	6"	1'-2"	2.7	5"
54"	68"	43"	8'-0"	5'-0"	3'-0"	2'-1"	7'-6"	6"	1'-4"	2.5	5½"
60"	76"	48"	8'-0"	5'-0"	3'-0"	2'-6"	8'-0"	6"	1'-6"	2.5	6"

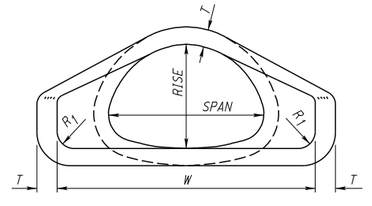
DETAILS OF CONCRETE FLARED END SECTION
(FOR REINFORCED CONCRETE ELLIPTICAL PIPE)



PLAN



SECTION



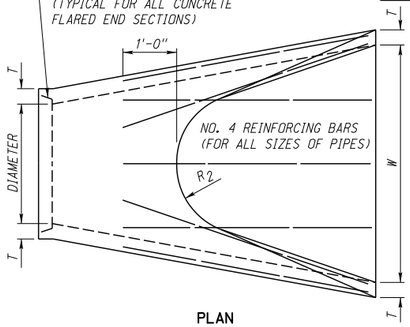
ELEVATION

EQUIV. DIA.	NOMINAL DIMENSIONS										
	SPAN	RISE	L ± 6"	B	Y ± 4½"	C	W ± 2"	R_1	R_2	S APPROX.	T MIN.
18"	22"	14"	6'-0"	2'-3"	3'-9"	7"	3'-0"	2"	1'-0"	2.2	2½"
24"	29"	18"	6'-0"	3'-3"	2'-9"	9"	4'-0"	3"	1'-2"	2.4	3"
30"	36"	23"	8'-0"	4'-0"	4'-0"	10"	5'-0"	3"	1'-3"	2.3	3½"
36"	44"	27"	8'-0"	5'-0"	3'-0"	11"	6'-0"	6"	1'-8"	2.4	4"
42"	51"	32"	8'-0"	5'-0"	3'-0"	1'-4"	6'-6"	6"	1'-10"	2.4	4½"
48"	59"	36"	8'-0"	5'-0"	3'-0"	1'-9"	7'-0"	6"	1'-10"	2.3	5"
54"	65"	40"	8'-0"	5'-0"	3'-0"	2'-0"	7'-6"	6"	2'-0"	2.1	5½"
60"	74"	45"	8'-0"	5'-0"	3'-0"	2'-3"	8'-0"	6"	1'-9"	2	6"
72"	88"	54"	8'-4"	6'-6"	1'-10"	2'-11"	10'-0"	6"	2'-0"	2	7"

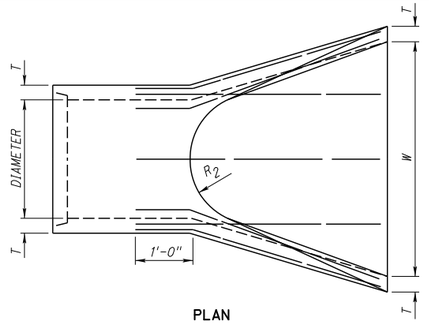
DETAILS OF CONCRETE FLARED END SECTION
(FOR REINFORCED CONCRETE PIPE-ARCH)

PIPE DIA.	NOMINAL DIMENSIONS								
	L ± 6"	B	Y ± 4½"	C	W ± 2"	R_1	R_2	S APPROX.	T MIN.
12"	6'-0⅞"	2'-0"	4'-0⅞"	4"	2'-0"	1'-0⅛"	9"	3	2"
15"	6'-1"	2'-3"	3'-10"	6"	2'-6"	1'-0½"	11"	3	2¼"
18"	6'-1"	2'-3"	3'-10"	9"	3'-0"	1'-3½"	1'-0"	3	2½"
24"	6'-1½'	3'-7½"	2'-6"	9½"	4'-0"	1'-4⅜6"	1'-2"	3	3"
30"	6'-1¾"	4'-6"	1'-7¾"	1'-0"	5'-0"	1'-6½"	1'-3"	3	3½"
36"	8'-1¾"	5'-3"	2'-10¾"	1'-3"	6'-0"	2'-0⅜6"	1'-8"	3	4"
42"	8'-2"	5'-3"	2'-11"	1'-9"	6'-6"	2'-3½"	1'-10"	3	4½"
48"	8'-2"	6'-0"	2'-2"	2'-0"	7'-0"	2'-4½"	1'-10"	3	5"
54"	8'-4"	5'-5"	2'-11"	2'-3"	7'-6"	2'-9⅛"	2'-0"	2.4	5½"
60"	8'-3"	5'-0"	3'-3"	2'-6"	8'-0"	3'-0⅛6"	2'-0"	2	6"
66"	8'-3"	6'-6"	1'-9"	2'-6"	9'-0"	3'-0⅛"	2'-0"	2	6½"
72"	8'-3"	6'-6"	1'-9"	2'-6"	9'-0"	3'-2⅛6"	2'-0"	2	7"

GROOVE END ON OUTLET END SECTION
TOUNGE END ON INLET END SECTION
(TYPICAL FOR ALL CONCRETE
FLARED END SECTIONS)

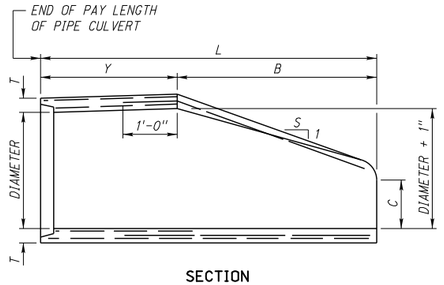


PLAN



PLAN

END OF PAY LENGTH
OF PIPE CULVERT



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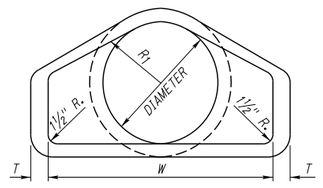


ELEVATION

DETAILS OF CONCRETE FLARED END SECTION
(FOR REINFORCED CONCRETE PIPE)

NOTES

CONCRETE FOR FLARED END SECTIONS SHALL BE IN ACCORDANCE WITH APPLICABLE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M170, M206, AND M207, FOR CLASS II PIPE.

REINFORCEMENT IN THE "Y" SECTION SHALL BE IN ACCORDANCE WITH APPLICABLE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M170, M206, AND M207, FOR CLASS II PIPE.

IN ADDITION TO THE REINFORCING BARS SHOWN, REINFORCEMENT IN THE "B" SECTION SHALL HAVE A CROSS-SECTIONAL AREA EQUAL TO THAT OF ONE LAYER OF STEEL IN THE "Y" SECTION.

REV. NO.	DATE	DESCRIPTION OF REVISION
R4	JAN 18	NDOR BORDER TO NDOT BORDER
R3	AUG 99	CHANGED NOTES
R2	MAR 89	SPAN, RISE SIZES FOR C.M. PIPE-ARCH

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 410-R4

FLARED END SECTIONS FOR CULVERT PIPES

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
MARK J. TRAYNOWICZ
E-8119
STATE OF NEBRASKA

DATE

ORIGINAL:
FEBRUARY 22, 1974
DATE

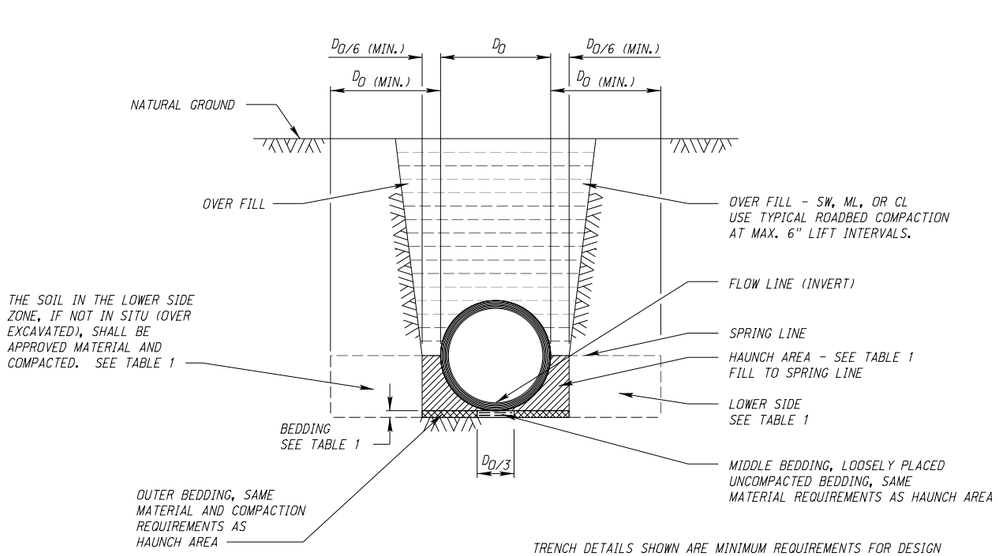
TABLE 1 - CONCRETE STANDARD INSTALLATIONS, SOILS AND MINIMUM COMPACTION REQUIREMENTS

INSTALLATION TYPE	BEDDING THICKNESS	HAUNCH AND OUTER BEDDING	LOWER SIDE
TYPE 1	$D_O/24$ MINIMUM, NOT LESS THAN 3" IF ROCK FOUNDATION, USE $D_O/12$ MINIMUM, NOT LESS THAN 6".	95% SW	90% SW, 95% ML, 100% CL, OR NATURAL SOILS OF EQUAL FIRMNESS
TYPE 2		90% SW OR 95% ML	85% SW, 90% ML, 95% CL, OR NATURAL SOILS OF EQUAL FIRMNESS
*TYPE 3		85% SW, 90% ML, OR 95% CL	85% SW, 90% ML, 95% CL, OR NATURAL SOILS OF EQUAL FIRMNESS

TABLE 1 NOTES:

** THE TYPE 3 INSTALLATION (SHADED) IN TABLE 4 IS THE NDOR MINIMUM STANDARD, USING EITHER A SHAPED TRENCH ACCORDING TO THE STANDARD SPECIFICATIONS, OR AT THE OPTION OF THE CONTRACTOR, THE BEDDING WITH COMPACTIONS AS SHOWN.*

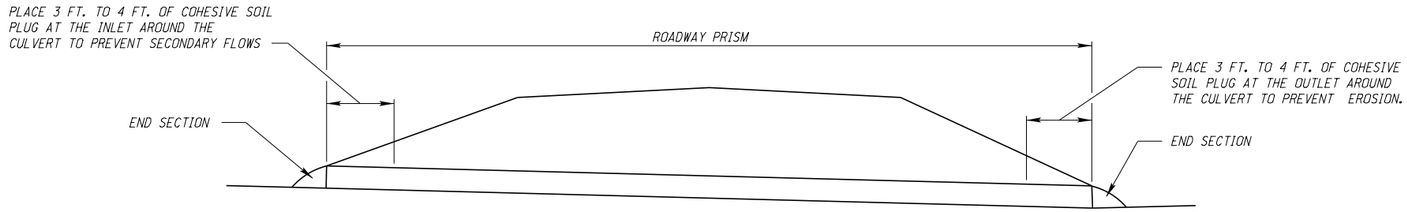
MAXIMUM FILL HEIGHTS FOR THE TYPE 1, 2, AND 3 INSTALLATIONS ARE SHOWN IN TABLE 4.



TRENCH DETAILS SHOWN ARE MINIMUM REQUIREMENTS FOR DESIGN AND CONSTRUCTION. PAYMENT FOR EXCAVATION IS BASED UPON THE GUIDELINES IN THE STANDARD SPECIFICATIONS.

TRENCHES SHALL BE EXCAVATED IN ACCORDANCE WITH APPROVED SAFETY PRACTICE.

TYPICAL TRENCH INSTALLATION



LIMITS OF BEDDING AND BACKFILL

EXCAVATION, BEDDING AND EMBANKMENT SEQUENCE:

TRENCH INSTALLATION:

(A) DETERMINE THE FLOW LINE AND TRENCH BOTTOM ELEVATIONS.

(B) DETERMINE THE SHAPE OF TRENCH. DECIDE IF SHORING IS NEEDED. CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR THE SAFETY OF ALL WORKERS, EQUIPMENT AND MATERIALS IN THE TRENCH.

(C) PLACE THE BEDDING MATERIAL (SEE CONCRETE - TABLE 1) LOOSELY.

(D) PLACE PIPE ON THE BEDDING AND COMPACT OUTER BEDDING, (SEE TABLE 1).

(E) PLACE AND COMPACT THE LOWER SIDE, HAUNCH AND OVERFILL MATERIAL AT 6 IN. INTERVALS.

EMBANKMENT INSTALLATION:

(A) DETERMINE THE FLOW LINE AND SPRING LINE ELEVATION.

(B) IF FLOW LINE IS ABOVE THE NATURAL GROUND, PLACE AN EMBANKMENT AT LEAST 3DO WIDE WITH 3:1 FORESLOPES OR FLATTER AT SPRING LINE ELEVATION, COMPACTED AT ROADBED REQUIRED COMPACTION.

(C) IF THE FLOW LINE IS BELOW THE NATURAL GROUND BUT THE SPRING LINE IS ABOVE THE NATURAL GROUND, PLACE THE EMBANKMENT SIMILAR TO THE ONE IN STEP B.

(D) EXCAVATE TO PROPER ELEVATION.

(E) PLACE BEDDING MATERIAL (SEE TABLE 1) LOOSELY.

(F) PLACE THE PIPE ON THE BEDDING MATERIAL AND COMPACT OUTER BEDDING MATERIAL (SEE CONCRETE - TABLE 1).

(G) PLACE AND COMPACT THE HAUNCH, LOWER SIDE AND OVERFILL MATERIAL AT 6 IN. INTERVALS.

NOTES FOR TRENCH INSTALLATIONS:

1. *COMPACTION AND SOIL SYMBOLS, I.E. 95% SW, REFER TO SW SOIL MATERIAL WITH MINIMUM STANDARD PROCTOR COMPACTION OF 95%.*
2. *THE TRENCH TOP ELEVATION SHALL BE NO LOWER THAN 1 FT. BELOW THE BOTTOM OF THE PAVEMENT BASE MATERIAL.*
3. *SOIL IN BEDDING AND HAUNCH ZONES SHALL BE COMPACTED TO AT LEAST THE SAME COMPACTION AS SPECIFIED FOR THE MAJORITY OF SOIL IN THE BACKFILL ZONES.*
4. *THE TRENCH WIDTH SHALL BE WIDER THAN SHOWN IF REQUIRED FOR ADEQUATE SPACE TO ATTAIN THE SPECIFIED COMPACTION IN THE HAUNCH AND BEDDING ZONES.*
5. *FOR TRENCH WALLS THAT ARE WITHIN 10 DEGREES OF VERTICAL, THE COMPACTION OR FIRMNESS OF THE SOIL IN THE TRENCH WALLS AND LOWER SIDE ZONE NEED NOT TO BE CONSIDERED.*
6. *FOR TRENCH WALLS WITH GREATER THAN 10 DEGREE SLOPES THAT CONSIST OF EMBANKMENT, THE LOWER SIDE SHALL BE COMPACTED TO AT LEAST THE SAME COMPACTION AS SPECIFIED FOR THE SOIL IN THE BACKFILL ZONE.*

REV. NO.	DATE	DESCRIPTION OF REVISION
R2	JAN. 18	NDOR BORDER TO NDOT BORDER
R1	OCT. 14	UP TO 60" PLASTIC ALLOWED IN ALL OF TABLE 1 - PLASTIC

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 411-R2

BEDDING AND BACKFILL REQUIREMENTS FOR CONCRETE PIPE

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
MICK S. SYSLO
E-10043
STATE OF NEBRASKA

DATE

ORIGINAL: JUNE 6, 2008
DATE

1/4

TABLE 1 - CONCRETE STANDARD INSTALLATIONS, SOILS AND MINIMUM COMPACTION REQUIREMENTS

INSTALLATION TYPE	BEDDING THICKNESS	HAUNCH AND OUTER BEDDING	LOWER SIDE
TYPE 1	$D_O/24$ MINIMUM, NOT LESS THAN 3" IF ROCK FOUNDATION, USE $D_O/12$ MINIMUM, NOT LESS THAN 6".	95% SW	90% SW, 95% ML OR 100% CL
TYPE 2		90% SW OR 95% ML	85% SW, 90% ML OR 95% CL
*TYPE 3		85% SW, 90% ML, OR 95% CL	85% SW, 90% ML OR 95% CL

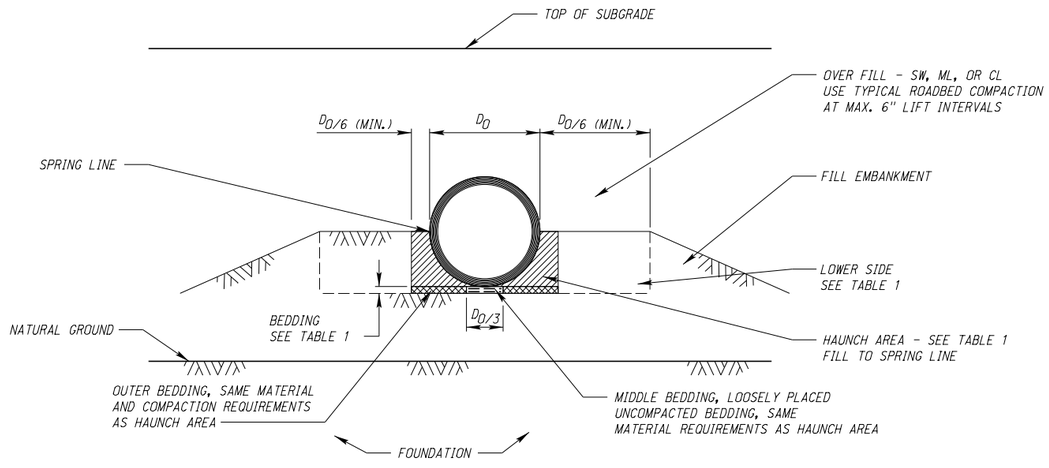
TABLE 1 NOTES:

** THE TYPE 3 INSTALLATION (SHADED) IN TABLE 4 IS THE NDOR MINIMUM STANDARD, USING EITHER A SHAPED TRENCH ACCORDING TO THE STANDARD SPECIFICATIONS, OR AT THE OPTION OF THE CONTRACTOR, THE BEDDING WITH COMPACTIONS AS SHOWN.*

MAXIMUM FILL HEIGHTS FOR THE TYPE 1, 2, AND 3 INSTALLATIONS ARE SHOWN IN TABLE 4.

TABLE 2 - CONCRETE PIPE DIMENSIONS

NOMINAL PIPE DIAMETER (INCHES)	STANDARD OUTSIDE PIPE DIAMETER, DO (SPAN)			
	ROUND PIPE	ARCH PIPE	H. ELLIP. PIPE	V. ELLIP. PIPE
15	19.5	22.5		
18	23	27	28.5	
21	26.5	31.5		
24	30	34.5	36.5	
27	33.5		41	
30	37	43.25	45.5	
36	44	51.75	54	38
42	51	60.13	63	44
48	58	68.5	71	49
54	65	76	80	55
60	72	85	89	61
66	79		97	67
72	86	102	106	73
78	93		114	79
84	100	118	123	85
90	107			
96	114			
102	121			
108	128			



TYPICAL EMBANKMENT INSTALLATION

TABLE 3 SOIL CLASSIFICATION FOR BEDDING & BACKFILL

ASTM SOIL GROUP SYMBOL D 2487	DESCRIPTION	PERCENTAGE PASSING SIEVE SIZES		
		1½ IN.	NO. 4	NO. 200
SW	WELL GRADED SANDS AND GRAVELLY-SANDS: LITTLE OR NO FINES. NON PLASTIC	100%	> 50% OF "COURSE FRACTION"	< 5%
ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY-FINE-SANDS, SILTS WITH SLIGHT PLASTICITY		100%	> 50%
CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELY-CLAYS, SANDY-CLAYS, SILTY-CLAYS, LEAN CLAYS			

NOTES FOR EMBANKMENT INSTALLATIONS:

1. COMPACTION AND SOIL SYMBOLS, I.E. 95% SW, REFER TO SW SOIL MATERIAL WITH A MINIMUM STANDARD PROCTOR COMPACTION OF 95%.

2. SOIL IN THE OUTER BEDDING, HAUNCH, AND LOWER SIDE ZONES, EXCEPT WITHIN THE $D_O/3$ MIDDLE BEDDING, SHALL BE COMPACTED TO AT LEAST THE SAME COMPACTION AS THE MAJORITY OF THE SOIL IN THE OVERFILL ZONES.

3. SUBTRENCHES

3.1 A SUBTRENCH IS DEFINED AS A TRENCH WITH ITS TOP AT AN ELEVATION LOWER THAN 1 FT. BELOW THE BOTTOM OF THE PAVEMENT BASE MATERIAL.

3.2 THE MINIMUM WIDTH OF A SUBTRENCH SHALL BE 1.33DO, OR WIDER IF REQUIRED FOR ADEQUATE SPACE TO ATTAIN THE SPECIFIED COMPACTION IN THE HAUNCH AND BEDDING ZONES.

3.3 FOR SUBTRENCHES WITH WALLS OF NATURAL SOIL, ANY PORTION OF THE LOWER SIDE ZONE IN THE SUBTRENCH WALL SHALL BE AT LEAST AS FIRM AS AN EQUIVALENT SOIL PLACED TO THE COMPACTION REQUIREMENTS SPECIFIED FOR THE LOWER SIDE ZONE, AND AS FIRM AS THE MAJORITY OF SOIL IN THE OVERFILL ZONE, OR SHALL BE REMOVED AND REPLACED WITH SOIL COMPACTED TO THE SPECIFIED LEVEL.

GENERAL NOTES:

WHEN IN-SITU LATERAL SOIL RESISTANCE IS NEGLIGIBLE, E.G. PEAT, MUCK, OR HIGHLY EXPANSIVE SOIL, EMBEDMENT SHALL BE PLACED AND COMPACTED AT THE DIRECTION OF THE ENGINEER.

TO PROTECT THE PIPE AND BACKFILL DURING CONSTRUCTION, PROVIDE A MINIMUM OF 36" OF COMPACTED FILL MATERIAL OVER THE TOP OF THE PIPE BEFORE ALLOWING ANY HEAVY EQUIPMENT TO TRAVERSE OVER THE PIPE. EXTREMELY HEAVY EQUIPMENT MAY REQUIRE LARGER COVER AS DETERMINED BY THE CONTRACTOR.

THE PIPE VOLUME SHOULD NOT BE SUBTRACTED FROM THE VOLUME OF EXCAVATION.

THESE DESIGN STANDARDS ARE MINIMUM. IF A MORE RESTRICTIVE DESIGN IS REQUIRED BY THE ENGINEER OR CULVERT MANUFACTURER, THEN THESE STANDARDS SHALL BE MODIFIED. CHANGES TO PAY ITEM QUANTITIES DUE TO UNFORESEEN SITE CONDITIONS SHALL BE CALCULATED AND INCORPORATED INTO THE CONTRACT THRU A CHANGE ORDER.

BOTH ENDS OF THE PIPE SHALL BE SEALED WITH COHESIVE SOIL (AROUND THE PIPE EXTENDING 3 FT. TO 4 FT. FROM EACH END) TO PROTECT AGAINST INFILTRATION AND EROSION.

BEDDING AND BACKFILL MATERIAL IS NOT PAID FOR DIRECTLY, BUT IS SUBSIDIARY TO THE LINEAR FEET OF CULVERT.

BEDDING AND BACKFILL MATERIAL SHALL MEET ASTM D 2487 (SOIL GROUPS AS SHOWN IN TABLE 3).

PERCENT COMPACTION SHALL BE DETERMINED IN ACCORDANCE WITH NDOR STANDARD TEST METHOD T 99.

REV. NO.	DATE	DESCRIPTION OF REVISION
R2	JAN. 18	NDOR BORDER TO NDOT BORDER
R1	OCT. 14	UP TO 60" PLASTIC ALLOWED IN ALL OF TABLE 1 - PLASTIC

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 411-R2

BEDDING AND BACKFILL REQUIREMENTS FOR CONCRETE PIPE

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
MICK S. SYSLO
E-10043
STATE OF NEBRASKA

DATE

ORIGINAL: JUNE 6, 2008
DATE

2/4

TABLE 1 – CONCRETE STANDARD INSTALLATIONS, SOILS AND MINIMUM COMPACTION REQUIREMENTS

INSTALLATION TYPE	BEDDING THICKNESS	HAUNCH AND OUTER BEDDING	LOWER SIDE
TYPE 1	$D_O/24$ MINIMUM, NOT LESS THAN 3" IF ROCK FOUNDATION,USE $D_O/12$ MINIMUM, NOT LESS THAN 6".	95% SW	90% SW, 95% ML OR 100% CL
TYPE 2		90% SW OR 95% ML	85% SW, 90% ML OR 95% CL
*TYPE 3		85% SW, 90% ML, OR 95% CL	85% SW, 90% ML OR 95% CL

NOTES:

** THE TYPE 3 INSTALLATION (SHADED) IN TABLE 4 IS THE NDOR MINIMUM STANDARD, USING EITHER A SHAPED TRENCH ACCORDING TO THE STANDARD SPECIFICATIONS, OR AT THE OPTION OF THE CONTRACTOR, THE BEDDING WITH COMPACTIONS AS SHOWN.*

MAXIMUM FILL HEIGHTS FOR THE TYPE 1, 2, AND 3 INSTALLATIONS ARE SHOWN IN TABLE 4.

INSTALLATION TYPE 2 AND TYPE 1 ARE IMPROVED METHODS IN ORDER TO SUPPORT HIGHER FILL HEIGHTS USING CLASS III, IV, AND V CIRCULAR CONCRETE PIPE. INSTALLATION TYPE I WILL PROVIDE THE BEST IN-SITU PERFORMANCE USING GREATER COMPACTION WITH GRANULAR BEDDING AND BACKFILL. THE CONTRACTOR WILL CHOOSE THE INSTALLATION TYPE AND CLASS OF PIPE. ACTUAL PROJECT FILL HEIGHTS MUST BE KNOWN IN ORDER TO USE TABLE 4.

ROUND EQUIVALENT, NON-CIRCULAR PIPE SUCH AS ARCH OR ELLIPTICAL PIPE, MAY BE SELECTED, PROVIDED SUCH PIPE ARE DESIGNED AND MANUFACTURED TO THE SAME D-LOADS AND ULTIMATE STRENGTHS (SEE TABLE 5) AS THE SELECTED CIRCULAR PIPE FROM THE FILL HEIGHT TABLE.

TABLE 4 MAXIMUM FILL HEIGHTS (FEET) FOR STANDARD DESIGN (AASHTO M 170) ROUND CONCRETE PIPE

	INSTALLATION TYPE 3* (NDOR STANDARD)			INSTALLATION TYPE 2			INSTALLATION TYPE 1		
PIPE SIZE (IN.)	CLASS III	CLASS IV	CLASS V	CLASS III	CLASS IV	CLASS V	CLASS III	CLASS IV	CLASS V
15	12	15	21	15	19	26	23	28	40
18	12	17	24	16	22	30	24	32	45
21	13	19	26	16	24	32	25	37	48
24	13	19	26	17	24	33	25	32	45
27	13	17	26	17	21	34	23	26	51
30	12	14	25	15	17	32	20	21	49
36	10	16	24	13	21	31	20	31	47
42	10	15	23	13	19	29	20	29	44
48	10	14	22	13	18	29	20	28	43
54	10	14		13	17		20	27	
60	9	14		12	18		19	28	
66	9	14		12	18		19	28	
72	9	14		12	18		19	28	
78	9			12			19		
84	9			12			19		
90	9			12			20		
96	9			12			19		
102	10			13			20		
108	10			14			22		

TABLE 4 NOTES:

AASHTO M 170 SPECIFICATIONS ARE MODIFIED AS FOLLOWS:

ONLY SINGLE INNER CAGE, CIRCULAR REINFORCING IS ALLOWED FOR CLASS III, 15", 18", 21", AND 24" ROUND RCP AS SHOWN:

PIPE SIZE (IN.)	CLASS	MINIMUM CIRCUMFERENTIAL REINFORCING ($IN.^2/FT.$ OF PIPE WALL)
15	III	0.08
18	III	0.10
21	III	0.12
24	III	0.14

APPLICABLE SPECIFICATIONS:

AASHTO M 170---ROUND RCP
AASHTO M 206---ARCH RCP
AASHTO M 207---ELLIPTICAL RCP

GENERAL NOTES:

FILL HEIGHTS SHOWN IN TABLE 4 WERE DEVELOPED USING ASCE STANDARDS FOR DIRECT DESIGN OF BURIED PRECAST CONCRETE PIPE, MANUFACTURED IN ACCORDANCE WITH AASHTO M 170 SPECIFICATION REQUIREMENTS (SEE TABLE 4 FOOTNOTE FOR EXCEPTIONS). FILL HEIGHTS SHOWN APPLY ONLY TO ROUND PIPE (UNDER FULL FLOW CONDITIONS), USED UNDER RIGID AND FLEXIBLE PAVEMENT, WITH SOIL OVERFILL WEIGHING 120 POUNDS PER CUBIC FOOT. UNDER SPECIAL CIRCUMSTANCES (WHERE PAVEMENT IS NOT USED AND LIVE LOAD BECOMES CRITICAL, OR DIFFERENT SOIL DENSITY IS ENCOUNTERED, OR THE ONE FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE PAVEMENT TO THE TOP OF THE PIPE CANNOT BE MAINTAINED) THESE FILL HEIGHTS MAY NEED TO BE MODIFIED. DEEPER FILL HEIGHTS MAY BE USED BY SUBMITTING A SPECIAL STANDARD INSTALLATION DIRECT DESIGN (SIDD) FOR NDOR APPROVAL.

CONCRETE PIPE DESIGNS THAT ARE NOT SHOWN IN APPLICABLE AASHTO SPECIFICATIONS WILL BE CONSIDERED SPECIAL DESIGNS THAT MUST BE SUBMITTED TO NDOR FOR APPROVAL.

TABLE 5 D-LOADS FOR CONCRETE PIPE

PIPE CLASS	III	IV	V
D-LOAD TO PRODUCE A 0.01-IN. CRACK	1350	2000	3000
D-LOAD TO PRODUCE THE ULTIMATE LOAD	2000	3000	3750

NOTES:

LOAD ON PIPE IN POUNDS PER LINEAR FOOT = D-LOAD X INSIDE SPAN IN FEET D-LOAD = TEST LOAD EXPRESSED IN POUNDS-FORCE PER LINEAR FOOT PER FOOT OF DIAMETER

REV. NO.	DATE	DESCRIPTION OF REVISION
R2	JAN. 18	NDOR BORDER TO NDOT BORDER
R1	OCT. 14	UP TO 60" PLASTIC ALLOWED IN ALL OF TABLE 1 - PLASTIC

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 411-R2

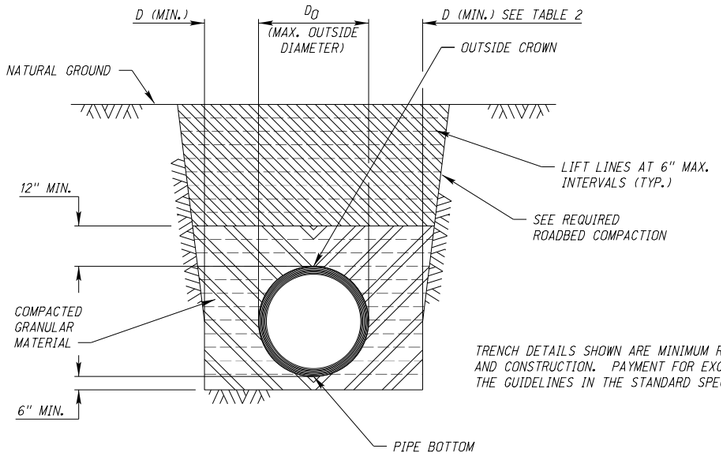
BEDDING AND BACKFILL REQUIREMENTS FOR CONCRETE PIPE

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
MICK S. SYSLO
E-10043
STATE OF NEBRASKA

DATE

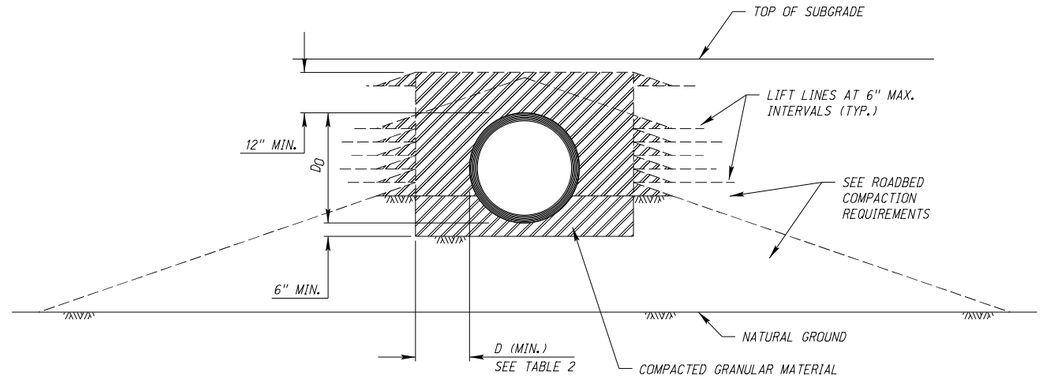
ORIGINAL: JUNE 6, 2008
DATE



TRENCH DETAILS SHOWN ARE MINIMUM REQUIREMENTS FOR DESIGN AND CONSTRUCTION. PAYMENT FOR EXCAVATION IS BASED UPON THE GUIDELINES IN THE STANDARD SPECIFICATIONS.

TRENCHES SHALL BE EXCAVATED IN ACCORDANCE WITH APPROVED SAFETY PRACTICE.

TYPICAL TRENCH INSTALLATION



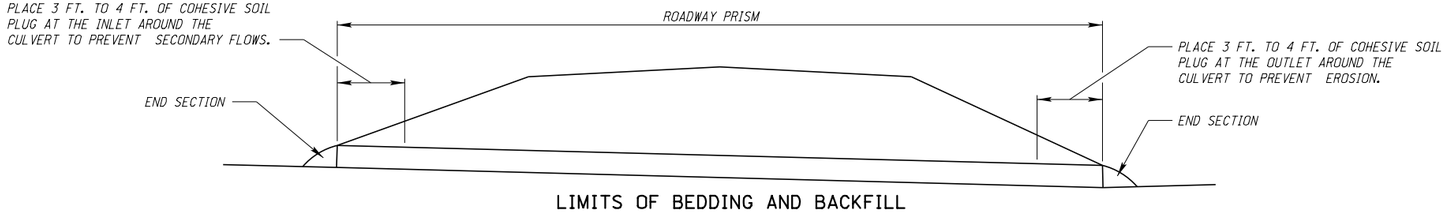
TYPICAL EMBANKMENT INSTALLATION

TABLE 1 - PLASTIC
SOIL CLASSIFICATION FOR GRANULAR FILL MATERIAL

SOIL GROUP SYMBOL D 2487	DESCRIPTION	% PASSING SIEVE SIZES		
		1½ IN.	NO. 4	NO. 200
GW	WELL GRADED GRAVEL AND GRAVEL-SAND MIXTURES; LITTLE OR NO FINES.	100%	< 50% OF COARSE FRACTION	< 5%
GP	POORLY GRADED GRAVEL AND GRAVEL-SAND MIXTURES; LITTLE OR NO FINES.			
SW	WELL GRADED SAND AND GRAVEL-SANDS; LITTLE OR NO FINES.		> 50% OF COARSE FRACTION	
SP	POORLY GRADED SAND AND GRAVEL-SANDS; LITTLE OR NO FINES.			
E.G. GW-GC SP-SM	SAND AND GRAVELS WHICH ARE BORDER LINE BETWEEN CLEAN AND WITH FINES.	100%	VARIES	5% TO 12%
GM	SILTY GRAVEL, GRAVEL-SAND-SILT MIXTURES.	100%	< 50% OF COARSE FRACTION	12% TO 50%
GC	CLAYEY-GRAVEL, GRAVEL-SAND-CLAY MIXTURES.			
SM	SILTY SANDS, SAND-SILT MIXTURES.		> 50% OF COARSE FRACTION	

TABLE 2 - PLASTIC
MINIMUM D (INCHES)

NOMINAL PIPE DIAMETER (INCHES)	TRENCH INSTALLATION		EMBANKMENT INSTALLATION	
	METAL PIPE	PLASTIC PIPE	METAL PIPE	PLASTIC PIPE
15	11	11	15	15
18	12	12	18	18
24	13	13	24	24
30	15	15	24	24
36	17	17	24	24
42	24	24	24	24
48	24	24	24	24
54	24	24	24	24
60	24	24	24	24
66	24		24	
72	24		24	
78	24		24	
84	24		24	



LIMITS OF BEDDING AND BACKFILL

NOTES:

INSTALLATIONS AS SHOWN ARE REQUIRED UNDER ALL SURFACED ROADWAYS. BEDDING AND BACKFILL FOR DRIVE PIPE OR OTHER PIPE OUTSIDE THE ROADWAY PRISM (OR BACK OF CURB-LINE FOR URBAN PROJECTS) MAY BE INSTALLED USING SUITABLE EXISTING SOIL, PLACED AND COMPACTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

WHERE IN-SITU LATERAL SOIL RESISTANCE IS NEGLIGIBLE E.G. PEAT, MUCK, OR HIGHLY EXPANSIVE SOIL, EMBEDMENT SHALL BE PLACED AND COMPACTED AT THE DIRECTION OF THE ENGINEER.

TO PROTECT THE PIPE AND BACKFILL DURING CONSTRUCTION, PROVIDE A MINIMUM OF 36" OF COMPACTED FILL MATERIAL OVER THE TOP OF THE PIPE BEFORE ALLOWING ANY HEAVY EQUIPMENT TO TRAVERSE OVER THE PIPE. EXTREMELY HEAVY EQUIPMENT MAY REQUIRE LARGER COVER AS DETERMINED BY THE CONTRACTOR.

PIPE VOLUME SHOULD NOT BE SUBTRACTED FROM THE VOLUME OF EXCAVATION.

THESE DESIGN STANDARDS ARE MINIMUM. IF A MORE RESTRICTIVE DESIGN IS REQUIRED BY THE ENGINEER OR THE CULVERT MANUFACTURER, THEN THESE STANDARDS SHALL BE MODIFIED. CHANGES TO PAY ITEM QUANTITIES DUE TO UNFORESEEN SITE CONDITIONS SHALL BE CALCULATED AND INCORPORATED INTO THE CONTRACT BY A CHANGE ORDER.

EXPOSED ENDS OF THE PIPE SHALL BE SEALED WITH COHESIVE SOIL (AROUND THE PIPE EXTENDING 3 FT. TO 4 FT. FROM EACH END) TO PROTECT AGAINST INFILTRATION AND EROSION.

GRANULAR FILL MATERIAL IS NOT PAID FOR DIRECTLY, BUT IS SUBSIDIARY TO THE LINEAR FEET OF CULVERT.

GRANULAR MATERIAL SHALL MEET ASTM D 2487 (SOIL GROUP AS SHOWN IN TABLE 1). MATERIAL SHALL BE COMPACTED TO AT LEAST 90% PROCTOR TEST DENSITY.

PERCENT COMPACTION SHALL BE DETERMINED IN ACCORDANCE WITH NDOR STANDARD TEST METHOD T 99.

REV. NO.	DATE	DESCRIPTION OF REVISION
R2	JAN. 18	NDOR BORDER TO NDOT BORDER
R1	OCT. 14	UP TO 60" PLASTIC ALLOWED IN ALL OF TABLE 1 - PLASTIC

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 411-R2

BEDDING AND BACKFILL REQUIREMENTS FOR MCCMP, PCCMP, & PLASTIC PIPE

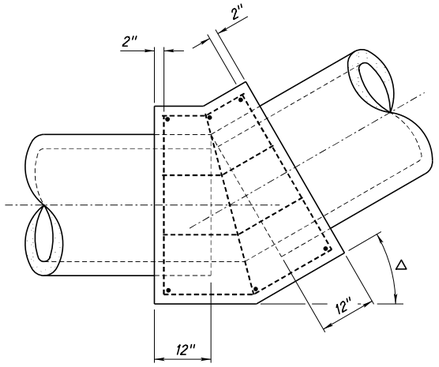
ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
MICK S. SYSLO
E-10043
STATE OF NEBRASKA

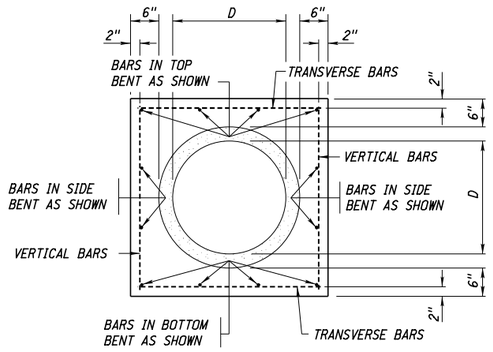
DATE

ORIGINAL: JUNE 6, 2008
DATE

4/4

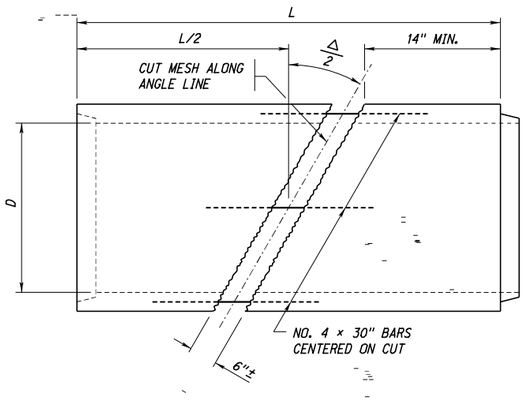


SIDE ELEVATION

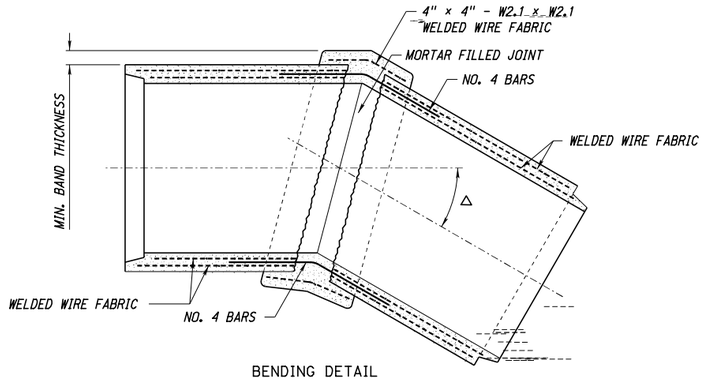


END ELEVATION

DETAILS OF COLLARS

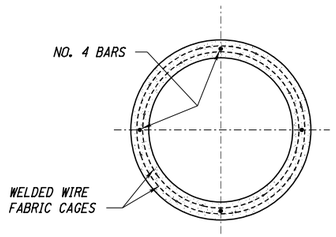


CUTTING DETAIL

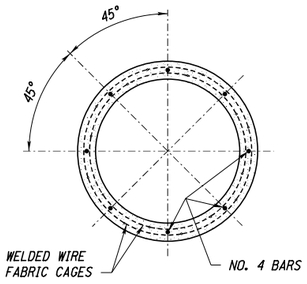


BENDING DETAIL

DETAILS OF CONCRETE ELBOWS



12" THROUGH 24"
PIPE DIAMETERS



OVER 24" PIPE DIAMETER

BAR LOCATION DETAILS

DATA FOR PRECAST ELBOWS			
SIZE OF PIPE "D"	MINIMUM BAND THICKNESS	Δ MAXIMUM L-6'	Δ MAXIMUM L-7½'
12"	1"	90°	90°
15"	1"	90°	90°
18"	1"	90°	90°
21"	1"	90°	90°
24"	1⅛"	90°	90°
27"	1⅛"	90°	90°
30"	1¼"	90°	90°
36"	1⅜"	81°	90°
42"	1½"	73°	90°
48"	1¾"	66°	88°
54"	2"	60°	81°
60"	2"	55°	75°

SCHEDULE OF BARS FOR COLLAR					
SIZE OF PIPE "D"	BAR SIZE	NUMBER OF BARS			
		TRANS-VERT	TOP	ONE SIDE	BOTTOM
12"	NO. 4	12	4	2	4
15"	NO. 4	12	4	2	4
18"	NO. 4	12	4	2	4
21"	NO. 4	12	4	2	4
24"	NO. 4	12	4	2	4
27"	NO. 4	12	4	2	5
30"	NO. 4	12	4	2	5
36"	NO. 4	12	4	2	5
42"	NO. 4	12	5	3	6
48"	NO. 4	12	5	3	6
54"	NO. 4	12	5	3	6
60"	NO. 4	12	5	3	6

DATA FOR COLLARS			
SIZE OF PIPE "D"	Δ	CONCRETE (CU. YDS.)	REINF. STEEL (LBS.)
12"	0°	0.30	32
	15°	0.33	33
	30°	0.36	36
	45°	0.39	37
15"	0°	0.36	35
	15°	0.40	36
	30°	0.43	38
	45°	0.47	40
18"	0°	0.42	38
	15°	0.49	41
	30°	0.56	44
	45°	0.64	46
21"	0°	0.47	40
	15°	0.55	42
	30°	0.64	46
	45°	0.74	48
24"	0°	0.53	43
	15°	0.63	45
	30°	0.74	49
	45°	0.86	51
27"	0°	0.57	45
	15°	0.70	48
	30°	0.84	52
	45°	0.99	55
30"	0°	0.63	49
	15°	0.79	53
	30°	0.96	57
	45°	1.14	61
36"	0°	0.77	53
	15°	1.01	58
	30°	1.26	63
	45°	1.53	68
42"	0°	0.96	65
	15°	1.32	72
	30°	1.69	80
	45°	2.09	91
48"	0°	1.16	68
	15°	1.66	77
	30°	2.19	86
	45°	2.75	95
54"	0°	1.34	75
	15°	2.01	84
	30°	2.70	95
	45°	3.44	106
60"	0°	1.54	77
	15°	2.39	89
	30°	3.28	100
	45°	4.23	113

NOTES:

THE DIMENSIONS FOR CONCRETE PIPE SHOWN ON THIS PLAN ARE FOR CLASS III REINFORCED CONCRETE PIPE, AASHTO DESIGNATION M170, WALL "B".

ALL QUANTITIES ARE BASED ON DIMENSIONS SHOWN ON THIS PLAN. NO ADJUSTMENTS WILL BE MADE IN THESE QUANTITIES IF OTHER STRENGTH STANDARD PIPE IS FURNISHED IN ACCORDANCE WITH THE SPECIFICATIONS OR IF COLLARS ARE USED ON PIPE OTHER THAN CONCRETE.

WHEN A CONCRETE COLLAR, CONNECTING EXISTING AND NEW CONCRETE PIPE, IS CONSTRUCTED WITH A BEND, IT SHALL BE CONSIDERED AS A COLLAR NOT AN ELBOW.

ALL REINFORCING STEEL USED SHALL CONFORM TO THE REQUIREMENTS OF THE ASTM DESIGNATIONS A615/A615M, GRADE 60. ALL BAR DESIGNATIONS ARE IN CUSTOMARY U.S. UNITS.

ALL CONCRETE USED SHALL BE CLASS 47B-3000.

FOR A SINGLE LINE OF REINFORCING WIRE MESH, TIE REINFORCING BARS ON THE OUTSIDE OF THE CAGE.

FOR A DOUBLE LINE OF REINFORCING WIRE MESH, TIE REINFORCING WIRE MESH ON THE INSIDE OF THE OUTSIDE CAGE.

REINFORCING BARS SHALL BE LAPPED WHERE THE BEND IS MADE.

REINFORCING WIRE MESH SHALL BE LAPPED AND TIED WHERE THE BEND IS MADE.

WELDED WIRE FABRIC OR EQUAL SHALL BE LAPPED 12" AT SPLICES.

THE ORIENTATION OF THE PIPE SHALL BE MARKED WHEN CASTING TO ASSURE ADEQUATE REINFORCING BAR EMBEDMENT AND PROPER ALIGNMENT WHEN CUTTING AND ROTATING.

ALL PIPE DIMENSIONS SHOWN ARE NOMINAL.

REV. NO.	DATE	DESCRIPTION OF REVISION
R5	JAN 18	NDOR BORDER TO NDOT BORDER
R4	JAN 07	REMOVED REFERENCE TO CONC. AX-3000
R3	AUG 99	COMPUTER FILE/CHANGES

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 425-R5

COLLARS AND ELBOWS FOR CONCRETE PIPE

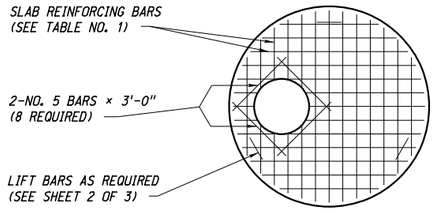
ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
MARK J. TRAYNOWICZ
E-8119
STATE OF NEBRASKA

DATE

ORIGINAL:
FEBRUARY 22, 1974
DATE

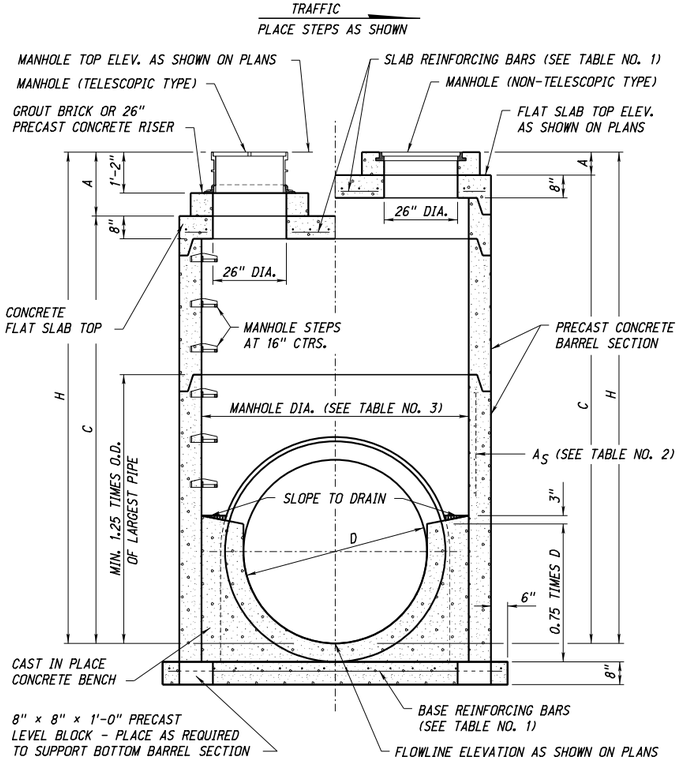
1
1



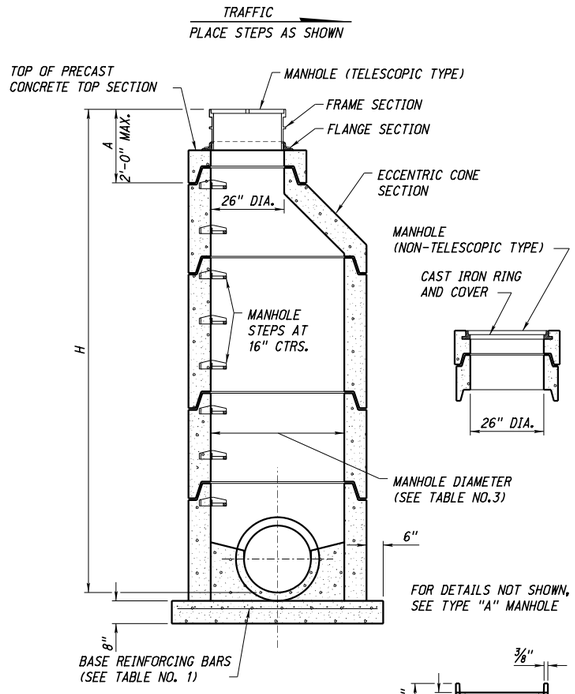
FLAT SLAB BASE

TABLE NO. 1	
BASE AND TOP SLAB FOR ROUND MANHOLE	
MANHOLE DIAMETER	SLAB REINFORCING BAR SIZE AND SPACING
48" - 60"	NO. 4 AT 6" CTRS.
66" & 72"	NO. 5 AT 7½" CTRS.
88" & 96"	NO. 5 AT 6½" CTRS.
120"	NO. 5 AT 5½" CTRS.

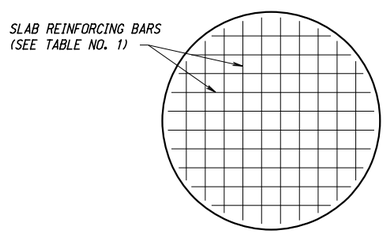
TABLE NO. 2	
CIRCUMFERENTIAL REINFORCEMENT PER FOOT OF BARREL	
DIAMETER BARREL SECTION	AREA OF STEEL A_S (SQ. IN./FT.)
84"	0.37
96"	0.47
120"	0.70



TYPE "A"

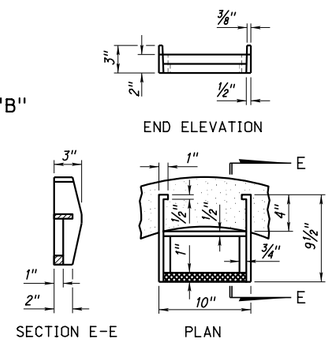


TYPE "B"

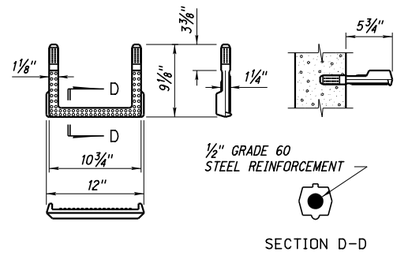


TYPE "A" AND "B" BASE

TABLE NO. 3	
MANHOLE SIZE BASED ON LARGEST PIPE INTO MANHOLE	
LARGEST PIPE DIAMETER	MINIMUM MANHOLE DIAMETER
24" OR LESS	48"
30"	54"
36"	60"
42"	66"
48"	72"
54"	84"
66"	96"
84"	120"



STEPS AT 16" CTRS.
DETAILS OF CAST IRON STEP



STEPS AT 16" CTRS.
DETAILS OF POLYPROPYLENE ENCAPSULATED STEEL ROD STEP
(ALTERNATE DESIGN)

NOTES

DIMENSION "A" SHALL BE THE DIFFERENCE BETWEEN THE MANHOLE TOP ELEVATION AND THE FLAT TOP ELEVATION FOR TYPE "A" MANHOLE. DIMENSION "A" SHALL BE THE DIFFERENCE BETWEEN THE TOP MANHOLE ELEVATION AND THE TOP OF THE ECCENTRIC TRANSITION SECTION FOR TYPE "B" MANHOLE. THE MIN. DIMENSION "A" SHALL BE 9" UNDER PAVEMENT AND 1'-4" OUTSIDE THE PAVEMENT. DIMENSION "A" SHALL NOT EXCEED 2'-0". WHEN RECONSTRUCTING OR ADJUSTING TO GRADE AN EXISTING MANHOLE, TYPE "A" OR "B", DIMENSION "A" MAY BE INCREASED TO 5'-0" MAX., IF THE RECONSTRUCTION WOULD REQUIRE DIMENSION "A" TO BE IN EXCESS OF 5'-0", THEN THE CONE SECTION OF THE FLAT SLAB TOP MUST BE RAISED AND THE 2'-0" MAX. DIMENSION "A" WILL AGAIN APPLY.

DIMENSION "C" SHALL BE THE DIFFERENCE BETWEEN THE FLOWLINE ELEVATION SHOWN ON THE PLANS AND THE FLAT SLAB TOP ELEVATION WHEN SHOWN ON THE PLANS. ONE OR MORE PRECAST CONCRETE BARREL SECTIONS MAY BE PROVIDED TO OBTAIN THE REQUIRED HEIGHT. THE CONTRACTOR MAY PROVIDE ANY COMBINATION OF STANDARD LENGTH PRECAST CONCRETE SECTIONS THAT WILL EQUAL OR EXCEED DIMENSION "C". IF ADDITIONAL LENGTH IS PROVIDED, THE LEVEL BLOCKS SHALL BE SET AT THE PROPER ELEVATION BELOW THE FLOWLINE SO THAT THE FLAT SLAB TOP ELEVATION SHOWN ON THE PLANS WILL BE OBTAINED. ALL ADDITIONAL MATERIAL OR WORK REQUIRED SHALL BE AT THE CONTRACTOR'S EXPENSE.

DIMENSION "H" SHALL BE THE DIFFERENCE BETWEEN THE FLOWLINE ELEVATION SHOWN ON THE PLANS AND THE MANHOLE TOP ELEVATION SHOWN ON THE PLANS.

THE FURNISHING AND PLACING OF MANHOLE STEPS AND LIFT BARS SHALL BE SUBSIDIARY TO THE MANHOLE.

MATCH TOP INSIDE SURFACES OF THE PIPES COMING INTO THE MANHOLE WHENEVER POSSIBLE. THE MANHOLE BENCH SHALL COME UP TO ¾ THE DIA. OF THE LARGEST PIPE AND SLOPE UP 3" TO THE SIDE. CONTOUR THE BENCH TO DRAIN.

THE MIN. CLEARANCE OF REINFORCING STEEL SHALL BE 2".

BARREL DIA. SHOWN ON THE PLAN ARE THE MIN. DIA. THAT MAY BE USED AT EACH LOCATION. THESE DIA. ARE BASED ON CENTER BARREL SECTIONS WHICH ARE USUALLY AVAILABLE FROM THE FABRICATOR. THE CONTRACTOR MAY PROVIDE BARREL SECTIONS OF LARGER DIA. THAN SHOWN ON THE PLAN. NO ADDITIONAL PAYMENT SHALL BE MADE FOR BARREL SECTIONS OF A LARGER DIA. THAN SHOWN ON THE PLANS.

EACH SECTION SHALL BE SET IN A FRESH BED OF MORTAR AND POINTED UP INSIDE AND OUT, OR A COLD FORMED JOINT MATERIAL CONFORMING TO FEDERAL SPECIFICATIONS SS-S-00210.

THE CONTRACTOR MAY, AT HIS OPTION, CAST-IN-PLACE THE FIRST SECTION OF THE MANHOLE WHEN THE STANDARD KNOCKOUTS ARE NOT AVAILABLE. THE CONCRETE WALL THICKNESS AND REINFORCING STEEL AREA SHALL BE AS SHOWN FOR THE RESPECTIVE "H" DIMENSION IN CHART NO. 1 FOR MANHOLE TYPE "C". THE MIN. LS AND SS DIMENSION SHALL BE OF SUFFICIENT DIMENSION TO ACCOMMODATE PIPES ENTERING THE RESPECTIVE WALL. THE TOP OF THE CAST-IN-PLACE SECTION SHALL BE FORMED TO THE SAME DIA. AS THE RESPECTIVE PRECAST SECTION.

UNLESS SPECIFIED IN THE PLANS, THE CONTRACTOR MAY DETERMINE THE TYPE MANHOLE TO BE CONSTRUCTED.

THE CONTRACTOR MAY, AT HIS OPTION, USE TRANSITION SECTIONS TO REDUCE THE BARREL SIZE OF THE MANHOLE. DIMENSION "A" CANNOT EXCEED 2'-0" ON THE 26" DIA. RISER SECTION.

WHEN USING BRICK FOR THE FINAL ADJUSTMENT OF THE FLANGE SECTION, A DOUBLE ROW OF BRICK PLASTERED ½" THICK INSIDE AND OUT SHALL BE USED. THE BRICK SHALL CONFORM TO REQUIREMENTS OF ASTM C32.

PRECAST MANHOLE SECTIONS MAY BE SET WITH EITHER THE TONGUE END UP OR THE GROOVE END UP.

REV. NO.	DATE	DESCRIPTION OF REVISION
R2	JAN 18	NDOR BORDER TO NDOT BORDER
R1	NOV 98	MULTIPLE REVISIONS

NEBRASKA DEPARTMENT OF TRANSPORTATION
STANDARD PLAN NO. 435-R2

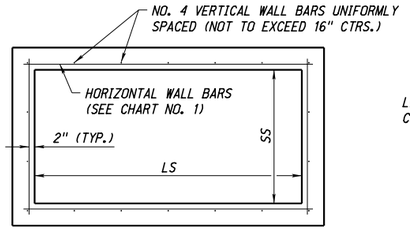
MANHOLE

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

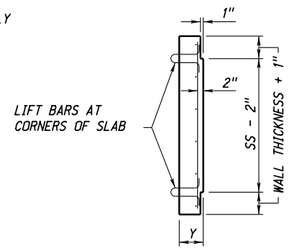
PROFESSIONAL CIVIL ENGINEER
MARK J. TRAYNOWICZ
E-8119
STATE OF NEBRASKA

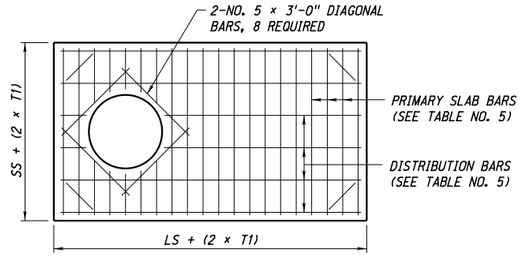
DATE

ORIGINAL:
APRIL 4, 1988
DATE



SECTION A-A





TOP SLAB

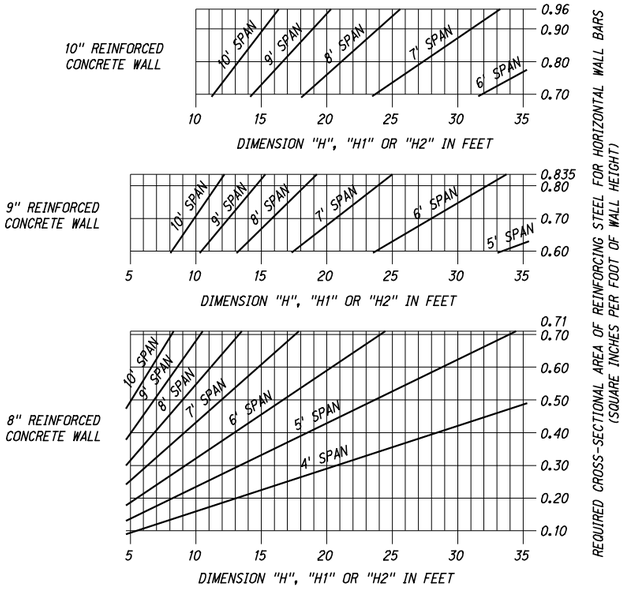


CHART NO. 1

NOTES

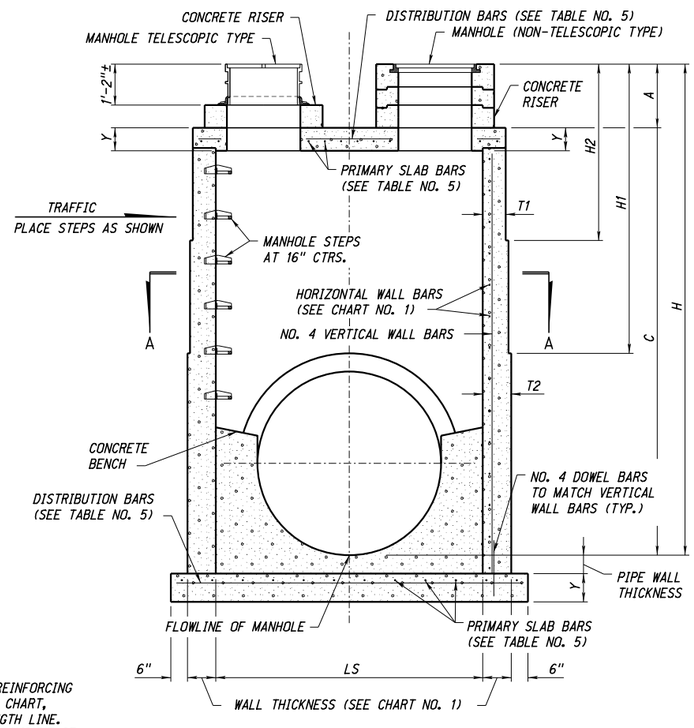
CHART NO. 1 SHALL BE USED TO DETERMINE THE WALL THICKNESS AND THE AMOUNT OF HORIZONTAL REINFORCING STEEL REQUIRED FOR A PARTICULAR VALUE OF "H" AND A LONG SPAN DIMENSION "LS". TO USE THE CHART, LOCATE THE POINT OF INTERSECTION OF A VERTICAL "H" DIMENSION LINE WITH A SLOPING SPAN LENGTH LINE. FROM THIS POINT OF INTERSECTION, DRAW A HORIZONTAL LINE TO THE RIGHT TO FIND THE REQUIRED AMOUNT OF HORIZONTAL REINFORCING STEEL PER FOOT OF WALL HEIGHT. THE REQUIRED WALL THICKNESS WILL BE FOUND AT THE LEFT OF THE PARTICULAR CHART SECTION.

EXAMPLE 1: GIVEN A MANHOLE WITH H = 13 FEET AND LONG SPAN LS = 6 FEET. FROM THE CHART FIND THAT A 8" THICK WALL WITH 0.40 SQ. IN./FT. OF REINFORCING STEEL IS REQUIRED. THE HORIZONTAL BARS MAY BE NO. 4 AT 6" SPACING OR NO. 5 AT 9" SPACING. (SEE TABLE NO. 4)

EXAMPLE 2: GIVEN A MANHOLE WITH H = 19 FEET AND LONG SPAN LS = 7.5 FEET. NOTE THAT THE CENTER SECTION OF THE CHART MUST BE USED WHICH INDICATES THAT A 9" THICK WALL IS REQUIRED. ON THE VERTICAL LINE REPRESENTING H = 19 FEET, FIND A POINT MIDWAY BETWEEN THE 7-FOOT AND 8-FOOT SPAN LENGTH LINES. THE REQUIRED AMOUNT OF HORIZONTAL REINFORCING STEEL WOULD THEN BE READ AS 0.73 SQ. IN./FT., WHICH COULD BE PROVIDED BY USING NO. 5 BARS AT 5" SPACING OR NO. 6 BARS AT 7" SPACING. (SEE TABLE NO. 4)

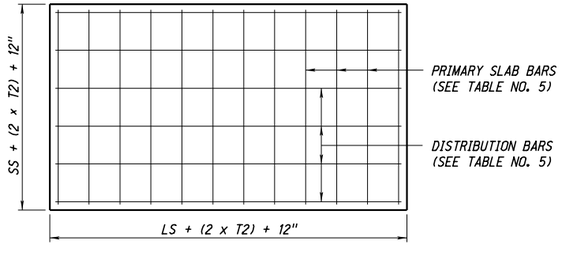
THE WALL THICKNESS AND THE AMOUNT OF HORIZONTAL REINFORCING AS DETERMINED FROM THE CHART SHALL BE USED FOR ALL FOUR WALLS IN A PARTICULAR LIFT OR POUR. THE SAME WALL DESIGN MAY BE USED THROUGHOUT THE HEIGHT OF THE MANHOLE, OR A DIFFERENT WALL DESIGN FOR THE NEXT LIFT MAY BE DETERMINED BY REENTERING THE CHART WITH THE VALUES OF "H1" AND "LS" WALL DESIGN FOR ADDITIONAL LIFTS WOULD BE HANDLED IN THE SAME MANNER.

WHEN DESIGNING A MANHOLE FROM CHART NO. 1, THE MINIMUM VALUE OF "H" SHALL BE 5 FEET (FOR DESIGN PURPOSES ONLY). THE MINIMUM HORIZONTAL REINFORCING SHALL BE NO. 4 BARS AT 12" CENTERS AND THE MINIMUM WALL THICKNESS SHALL BE 8".



FOR DEFINITIONS OF DIMENSIONS "A", "C" AND "H", SEE SHEET 1 OF 3.

TYPE "C"



BASE

TABLE NO. 4			
CROSS SECTIONAL AREAS IN SQUARE INCHES OF BARS IN WALL SECTIONS ONE FOOT HIGH			
SPACING	BAR SIZE		
	NO. 4	NO. 5	NO. 6
5"	0.46	0.74	1.06
5½"	0.44	0.68	0.96
6"	0.40	0.62	0.88
6½"	0.37	0.57	0.81
7"	0.34	0.53	0.75
7½"	0.32	0.50	0.70
8'	0.30	0.47	0.66
8½"	0.28	0.44	0.62
9"	0.27	0.41	0.59
9½"	0.25	0.39	0.56
10"	0.24	0.37	0.53
10½"	0.23	0.35	0.50
11"	0.22	0.34	0.48
11½"	0.21	0.32	0.46
12"	0.20	0.31	0.44

TABLE NO. 5			
BASE AND TOP SLAB FOR RECTANGULAR MANHOLE			
SHORT SPAN DIMENSION "SS"	SLAB THICKNESS "Y"	PRIMARY SLAB REINFORCING BAR SIZE & SPACING	DISTRIBUTION REINFORCING BAR SIZE & SPACING
2'-6" TO 4'-11"	8½"	NO. 5 AT 5½" CTRS.	NO. 5 AT 11" CTRS.
5'-0" TO 5'-11"	9"	NO. 5 AT 5" CTRS.	NO. 5 AT 10" CTRS.
6'-0" TO 6'-11"	9½"	NO. 5 AT 4½" CTRS.	NO. 5 AT 9" CTRS.
7'-0" TO 7'-11"	10"	NO. 6 AT 5½" CTRS.	NO. 6 AT 11" CTRS.
8'-0" TO 8'-11"	11"	NO. 6 AT 5½" CTRS.	NO. 6 AT 11" CTRS.
9'-0" TO 10'-0"	12"	NO. 6 AT 5" CTRS.	NO. 6 AT 10" CTRS.

NOTES

FOR TYPE "C" MANHOLE, THE MAX. VALUES OF "H" SHALL BE:
MAX. H = 17 FEET WHEN LS = 10 FEET
MAX. H = 21 FEET WHEN LS = 9 FEET
MAX. H = 26 FEET WHEN LS = 8 FEET
MAX. H = 34 FEET WHEN LS = 7 FEET
MAX. H = 35 FEET WHEN LS = 6 FEET

THE LONGER CLEAR SPAN "LS" OF THE WALLS, AS SEEN IN A HORIZONTAL SECTION, SHALL BE USED TO FIND A WALL DESIGN FROM CHART NO. 1.

THE SHORTER CLEAR SPAN "SS" SHALL BE USED TO FIND A BASE AND TOP SLAB DESIGN FROM THE TABLE NO. 5.

THE MIN. COVERING, MEASURED FROM THE FACE OF THE CONCRETE TO THE SURFACE OF A REINFORCING BAR, SHALL BE 2" EXCEPT AS SHOWN.

THE FURNISHING AND PLACING OF MANHOLE STEPS SHALL BE SUBSIDIARY TO THE MANHOLE.

THE TOP SLAB MAY BE CAST-IN-PLACE OR PRECAST, BUT IF IT IS PRECAST, IT SHALL BE SET IN A FRESH BED OF MORTAR AND POINTED UP INSIDE AND OUT.

FOR RISER AND BENCH DETAILS NOT SHOWN, SEE SHEET 1 OF 3.

THE MIN. "LS" AND "SS" DIMENSION SHALL BE 2'-6" FOR MANHOLES WITH "H" LESS THAN 6 FEET AND SHALL BE 4'-0" FOR MANHOLES WITH "H" GREATER THAN 6 FEET. WHEN "LS" AND "SS" DIMENSIONS ARE NOT SPECIFIED ON THE PLANS, THE DIMENSIONS SHALL BE OF SUFFICIENT DIMENSION TO ACCOMMODATE PIPES ENTERING THE RESPECTIVE WALL. A MIN. OF 6" SHALL BE MAINTAINED BETWEEN THE INSIDE CORNER OF THE MANHOLE AND THE OUTER SHELL OF AN ENTERING PIPE, AND BETWEEN OUTER SHELLS OF PIPE ENTERING THE SAME WALL.

REV. NO.	DATE	DESCRIPTION OF REVISION
R2	JAN 18	NDOR BORDER TO NDOT BORDER
R1	NOV 98	MULTIPLE REVISIONS

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 435-R2

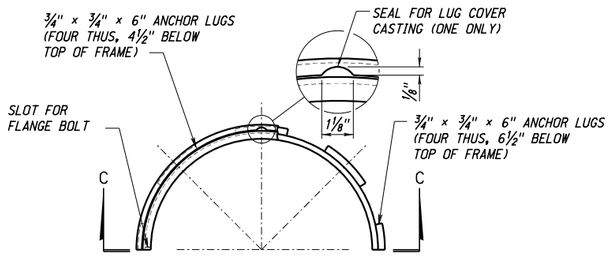
MANHOLE

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

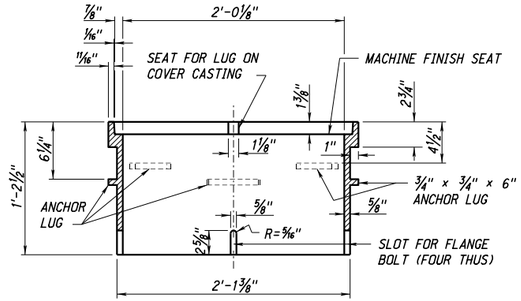
PROFESSIONAL CIVIL ENGINEER
MARK J. TRAYNOWICZ
E-8119
STATE OF NEBRASKA

DATE

ORIGINAL:
APRIL 4, 1988
DATE



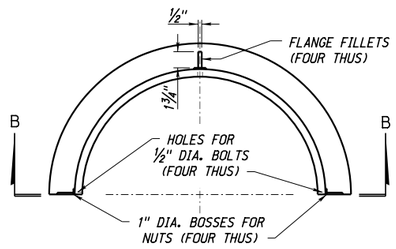
HALF TOP VIEW



SECTION C-C

FRAME

DURING PAVEMENT CONSTRUCTION, FRAME CASTING TO BE TEMPORARILY HELD IN POSITION BY BOLTING TO FLANGE CASTING. BOLTS TO BE REMOVED AFTER CONCRETE HAS HARDENED.



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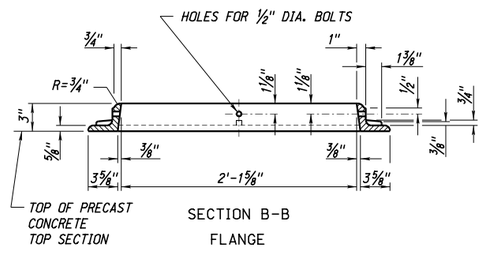
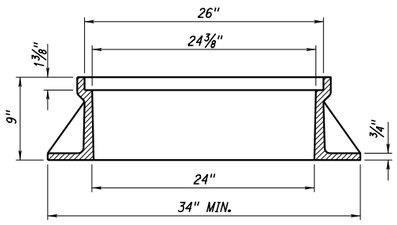


SECTION B-B

FLANGE

TYPE I
DETAILS OF FRAME AND FLANGE

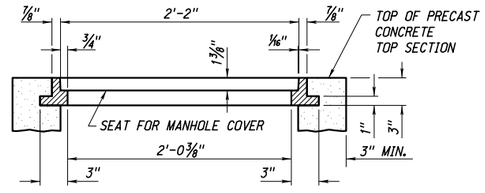
TELESCOPIC TYPE (CAST IRON)



SECTION

TYPE II
DETAILS OF FRAME

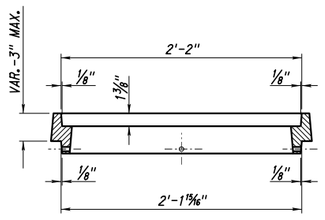
NON-TELESCOPIC TYPE (CAST IRON)



SECTION

TYPE III
DETAILS OF RING

NON-TELESCOPIC TYPE (CAST IRON)



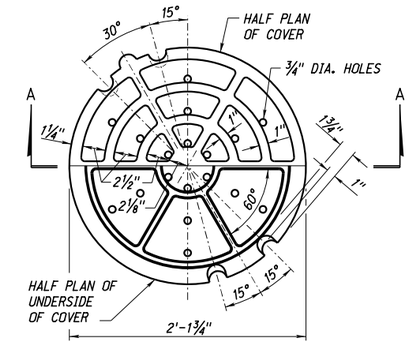
SECTION

ADJUSTING RINGS MAY BE USED IN ORDER TO OBTAIN THE REQUIRED ELEVATION OF EITHER NEW OR EXISTING MANHOLES. THE RINGS ARE SUBSIDIARY TO BUILD MANHOLE, ADJUST MANHOLE TO GRADE OR RECONSTRUCT MANHOLE.

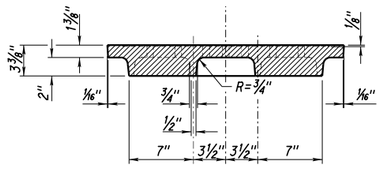
THE ADJUSTING RINGS SHALL BE HELD RIGIDLY TO THE FRAME AND TO EACH OTHER BY USE OF FOUR SET SCREWS IN THE BEARING LEG OF THE RING. ADJUSTING RINGS MAY BE USED TO A MAXIMUM HEIGHT OF 12 INCHES.

THE CONTRACTOR SHALL INSPECT THE CONDITION AND VERIFY THE DIMENSIONS OF EXISTING MANHOLE PRIOR TO USING ADJUSTING RINGS.

DETAILS OF ADJUSTING RING



HALF PLAN



SECTION A-A

DETAILS OF COVER

(CAST IRON)

WEIGHTS

(CAST IRON)

TYPE A COVER	225 POUNDS
TYPE B COVER	230 POUNDS
FRAME (TYPE I)	260 POUNDS
FLANGE (TYPE I)	95 POUNDS
FRAME (TYPE II)	275 POUNDS
RING FOR COVER (TYPE III)	120 POUNDS

NOTES

TYPE I AND II ASSEMBLIES NORMALLY USED IN PAVEMENT.

TYPE III ASSEMBLY IS NORMALLY USED OUTSIDE OF PAVEMENT.

FOR TYPE A COVER (STORM SEWER), USE DETAILS AS SHOWN.

FOR TYPE B COVER (SANITARY SEWER), OMIT ¾" DIA. HOLES IN COVER.

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MANHOLE

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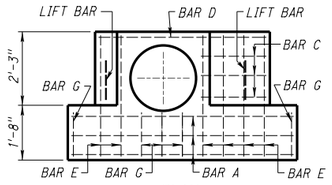
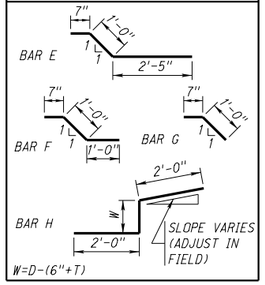
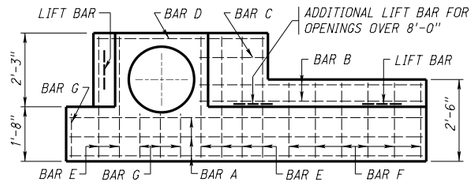


PLAN

INLET COVER

REINFORCING BAR BENDING DIAGRAM FOR CURB INLET



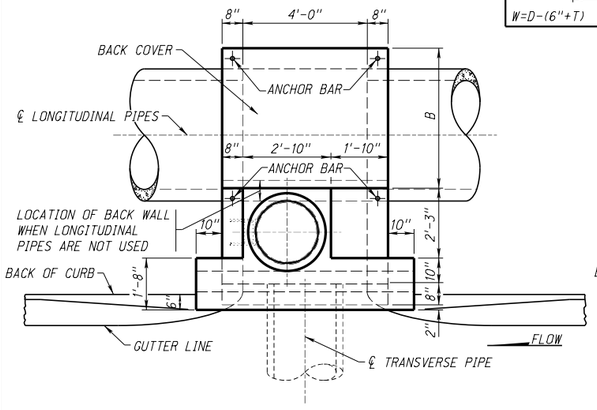


PLAN

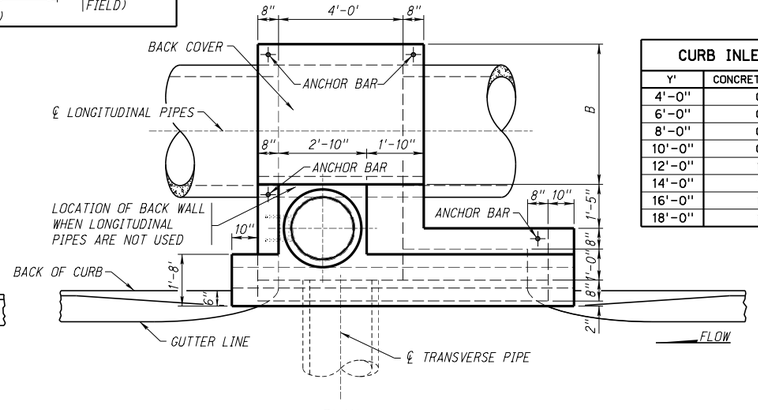
INLET COVER

REINFORCING BAR SCHEDULE FOR CURB INLETS (INCLUDES COVER)

BAR	SIZE	SHAPE	Y = 4'-0"		Y = 6'-0"		Y = 8'-0"		Y = 10'-0"		Y = 12'-0"		Y = 14'-0"		Y = 16'-0"		Y = 18'-0"	
			NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH
A	8	STR.	3	6'-9"	3	8'-9"	3	10'-9"	3	12'-9"	3	14'-9"	3	16'-9"	3	18'-9"	3	20'-9"
B	6	STR.	--	--	2	4'-10	2	6'-10"	2	8'-10"	2	10'-10"	2	12'-10"	2	14'-10"	2	16'-10"
C	6	STR.	3	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"	1	2'-0"
D	6	STR.	1	5'-1"	1	5'-1"	1	5'-1"	1	5'-1"	1	5'-1"	1	5'-1"	1	5'-1"	1	5'-1"
E	5	BENT	6	4'-0"	6	4'-0"	6	4'-0"	6	4'-0"	6	4'-0"	6	4'-0"	6	4'-0"	6	4'-0"
F	5	BENT	--	2'-7"	3	2'-7"	6	2'-7"	8	2'-7"	11	2'-7'	13	2'-7"	16	2'-7"	18	2'-7"
G	5	BENT	5	1'-7"	4	1'-7"	4	1'-7"	4	1'-7"	4	1'-7"	4	1'-7"	4	1'-7"	4	1'-7"
H	4	BENT	--	--	10	W+4'-0"	10	W+4'-0"	10	W+4'-0"	10	W+4'-0"	10	W+4'-0"	10	W+4'-0"	10	W+4'-0"
J	4	STR.	--	--	--	--	--	--	--	--	--	--	2	2'-2"	2	2'-2"	2	2'-2"
K	4	STR.	--	--	--	--	--	--	--	--	--	--	4	1'-9"	4	1'-9"	4	1'-9"
LIFT	4	BENT	VAR.	2'-6"	VAR.	2'-6"	VAR.	2'-6"	VAR.	2'-6"	VAR.	2'-6"	VAR.	2'-6"	VAR.	2'-6"	VAR.	2'-6"
M	4	STR.	VAR.	5'-1"	VAR.	5'-1"	VAR.	5'-1"	VAR.	5'-1'	VAR.	5'-1"	VAR.	5'-1"	VAR.	5'-1"	VAR.	5'-1"
N	4	STR.	8	B-3	8	B-3	8	B-3	8	B-3	8	B-3	8	B-3	8	B-3	8	B-3



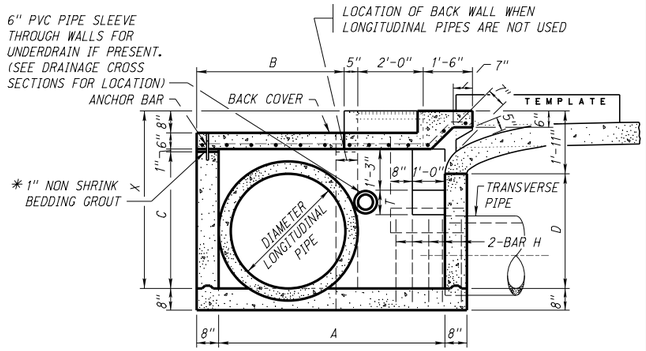
PLAN



PLAN

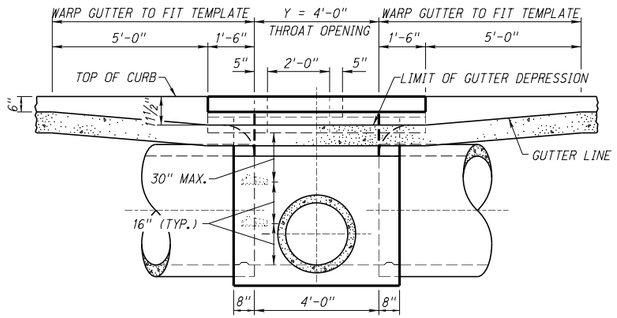
CURB INLET COVER QUANTITIES

Y'	CONCRETE (CU.YDS.)	REINFORCING (LB.)
4'-0"	0.62	46
6'-0"	0.72	58
8'-0"	0.82	71
10'-0"	0.92	83
12'-0"	1.02	95
14'-0"	1.12	112
16'-0"	1.22	122
18'-0"	1.32	136

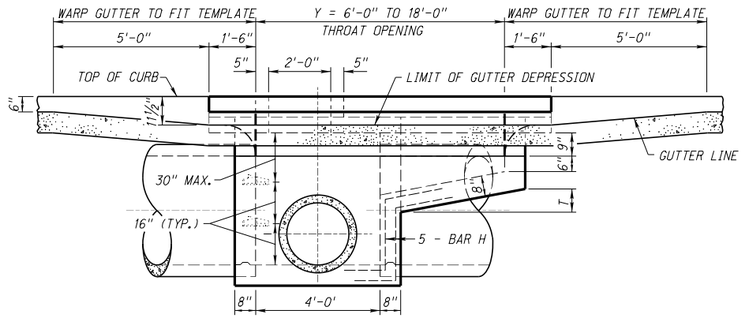


TYPICAL SECTION OF INLETS

* GROUT SHALL BE FINISHED SUCH THAT THE TOP ELEVATION OF THE INLET LID, WHEN INSTALLED, MATCHES THE FINISHED SHOULDER SLOPE OF THE ROADWAY CROSS-SECTIONS.



FRONT ELEVATION



FRONT ELEVATION

CURB INLETS

DATA FOR CURB INLETS (INCLUDES INLET COVER)

DIA. OF LONGIT. PIPE	DIMENSIONS					QUANTITIES															NO. OF M BARS	ADDITIONAL QUANTITIES PER ONE FOOT INCREASE OF DIMENSION "X"	
	X ① (MIN.)	A ②	B	C	D	CONCRETE, CU. YDS. ③								REINFORCING STEEL, LBS.								CONCRETE CU. YDS.	REINF. STEEL LBS. ④
						Y=4'	Y=6'	Y=8'	Y=10'	Y=12'	Y=14'	Y=16'	Y=18'	Y=4'	Y=6'	Y=8'	Y=10'	Y=12'	Y=14'	Y=16'	Y=18'		
--	3'-11"	2'-8"	--	2'-8"	2'-0"	2.08	2.43	2.79	3.15	3.51	4.06	4.46	4.85	113	175	202	231	259	289	316	344	NONE	0.383	6.7
12"	2'-11"	4'-0"	1'-7"	1'-8"	1'-0"	2.14	2.51	2.86	3.21	3.56	3.95	4.30	4.65	133	186	216	245	274	310	340	364	3	0.459	6.7
15"	3'-2"	4'-4"	1'-11"	1'-11"	1'-3"	2.37	2.71	3.07	3.43	3.79	4.21	4.57	4.94	136	193	221	250	277	312	342	370	3	0.473	6.7
18"	3'-5"	4'-7"	2'-2"	2'-2"	1'-6"	2.60	2.95	3.30	3.67	4.03	4.44	4.80	5.16	141	200	228	257	284	318	349	376	4	0.490	6.7
21"	3'-8"	4'-11"	2'-6"	2'-5"	1'-9"	2.83	3.19	3.53	3.90	4.26	4.68	5.04	5.40	144	203	231	260	287	322	351	379	4	0.504	6.7
24"	3'-11"	5'-2"	2'-9"	2'-8"	2'-0"	3.06	3.41	3.76	4.12	4.49	5.04	5.43	5.83	148	210	238	267	294	324	352	379	5	0.518	6.7
27"	4'-2"	5'-6"	3'-1"	2'-11"	2'-3"	3.31	3.66	4.01	4.37	4.74	5.29	5.68	6.08	150	213	241	270	297	327	354	382	5	0.532	6.7
30"	4'-5"	5'-9"	3'-4"	3'-2"	2'-6"	3.54	3.89	4.25	4.61	4.97	5.52	5.92	6.32	151	217	244	273	301	331	358	385	5	0.547	6.7
36"	4'-11"	6'-4"	3'-11"	3'-8"	3'-0"	4.06	4.41	4.77	5.13	5.49	6.04	6.44	6.83	158	226	254	283	310	340	368	395	6	0.576	6.7
42"	5'-5"	6'-11"	4'-6"	4'-2"	3'-6"	4.60	4.95	5.31	5.67	6.03	6.58	6.98	7.38	164	236	264	293	320	350	378	405	7	0.605	6.7
48"	5'-11"	7'-6"	5'-1"	4'-8"	4'-0"	5.18	5.53	5.89	6.25	6.61	7.16	7.56	7.95	171	246	274	303	330	360	387	415	8	0.634	6.7
54"	6'-5"	8'-1"	5'-8"	5'-2"	4'-6"	5.78	6.13	6.49	6.85	7.21	7.76	8.16	8.56	174	253	280	309	337	367	394	421	8	0.663	6.7
60"	6'-11"	8'-8"	6'-3"	5'-8"	5'-0"	6.41	6.76	7.12	7.48	7.84	8.39	8.79	9.19	180	262	290	319	346	376	404	431	9	0.691	6.7
66"	7'-5"	9'-3"	6'-10"	6'-2"	5'-6"	7.07	7.42	7.78	8.14	8.50	9.05	9.45	9.85	187	272	300	329	356	386	414	441	10	0.720	6.7

T = 9" EXCEPT FOR THE FOLLOWING:
T = 6" FOR 6'-0" TO 18'-0" OPENINGS WHEN X = 2'-11" THRU 3'-1"
T = 1'-6" FOR 14'-0" TO 18'-0" OPENINGS WHEN X = 3'-11" THRU 7'-5"

① "X" SHALL NOT EXCEED 7'-6".

② "A" SHALL NOT EXCEED 10'-0".

③ NO DEDUCTIONS WILL BE MADE FOR PIPE OPENINGS.

④ NOT APPLICABLE WHERE Y = 4'-0".

DIAMETER OF PIPE AND MINIMUM "X" IN THIS INLET DATA TABLE ARE BASED ON THE LONGITUDINAL PIPE. DEPTH OF THE INLET MAY BE GOVERNED BY THE TRANSVERSE PIPE (MINIMUM "D" = TRANSVERSE PIPE DIAMETER PLUS 9").

NOTES:

THE MINIMUM COVERING, MEASURED FROM THE FACE OF CONCRETE TO THE SURFACE OF ANY REINFORCING BAR, SHALL BE 1½".

THE QUANTITIES OF CONCRETE AND STEEL FOR CURB INLET INCLUDES THAT PORTION OF CONCRETE AND STEEL BELOW AND BACK OF THE CURB SECTION AS SHOWN ON THIS PLAN.

THE CONCRETE COVERS MAY BE CAST IN PLACE OR PRECAST.

THE CAST IRON COVERS, FRAMES SHALL BE GREY IRON CONFORMING TO THE SPECIFICATIONS. CAST IRON STEPS SHALL BE INSTALLED IN CURB INLETS AND JUNCTION BOXES WHEN THE "X" DIMENSION IS 4'-6" OR GREATER. THE FURNISHING AND PLACING OF CAST IRON STEPS SHALL BE SUBSIDIARY TO THE ITEM FOR WHICH DIRECT PAYMENT IS MADE.

THE GUTTER DEPRESSION TEMPLATE SHALL BE USED THROUGHOUT THE THROAT OPENING.

CLASS OF CONCRETE AND MINIMUM COMPRESSIVE STRENGTH AND TYPE OF STEEL FOR REINFORCING BARS SHALL CONFORM TO THE NDOT "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION."

THE INLET COVER SHALL BE IMPRINTED "NO DUMPING" SEE SHEET 2 OF 2.

REV. NO.	DATE	DESCRIPTION OF REVISION
R12	JUL 20	ADDED UNDERDRAIN NOTE & TABLE
R11	JAN 18	NDOR BORDER TO NDOT BORDER
R10	DEC 16	CHANGED TABLE INFORMATION

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 443-R12

CURB INLETS AND JUNCTION BOX

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

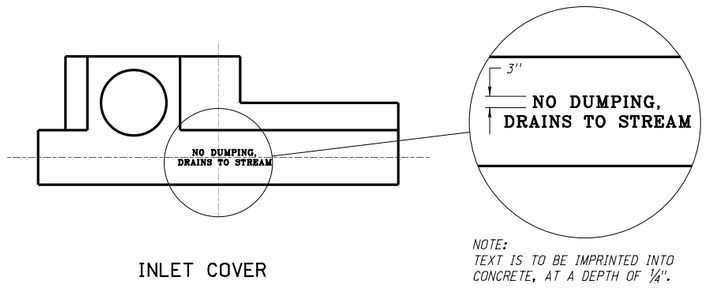
PROFESSIONAL CIVIL ENGINEER * MICHAEL H. OWEN E-6515 * STATE OF NEBRASKA

DATE

ORIGINAL: FEBRUARY 22, 1974
DATE

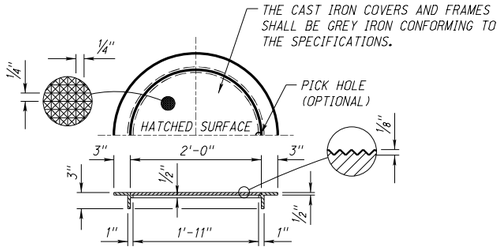
1
2

Computer: NDOTDESIGN134
Date: 29-JUN-2021 09:18
File: 443006e12.dgn



INLET COVER

NOTE:
TEXT IS TO BE IMPRINTED INTO CONCRETE, AT A DEPTH OF ¼".

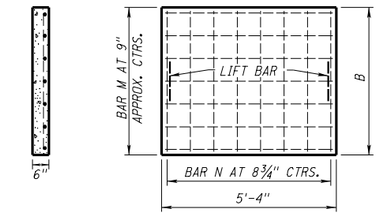


TOTAL WEIGHT = 125 LBS.

CAST IRON COVER AND FRAME
FOR JUNCTION BOX AND CURB INLET

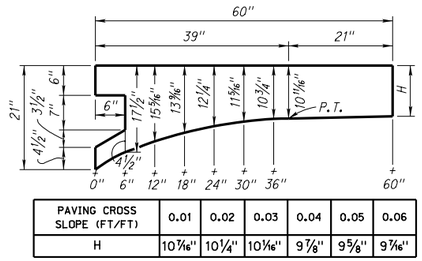
QUANTITIES FOR JUNCTION BOX			
SIZE Y × Y_1	X = 2'-6"		ADDITIONAL QUANTITIES OF CONCRETE (CU. YDS.) PER ONE FOOT INCREASE OF DIMENSIONS "X" **
	CONCRETE CU. YDS. *	REINFORC. STEEL LBS.	
2'-0" × 2'-0"	0.94	15	0.26
2'-0" × 2'-6"	1.06	18	0.27
2'-0" × 3'-0"	1.18	23	0.31
2'-6" × 2'-6"	1.20	19	0.31
2'-6" × 3'-0"	1.33	22	0.34
3'-0" × 3'-0"	1.47	29	0.36
3'-0" × 3'-6"	1.61	30	0.39
3'-0" × 4'-0"	1.76	34	0.41

* NO DEDUCTIONS WILL BE MADE FOR PIPE OPENINGS
** DIMENSION "X" SHALL NOT EXCEED 5'-6"



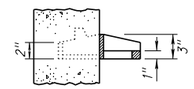
SECTION PLAN

BACK COVER

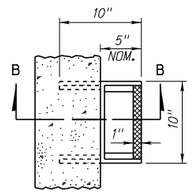


PAVING CROSS SLOPE (FT/FT)	0.01	0.02	0.03	0.04	0.05	0.06
H	10 7/16"	10 1/4"	10 1/16"	9 7/8"	9 5/8"	9 7/16"

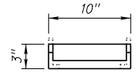
GUTTER DEPRESSION TEMPLATE



SECTION B-B



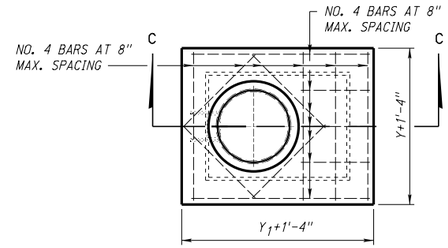
PLAN



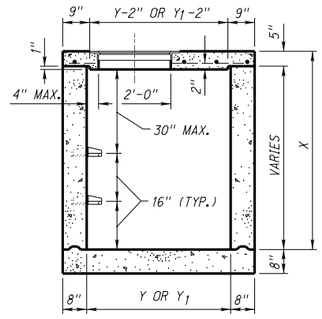
FRONT ELEVATION

STEPS TO BE PLACED AT 16" CENTERS

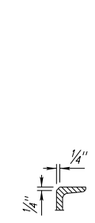
CAST IRON STEPS



PLAN

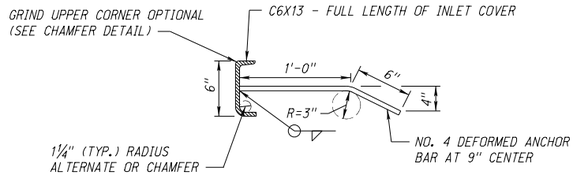


SECTION C-C
JUNCTION BOX
(NOT FOR USE UNDER TRAFFIC)



CHAMFER DETAIL

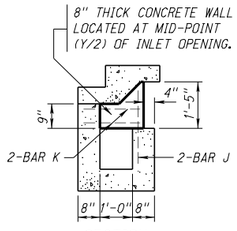
STRUCTURAL STEEL FOR FACE ARMOR	
THROAT OPENING	WEIGHT (LBS.)
4'-0"	100
6'-0"	129
8'-0"	157
10'-0"	186
12'-0"	215
14'-0"	243
16'-0"	272



FACE ARMOR

NOTE:

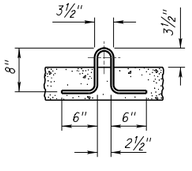
THE COMPLETED FACE ARMOR/ANCHOR BAR ASSEMBLY SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A153.



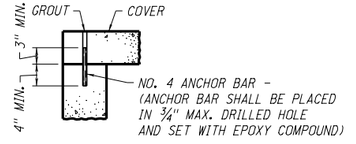
SECTION

FOR 14'-0", 16'-0" & 18'-0" INLET OPENINGS

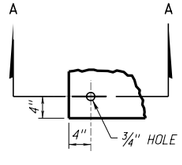
MID-POINT
COVER SUPPORT



LIFT BAR



SECTION A-A



PLAN

ANCHOR BAR

REV. NO.	DATE	DESCRIPTION OF REVISION
R12	JUL 20	ADDED UNDERDRAIN NOTE & TABLE
R11	JAN 18	NDOR BORDER TO NDOT BORDER
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NEBRASKA DEPARTMENT OF TRANSPORTATION
STANDARD PLAN NO. 443-R12

CURB INLETS AND JUNCTION BOX

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

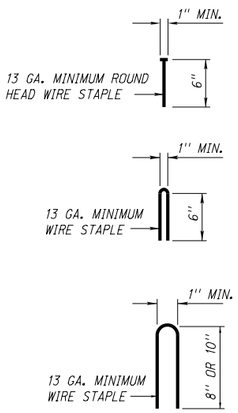
DATE

PROFESSIONAL CIVIL ENGINEER
MICHAEL H. OWEN
E-6515
STATE OF NEBRASKA

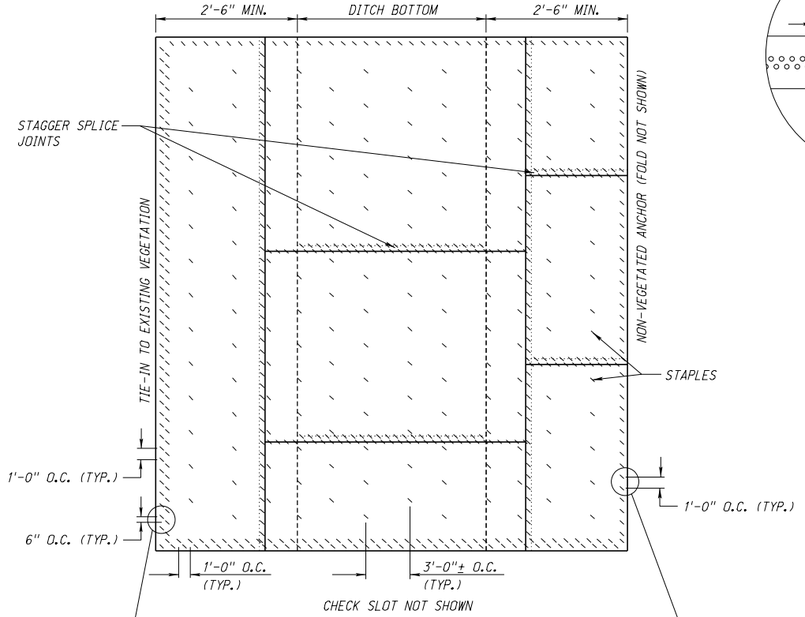
ORIGINAL:
FEBRUARY 22, 1974
DATE

2
2

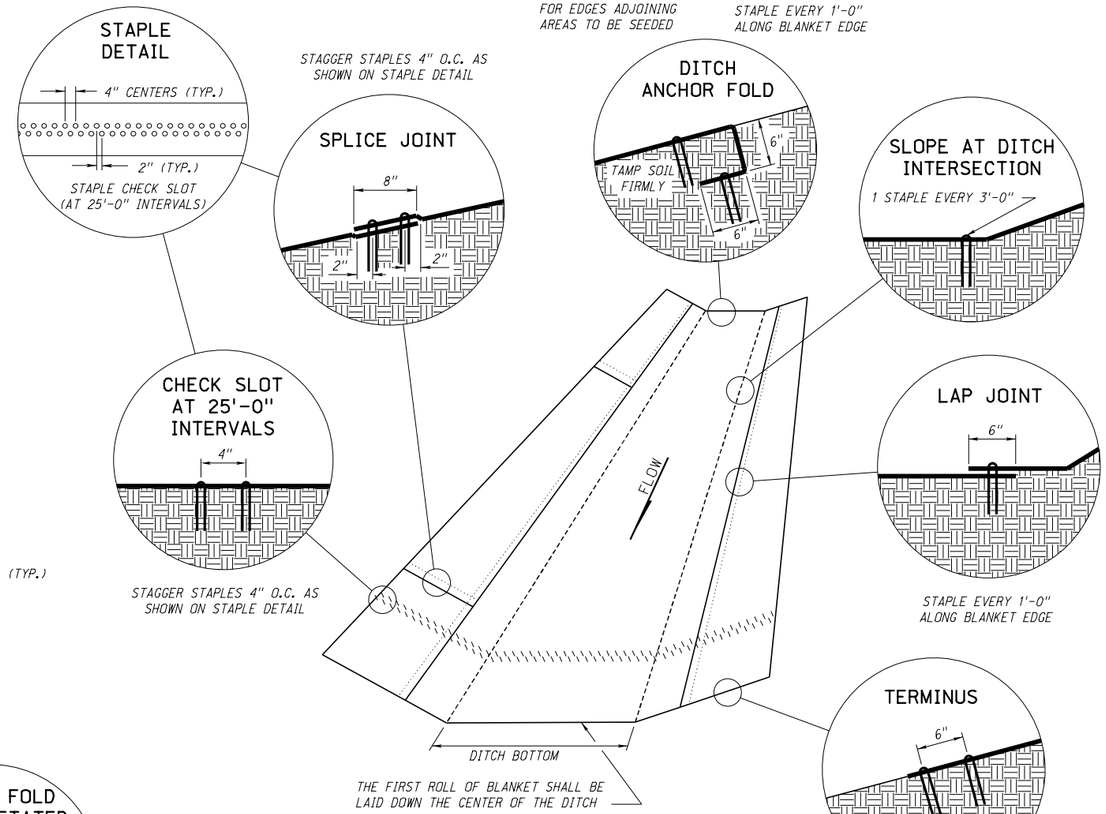
ROADWAY DESIGN DIVISION



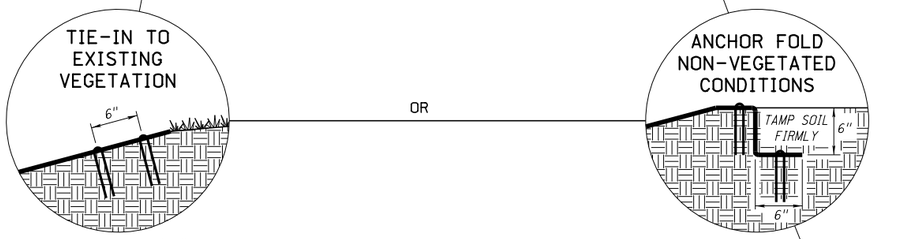
WIRE STAPLE DETAIL

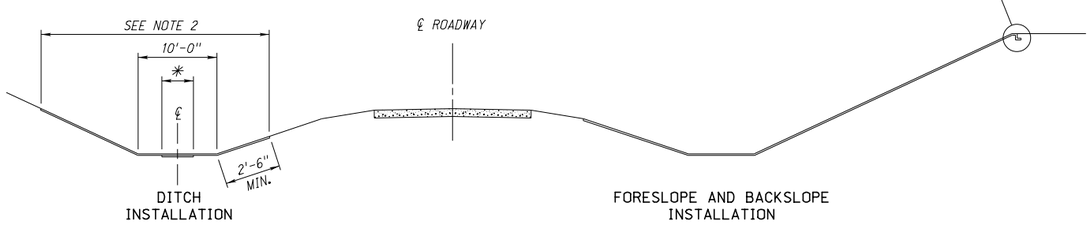


PLAN VIEW STAPLING DIAGRAM



TYPICAL EROSION CONTROL BLANKET INSTALLATION





TYPICAL CROSS-SECTION

* THE FIRST ROLL OF BLANKET SHALL BE LAID DOWN THE CENTER OF THE DITCH

NOTES:

1. THIS PLAN IS APPLICABLE FOR THE FOLLOWING: EROSION CONTROL CLASS 1B, 1C, 1D, 1E, 1F, 2A, 2B & 2C.
2. SOIL RETENTION BLANKET SHALL BE LAID A MINIMUM OF 2'-6" UP THE BACKSLOPE AND FORESLOPE.
3. CHECK SLOTS ARE PLACED PERPENDICULAR TO DITCH CENTER LINE ON 25'-0" INTERVALS.
4. THE MANUFACTURERS' RECOMMENDED STAPLING PATTERNS SHALL GOVERN OVER THE PLANS.

REV. NO.	DATE	DESCRIPTION OF REVISION
R7	JAN 18	NDOR BORDER TO NDOT BORDER
R6	APR 14	UPDATE INSTALLATION METHOD
R5	OCT 07	EROSION CONTROL AT SPLASH BASIN

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 501-R7

EROSION CONTROL

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
BRANDIE S. NEEMANN
E-11829
STATE OF NEBRASKA

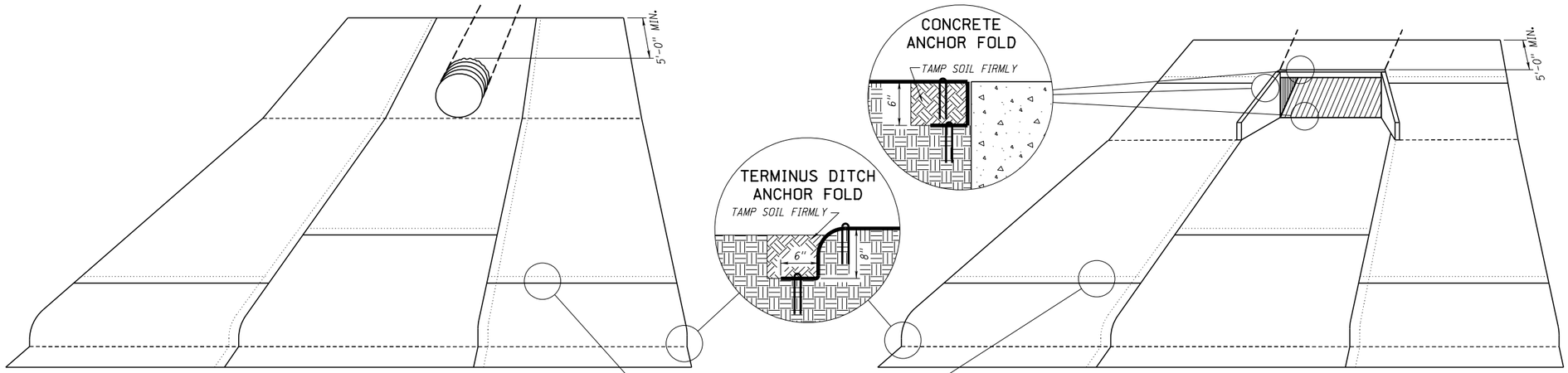
DATE

ORIGINAL: NOVEMBER 1973
DATE

1/3

Computer: NDOTDESIGN134
Date: 29-JUN-2021 09:20
File: 50100e07.dgn

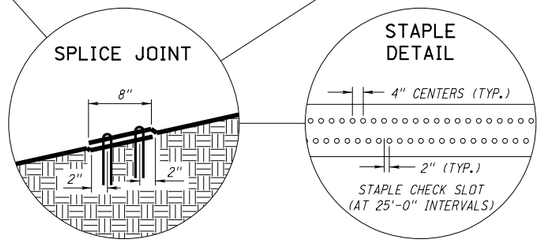
ROADWAY DESIGN DIVISION

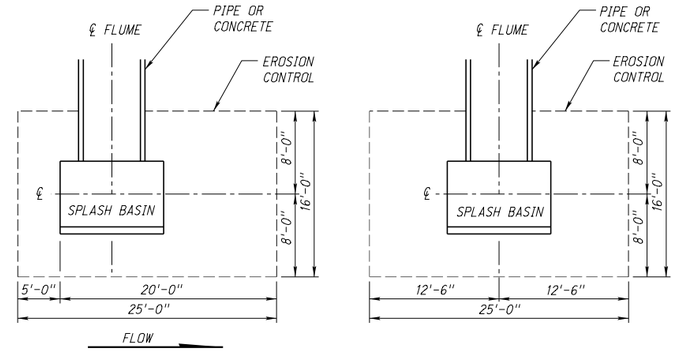


TYPICAL INSTALLATION AT PIPE CULVERT

(SHOWING STRAIGHT PIPE)

TYPICAL INSTALLATION AT BOX CULVERT

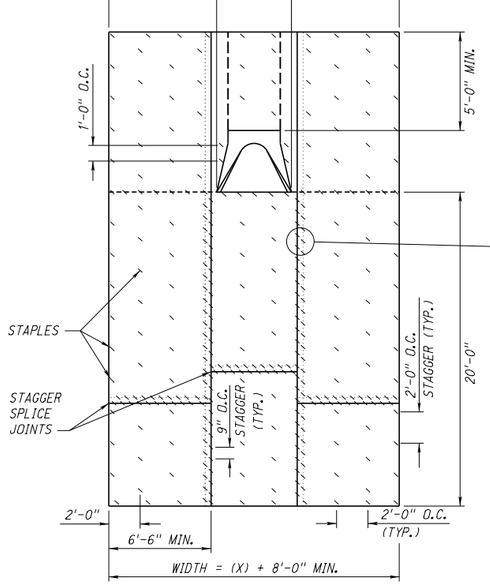




NOTE:
OFFSET EROSION CONTROL PLACEMENT ALONG THE DRAINAGE PATH

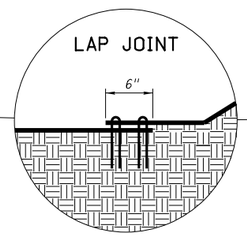
NOTE:
CENTER EROSION CONTROL ON FLUME WHERE THERE IS NO DEFINED DRAINAGE PATH

EROSION CONTROL BLANKET PLACEMENT AT SPLASH BASIN

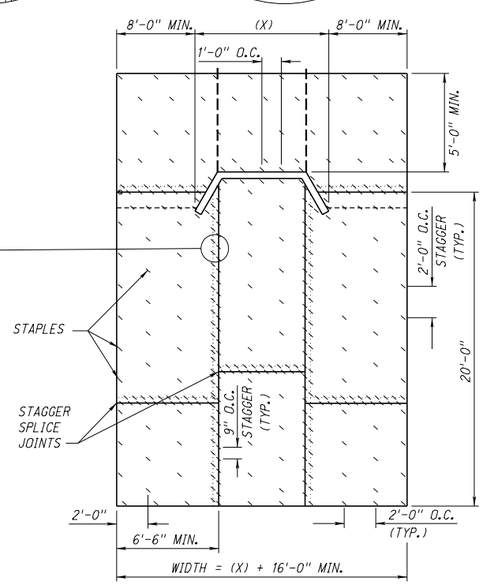


PLAN VIEW STAPLING DIAGRAM

(X) IS EQUAL TO THE OUTSIDE WIDTH OF THE FLARED END SECTION



STAGGER STAPLES EVERY 1'-0" O.C. WITHIN 20'-0" OF PIPE



PLAN VIEW STAPLING DIAGRAM

(X) IS EQUAL TO THE OUTSIDE WIDTH OF THE WING WALLS

REV. NO.	DATE	DESCRIPTION OF REVISION
R7	JAN 18	NDOR BORDER TO NDOT BORDER
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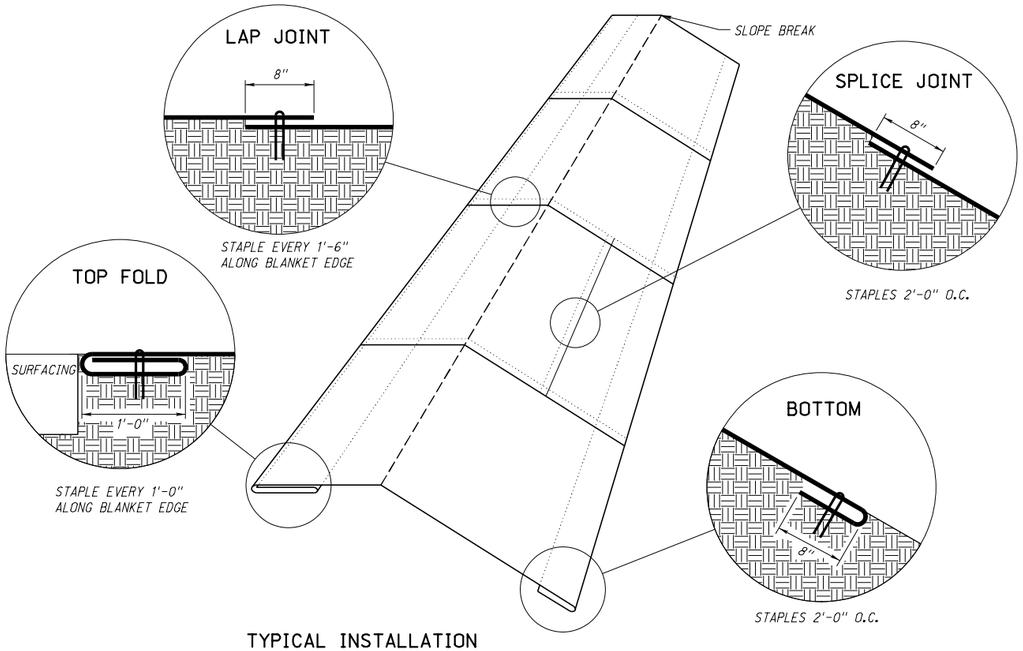
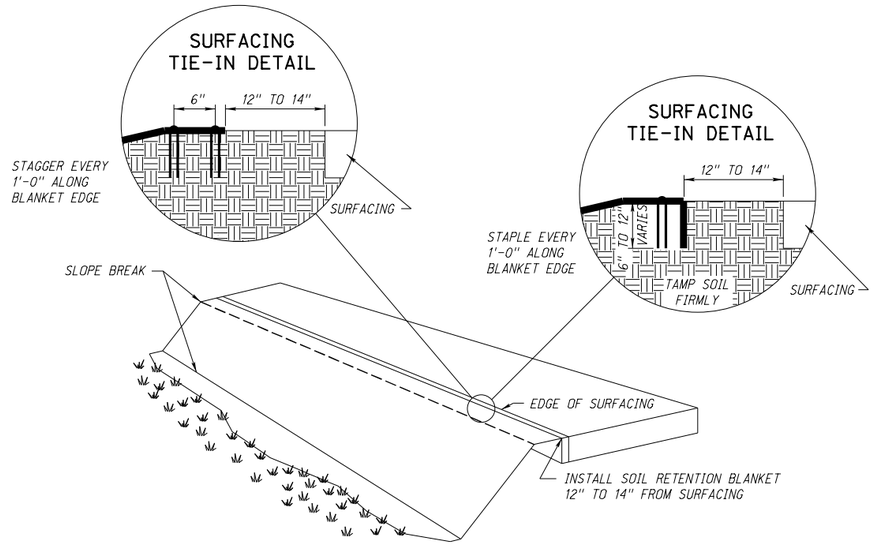
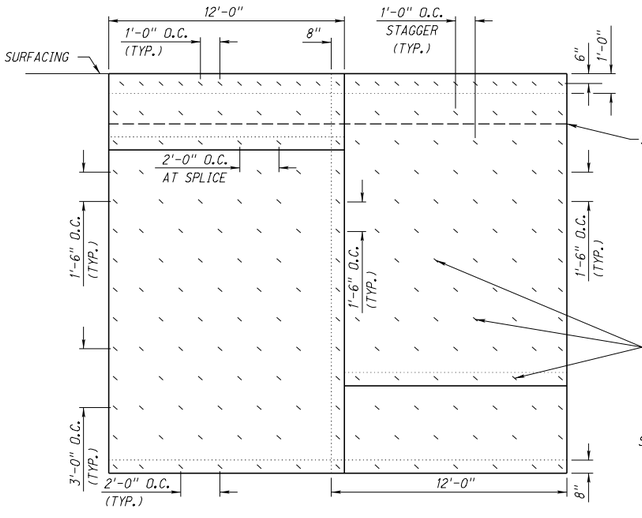
File: 50100e07.dgn Date: 29-JUN-2021 09:20 Computer: NDOTDESIGN134



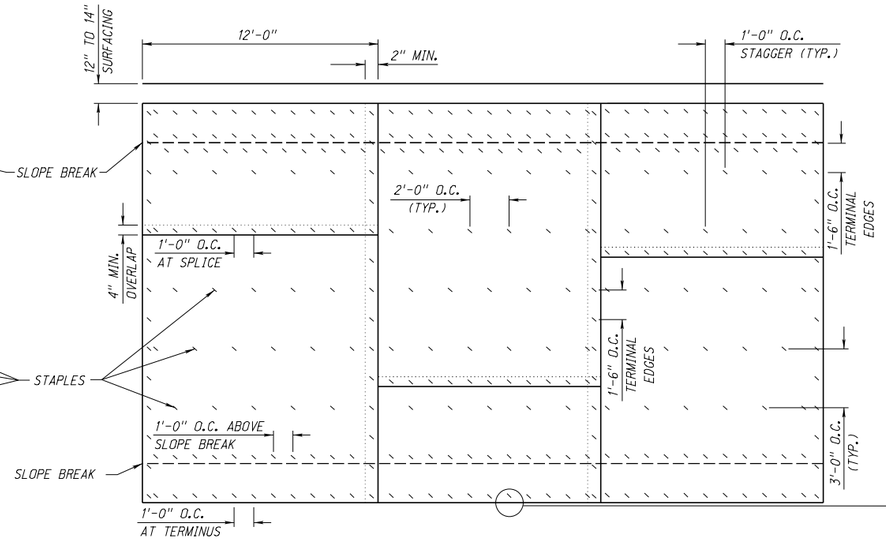
TYPICAL INSTALLATION
CLASS 1A (SLOPE PROTECTION, SAND)



SURFACING INSTALLATION

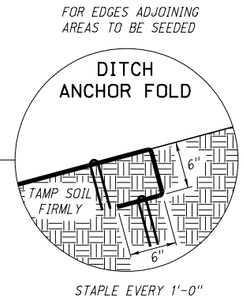


PLAN VIEW STAPLING DIAGRAM FOR
CLASS 1A (SLOPE PROTECTION, SAND)



TERMINATE BLANKET AT THE TOE OF SLOPE OR AT UNDISTURBED VEGETATION

PLAN VIEW STAPLING DIAGRAM FOR
CLASS 1B, 1C, 1D, 1E, 1F, 2A, 2B, & 2C



NOTES:

1. THE MANUFACTURERS' RECOMMENDED STAPLING PATTERNS SHALL GOVERN OVER THE PLANS.
2. SURFACING INSTALLATION IS APPLICABLE FOR ASPHALT, CONCRETE, OR BEVELLED EDGE.

REV. NO.	DATE	DESCRIPTION OF REVISION
R7	JAN 18	NDOR BORDER TO NDOT BORDER
R6	APR 14	UPDATE INSTALLATION METHOD
R5	OCT 07	EROSION CONTROL AT SPLASH BASIN

NEBRASKA DEPARTMENT OF TRANSPORTATION
STANDARD PLAN NO. 501-R7

EROSION CONTROL

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

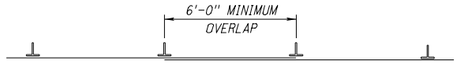
DATE

PROFESSIONAL CIVIL ENGINEER
BRANDIE S. NEEMANN
E-11829
STATE OF NEBRASKA

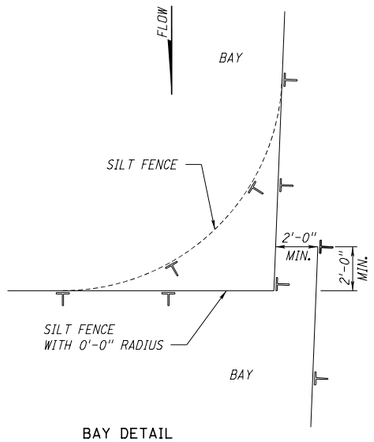
ORIGINAL:
NOVEMBER 1973
DATE

3
3

File: 501000e07.dgn Date: 29-JUN-2021 09:20 Computer: NDOTDESIGN134

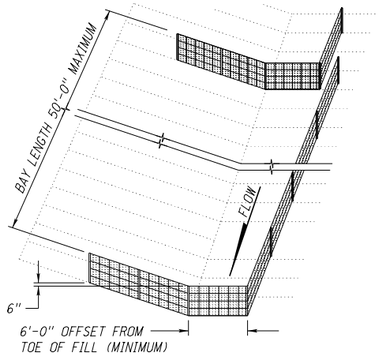


SILT FENCE SPLICE

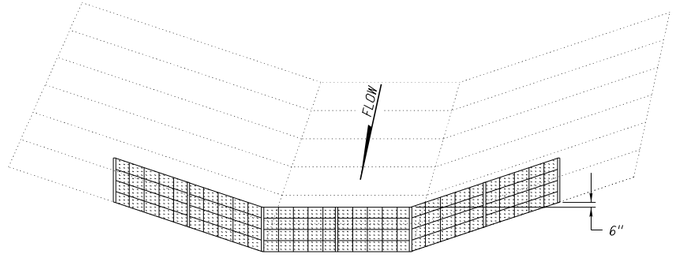


BAY DETAIL

NOTE:
SILT FENCE AT CORNERS SHALL HAVE A RADIUS OF 0'-0" MINIMUM TO 10'-0" MAXIMUM

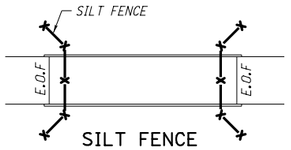


SILT FENCE BAYS

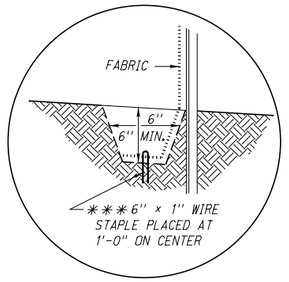


HIGH POROSITY SILT FENCE
(ACROSS DITCH)

NOTE:
POST SPACING 6'-0" MAXIMUM MULTIPLE BAYS MAY BE USED

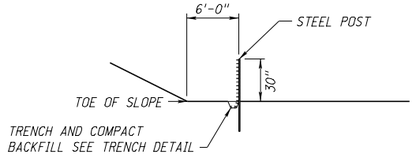


SILT FENCE
(UNDER BRIDGE)

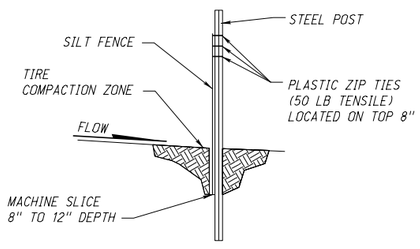


TRENCH DETAIL

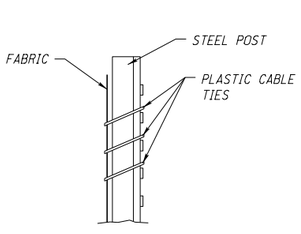
*** SILT FENCE MAY ALSO BE INSTALLED WITH A SILT FENCE PLOW. NO STAPLING IS REQUIRED WHEN THE SILT FENCE PLOW IS USED.



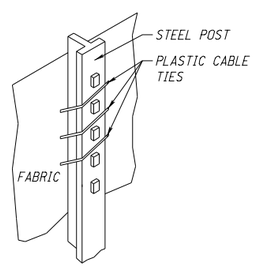
OPTION ONE (PREFERED)
SILT FENCE
(6'-0" OFFSET FROM TOE OF FILL)



SILT FENCE MACHINE SLICED



PROFILE VIEW
ATTACHMENT TO POST



BACK VIEW
ATTACHMENT TO POST

NOTES:

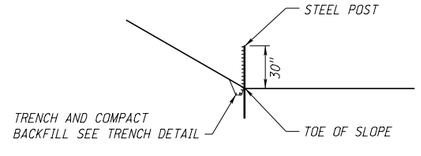
SILT FENCE SHOULD BE 30" ABOVE GRADE (MAY VARY)

SILT FENCE MINIMUM ROLL WIDTH:
LOW POROSITY = 42"
HIGH POROSITY = 42"
LOW PROFILE = 36"
COIR SILT FENCE = 36"

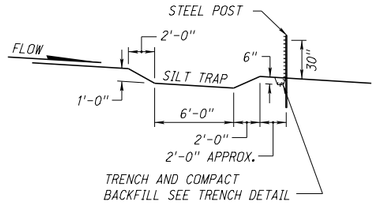
STEEL STUDDED "T" LINE POSTS 5'-6" LENGTH; 6'-0" MAXIMUM SPACING.

FOR EACH STEEL STUDDED "T" LINE POST, 3 PLASTIC CABLE TIES ARE REQUIRED.

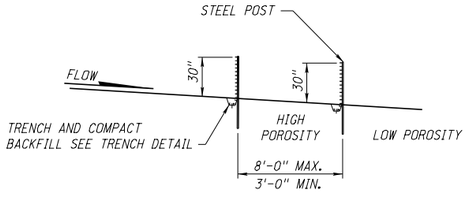
2" x 2" x 6'-0" NOMINAL WOOD STAKES SPACING, 6'-0" MAXIMUM ON CENTER DRIVEN UNTIL FIRM.



OPTION TWO (WITH LIMITED R.O.W.)
SILT FENCE
(AT TOE OF FILL)



HIGH POROSITY SILT
FENCE WITH SILT TRAP
(ACROSS DITCH)



SILT FENCE
(ACROSS DITCH)

REV. NO.	DATE	DESCRIPTION OF REVISION
R2	JAN 18	NDOR BORDER TO NDOT BORDER
R1	APR 14	STEEL POST INSTALLATION

NEBRASKA DEPARTMENT OF TRANSPORTATION
STANDARD PLAN NO. 502-R2

SILT FENCE DETAILS

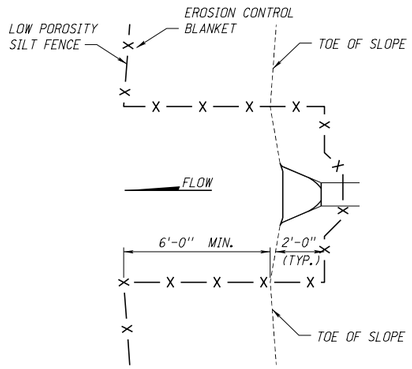
ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
BRANDIE S. NEEMANN
E-11829
STATE OF NEBRASKA

DATE

ORIGINAL:
DECEMBER 2006
DATE

1
2



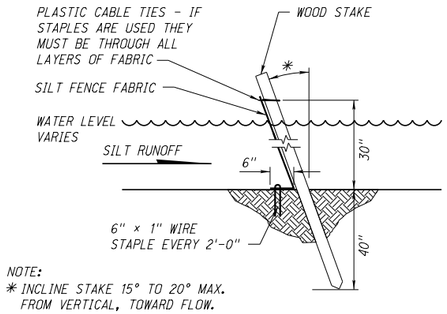
SILT FENCE OUTLET PROTECTION

NOTES:

1. SILT FENCE SHOULD BE BROUGHT FLUSH WITH WING WALLS ON BOX CULVERTS IF IT CAN NOT BE INSTALLED ABOVE THE BOX CULVERT.

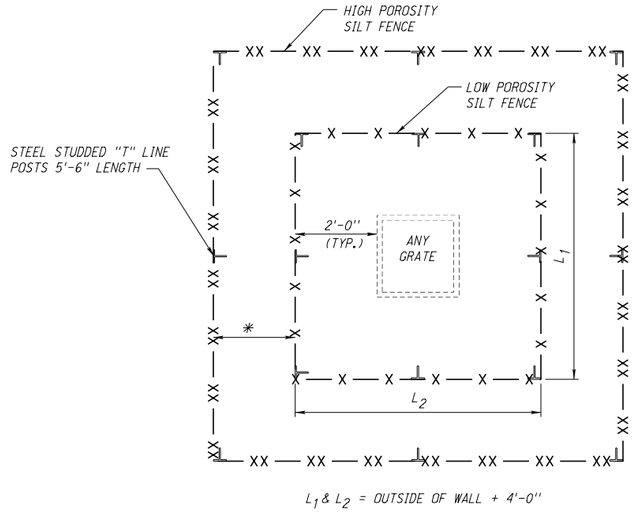
2. IF APPLICABLE, SILT FENCE AROUND THE CULVERT SHOULD BE ADJUSTED TO ALLOW FOR THE INSTALLATION OF EROSION CONTROL AS SHOWN IN STANDARD PLAN 501.

3. SILT CHECKS MAY USED IN PLACE OF SILT FENCE ABOVE THE OPENING OF A CULVERT, AS SHOWN IN SPECIAL PLAN C.



NOTE:
✳ INCLINE STAKE 15° TO 20° MAX. FROM VERTICAL, TOWARD FLOW.

SILT FENCE
(WET & BELOW WATER INSTALLATION)

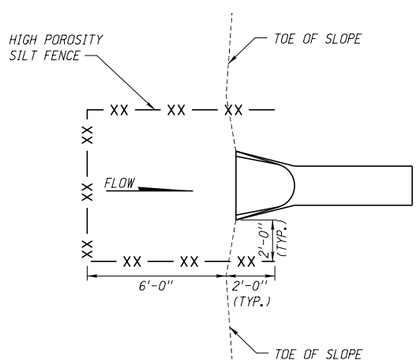


L_1 & L_2 = OUTSIDE OF WALL + 4'-0"

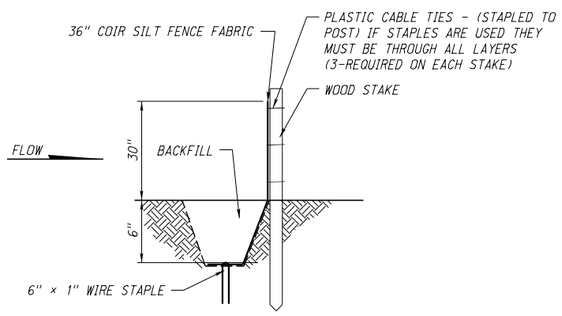
PLAN VIEW

SILT FENCE FOR GRATE, AREA, MEDIAN INLETS OR JUNCTION BOXES

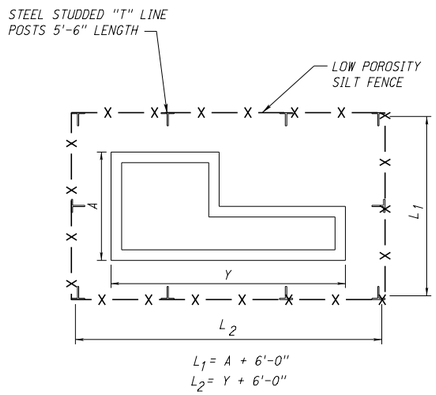
✳ 3'-0" IF POSSIBLE (MAY VARY)



SILT FENCE INLET PROTECTION



COIR SILT FENCE - ON WOOD POSTS - DRY INSTALLATION



L_1 = A + 6'-0"
L_2 = Y + 6'-0"

PLAN VIEW

SILT FENCE CURB INLET

REV. NO.	DATE	DESCRIPTION OF REVISION
R2	JAN 18	NDOR BORDER TO NDOT BORDER
R1	APR 14	STEEL POST INSTALLATION

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 502-R2

SILT FENCE DETAILS

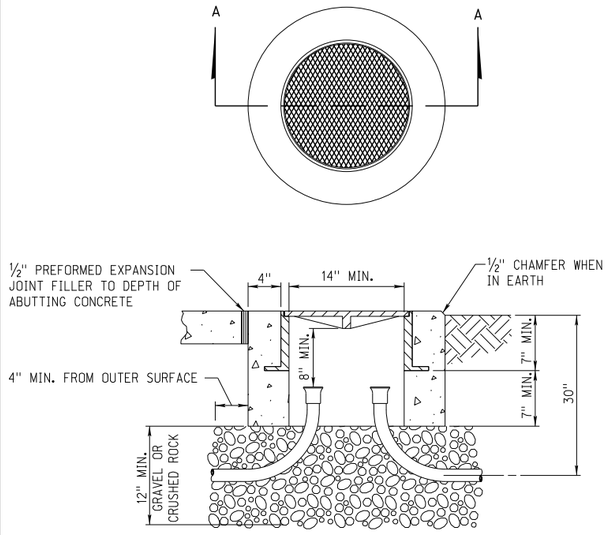
ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
BRANDIE S. NEEMANN
E-11829
STATE OF NEBRASKA

DATE

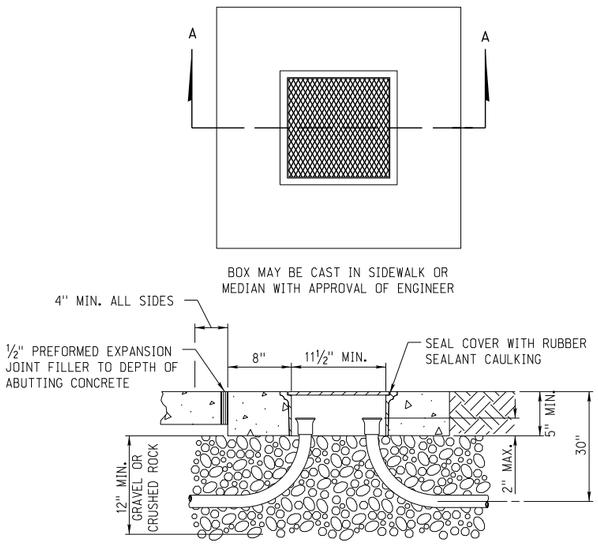
ORIGINAL: DECEMBER 2006
DATE

2/2



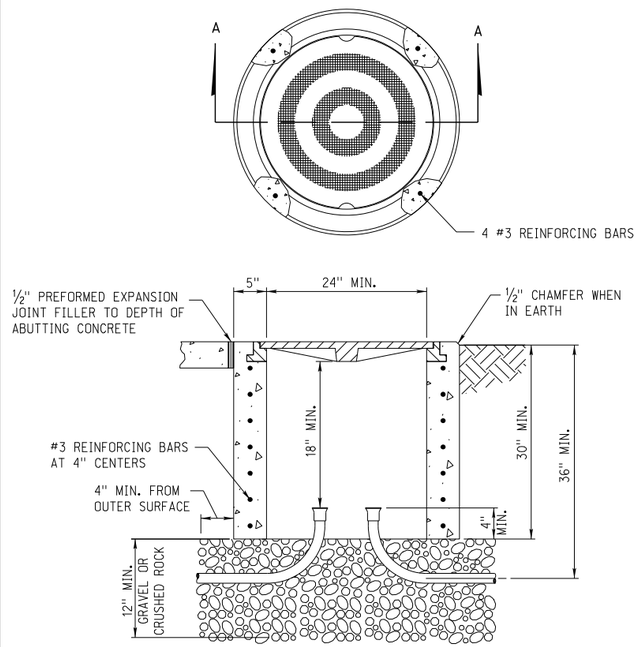
SECTION A-A

PULL BOX, TYPE PB-1



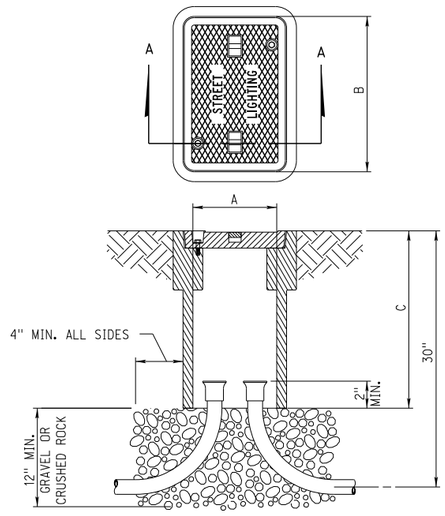
SECTION A-A

PULL BOX, TYPE PB-4



SECTION A-A

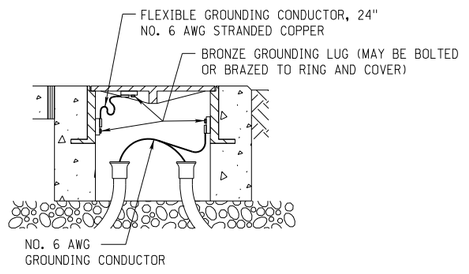
PULL BOX, TYPE PB-2



SECTION A-A

APPROXIMATE DIMENSIONS			
TYPE	A	B	C
PB-5	13"	24"	18"
PB-6	17"	30"	18"

PULL BOX, TYPE PB-5 & PB-6



GROUNDING CONNECTIONS FOR METAL FRAME AND COVER

NOTES:

1. ACCESS DUCTS, BENDS AND/OR SWEEPS, ARE SUBSIDIARY TO THE ITEM "PULL BOX, TYPE PB-*".
2. FILL MATERIAL SHALL BE GRAVEL OR CRUSHED ROCK COMPOSED OF CLEAN, DURABLE AND UNCOATED PARTICLES. FILL MATERIAL SHALL EXTEND A MINIMUM OF 4 INCHES BEYOND THE OUTER WALL OF THE ENCLOSURE. CRUSHED LIMESTONE SHALL NOT BE USED.
3. PROLONGED EXPOSURE OF THE PULL BOX AND COVER TO SUNLIGHT, COMMON ICE MELTING CHEMICALS OR FERTILIZERS SHALL NOT CAUSE SIGNIFICANT DAMAGE TO THE PULL BOX OR COVER, OR IMPAIR IT'S FUNCTION.
4. CONDUIT ENDS IN PULL BOX SHALL BE FITTED WITH BELL OR FLARED ENDS.

TYPE PB-1, PB-2 AND PB-4

5. CONCRETE SHALL BE CLASS 47B-3000.
6. PULL BOXES WHICH ARE INTENDED FOR INSTALLATION IN SURFACED AREAS, SUCH AS SIDEWALKS OR SURFACED MEDIANS, SHALL HAVE A LIP OR FLANGED EDGE FRAMING THE COVER OPENING TO PROVIDE A FLUSH, FRAMED SEPARATION BETWEEN THE SURFACING MATERIAL AND THE EDGES OF THE COVER.
7. PULL BOX COVERS SHALL BE EMBOSSED WITH AN ANTI-SLIP SURFACE PATTERN, AND SHALL FIT SUFFICIENTLY TIGHT TO PREVENT ENTRANCE OF RUN-OFF WATER.
8. SEATING SURFACES OF FRAME AND COVER SHALL BE MACHINED TO FIT. FRAME AND COVER TO BE CAST IRON.
9. PULL BOXES TYPE PB-1 AND TYPE PB-2, SHALL BE CAPABLE OF SUPPORTING VEHICULAR TRAFFIC IN ACCORDANCE WITH AASHTO SPECIFICATIONS H-20 LOADING.
10. PULL BOX TYPE PB-4 SHALL BE CAPABLE OF SUPPORTING LIGHT VEHICULAR TRAFFIC IN ACCORDANCE WITH AASHTO SPECIFICATION H-10 LOADING.

TYPE PB-5 AND PB-6

11. TYPE PB-5 AND PB-6 PULL BOXES ARE IN GROUND, GRADE LEVEL ENCLOSURES INTENDED TO BE INSTALLED BEHIND CURBS OR AT DISTANCES OFF OF THE ROADWAY WHERE NO DELIBERATE VEHICULAR TRAFFIC IS ANTICIPATED AND ONLY AN OCCASIONAL HEAVY VEHICLE WILL BE ENCOUNTERED.
12. THE PULL BOX ILLUSTRATIONS SHOWN ARE TYPICAL OF COMMERCIALLY AVAILABLE UNITS AND ARE NOT INTENDED TO LIMIT DESIGN. PULL BOXES OF EQUAL OR GREATER VOLUME HAVING TAPERED SIDES OR CIRCULAR OR SQUARE PLAN SECTION ARE ALSO ACCEPTABLE. A MINIMUM PULL BOX DEPTH OF 18 INCHES MUST BE MAINTAINED.
13. THE TYPE PB-5 AND PB-6 PULL BOX ENCLOSURES (BOX AND COVER) SHALL BE NON-METALLIC AND GREEN OR GRAY IN COLOR.
14. PULL BOX COVERS SHALL BE OF HEAVY-DUTY CONSTRUCTION TO WITHSTAND THE STRUCTURAL REQUIREMENTS OF THE SPECIFICATIONS. COVERS SHALL FIT SUFFICIENTLY TIGHT TO PREVENT THE ENTRANCE OF RUN-OFF WATER. COVERS SHALL BE EMBOSSED WITH AN ANTI-SLIP SURFACE, THE MANUFACTURER'S NAME AND THE LOGO "STREET LIGHTING". COVERS SHALL BE HELD SECURELY IN PLACE BY TWO OR MORE 3/8" (MIN. DIA.) STAINLESS STEEL HEX HEAD BOLTS WITH FLAT WASHER. BOLTS SHALL BE HELD CAPTIVE TO THE COVER. ALL COVERS SHALL BE EQUIPPED WITH A RECESSED "LIFT PIN" AND HAVE A MINIMUM 0.50 COEFFICIENT OF FRICTION SKID RESISTANT SURFACE.
15. EACH PB-5 AND PB-6 PULL BOX ASSEMBLY (BOX WITH HEAVY-DUTY COVER SECURELY ATTACHED) SHALL CONFORM TO ALL TEST PROVISIONS AND REQUIREMENTS FOR TIER 15 APPLICATIONS AS OUTLINED IN THE LATEST ISSUE OF THE ANSI/SCTE 77 STANDARD TITLED "SPECIFICATION FOR UNDER GROUND ENCLOSURE INTEGRITY". INDEPENDENT THIRD-PARTY TEST REPORTS TOGETHER WITH CERTIFICATION THAT ALL TEST PROVISIONS OF THE LATEST ISSUE OF THE ANSI/SCTE 77 STANDARD HAVE BEEN MET WILL BE REQUIRED FOR EACH TYPE OF PULL BOX BEING FURNISHED. ALL TEST REPORTS SHALL BE DATED AND SIGNED BY A REGISTERED PROFESSIONAL ENGINEER AND SHALL BEAR THE LETTERHEAD OF THE TESTING AGENCY.
16. THE INDEPENDENT TEST REPORTS SHALL BE CERTIFIED AS TO BEING REPRESENTATIVE OF THE RESULTS THAT WOULD BE OBTAINED BY SIMILARLY TESTING PULL BOXES OF LIKE KIND THAT THE MANUFACTURER WILL BE FURNISHING TO STATE OF NEBRASKA HIGHWAY PROJECTS. THE CERTIFICATION SHALL BE EXECUTED AND SIGNED BY AN AUTHORIZED REPRESENTATIVE OF THE PULL BOX MANUFACTURER AND SHALL BEAR THE MANUFACTURER'S LETTERHEAD. A NEW TEST REPORT AND CERTIFICATION FOR EACH TYPE PULL BOX BEING FURNISHED WILL BE REQUIRED EVERY FIVE YEARS.
17. THE TEST REPORTS AND CERTIFICATIONS, IF FOUND ACCEPTABLE, WILL BE PLACED ON FILE IN THE ROADWAY DESIGN DIVISION OF THE NEBRASKA DEPARTMENT OF ROADS IN LINCOLN, NEBRASKA AND THE PULL BOX MANUFACTURER'S NAME AND PART NUMBER WILL BE ADDED TO THE NEBRASKA DEPARTMENT OF ROADS "APPROVED PRODUCTS LIST."
18. AFTER ACCEPTENCE BY THE STATE, THE PULL BOX MANUFACTURER SHALL MAKE NO CHANGES IN DIMENSIONS, MANUFACTURING PROCESS OR MATERIAL WITHOUT SUBMITTING NEW TEST REPORTS FOR APPROVAL.

REV. NO.	DATE	DESCRIPTION OF REVISION
R8	JAN 18	NDOR BORDER TO NDOT BORDER
R7	DEC 16	ADD 8" GAP TO PB-1 & NOTES 2,4,6,17
R6	JAN 10	WIDTH OF DRAINABLE BASE & NOTE 12

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 914-R8

PULL BOX DETAIL

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
DANIEL J. WADDLE
E-6289
STATE OF NEBRASKA

DATE

ORIGINAL: JULY 2, 1981
DATE

1/1

CHANNELIZATION DEVICES

THE FUNCTION OF CHANNELIZATION DEVICES IS TO WARN ROAD USERS OF CONDITIONS CREATED BY WORK ACTIVITIES IN OR NEAR THE TRAVELED WAY, TO PROTECT WORKERS IN THE TEMPORARY TRAFFIC CONTROL ZONE, AND TO GUIDE DRIVERS AND PEDESTRIANS SAFELY. CHANNELIZING DEVICES INCLUDE BUT ARE NOT LIMITED TO CONES, TUBULAR POSTS, VERTICAL PANELS, DRUMS, BARRICADES, TRAFFIC LANE DIVIDERS, TEMPORARY RAISED ISLANDS, AND BARRIERS.

DEVICES USED FOR CHANNELIZATION SHOULD PROVIDE FOR SMOOTH AND GRADUAL TRAFFIC MOVEMENT FROM ONE LANE TO ANOTHER, ONTO A BYPASS OR DETOUR, OR TO REDUCE THE WIDTH OF THE TRAVELED WAY. THEY MAY ALSO BE USED TO SEPARATE TRAFFIC FROM THE WORK SPACE, PAVEMENT DROP-OFFS, PEDESTRIAN PATHS, OR OPPOSING DIRECTIONS OF TRAFFIC.

CHANNELIZING DEVICES SHALL MEET THE CRASHWORTHY PERFORMANCE CRITERIA CONTAINED IN THE NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM (NCHRP) REPORT 350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH). THEY SHOULD BE CONSTRUCTED AND BALLASTED TO PERFORM IN A PREDICTABLE MANNER WHEN INADVERTENTLY STRUCK BY A VEHICLE. IF STRUCK, THE DEVICE SHOULD YIELD OR BREAK AWAY, FRAGMENTS OR OTHER DEBRIS FROM THE DEVICE SHOULD NOT PENETRATE THE PASSENGER COMPARTMENT OF THE VEHICLE OR BE A POTENTIAL HAZARD TO WORKERS OR PEDESTRIANS IN THE IMMEDIATE AREA.

SPACING OF CHANNELIZING DEVICES SHOULD NOT EXCEED A DISTANCE IN FEET EQUAL TO THE SPEED WHEN USED FOR THE TAPER CHANNELIZATION, AND A DISTANCE IN FEET OF TWICE THE SPEED WHEN USED FOR TANGENT CHANNELIZATION.

SPACING OF CHANNELIZATION DEVICES

SPEED (MPH) S	SPACING OF DEVICES (FEET)	
	TAPER	TANGENT
25	25	50
35	35	70
45	45	90
55	55	110
60	60	120
65	65	130
75	75	150

WARNING LIGHTS MAY BE ADDED TO CHANNELIZING DEVICES IN AREAS WITH FREQUENT FOG, SNOW, OR SEVERE ROADWAY CURVATURE, OR WHERE VISUAL DISTRACTIONS ARE PRESENT, EXCEPT FOR THE SEQUENTIAL FLASHING WARNING LIGHTS, WARNING LIGHTS PLACED ON CHANNELIZING DEVICES USED IN A SERIES TO CHANNELIZE ROAD USERS SHALL BE STEADY-BURN.

THE RETROREFLECTIVE MATERIAL USED ON CHANNELIZING DEVICES SHALL HAVE A SMOOTH, SEALED OUTER SURFACE, MEETING THE REQUIREMENTS OF THE ASTM SPECIFICATION D4956, FOR TYPE IV SHEETING OR TYPE V REBOUNDABLE SHEETING (OR GREATER).

COEFFICIENT OF RETROREFLECTION ($CD/LUX/M^2$)

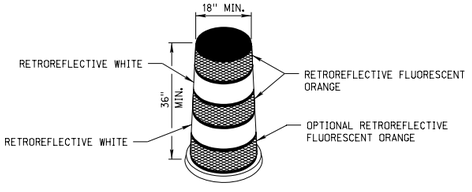
WHITE	ORANGE	RED	YELLOW
250	100	45	170

THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) "QUALITY GUIDELINES FOR WORK ZONE TRAFFIC CONTROL DEVICES" SHALL BE USED AS A VISUAL GUIDE FOR DETERMINING IF A TRAFFIC CONTROL DEVICE/OR SIGN IS ACCEPTABLE, MARGINAL OR UNACCEPTABLE.

THE NAME AND TELEPHONE NUMBER OF THE AGENCY, CONTRACTOR, OR SUPPLIER MAY BE SHOWN ON THE CHANNELIZING DEVICE BACK OR SUPPORT, BUT NOT ON THE DEVICE FACE. THE LETTERS AND NUMBERS SHALL BE A NON-REFLECTIVE COLOR AND NOT OVER 15 SQUARE INCHES IN TOTAL AREA.

PARTICULAR ATTENTION SHOULD BE GIVEN TO MAINTAINING THE CHANNELIZING DEVICES TO KEEP THEM CLEAN, VISIBLE, AND PROPERLY POSITIONED. DEVICES SHALL BE REPLACED THAT ARE DAMAGED AND/OR HAVE LOST A SIGNIFICANT AMOUNT OF THEIR RETROREFLECTIVITY AND EFFECTIVENESS.

REFLECTORIZED PLASTIC DRUMS



DESIGN

REFLECTORIZED PLASTIC DRUMS USED FOR TRAFFIC WARNING OR CHANNELIZATION SHALL BE CONSTRUCTED OF LIGHTWEIGHT, FLEXIBLE, AND DEFORMABLE MATERIALS AND BE A MINIMUM OF 36 INCHES IN HEIGHT AND HAVE A MINIMUM WIDTH OF AT LEAST A 18 INCHES, REGARDLESS OF ORIENTATION. THE PREDOMINANT COLOR OF THE DRUM SHALL BE ORANGE. METAL DRUMS SHALL NOT BE USED. THE MARKINGS ON DRUMS SHALL BE HORIZONTAL, SHALL BE CIRCUMFERENTIAL, AND SHALL DISPLAY FOUR 6 INCH WIDE BANDS OF RETROREFLECTIVE SHEETING, ALTERNATING FLUORESCENT ORANGE-WHITE-FLUORESCENT ORANGE-WHITE, DRUMS SHALL HAVE CLOSED TOPS THAT WILL NOT ALLOW COLLECTION OF CONSTRUCTION OR OTHER DEBRIS.

APPLICATION

DRUMS ARE MOST COMMONLY USED TO CHANNELIZE OR DELINEATE TRAFFIC FLOW BUT MAY ALSO BE USED INDIVIDUALLY OR IN GROUPS TO MARK SPECIFIC LOCATIONS. DRUMS ARE HIGHLY VISIBLE AND HAVE GOOD TARGET VALUE; THEY GIVE THE APPEARANCE OF BEING FORMIDABLE OBSTACLES AND, THEREFORE, COMMAND THE RESPECT OF ROAD USERS.

BALLAST SHALL NOT BE PLACED ON TOP OF THE DRUM. DRUMS SHOULD NOT BE WEIGHTED WITH SAND, WATER, OR ANY MATERIAL.

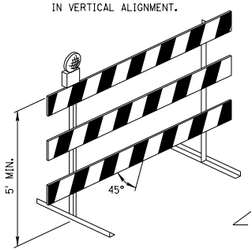
BARRICADES

BARRICADE TYPE	TYPE II	TYPE III
WIDTH OF RAIL ✳	8 INCHES MIN. - 12 INCHES MAX.	8 INCHES MIN. - 12 INCHES MAX.
LENGTH OF RAIL	36 INCHES	8 FEET ✳✳
WIDTH OF STRIPES	6 INCHES	6 INCHES
HEIGHT	36 INCHES	5 FEET
REFLECTIVE SHEETING	TYPE IV	TYPE IV
NUMBER OF REFLECTORIZED RAIL FACES	4 (TWO EACH DIRECTION)	6 (THREE EACH DIRECTION)

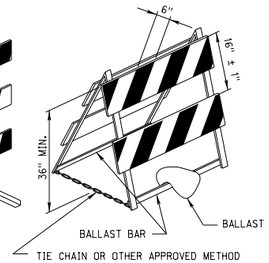
✳NOMINAL DIMENSIONS ARE PERMISSIBLE WHEN CONSTRUCTED FROM LUMBER.
✳✳WHEN LATERAL SPACE IS LIMITED, SOME TYPE III BARRICADES WITH A 4 FOOT LENGTH OF RAIL, MAY BE ALLOWED WHEN APPROVED BY THE ENGINEER.

TYPE III BARRICADE

TYPICAL MOUNTING OF FLASHING WARNING LIGHTS. LIGHTS SHALL ALWAYS BE IN VERTICAL ALIGNMENT.



TYPE II BARRICADE



BALLAST SHALL NOT BE PLACED OVER ANY REFLECTIVE DEVICE

DESIGN

A BARRICADE IS A PORTABLE OR FIXED DEVICE HAVING TWO OR THREE RAILS WITH APPROPRIATE MARKINGS. IT IS USED TO CONTROL ROAD USERS BY CLOSING, RESTRICTING, OR DELINEATING ALL OR A PORTION OF THE RIGHT-OF-WAY.

BARRICADES SHALL BE ONE OF TWO TYPES; TYPE II OR TYPE III.

STRIPES ON BARRICADE RAILS SHALL BE ALTERNATING ORANGE AND WHITE RETROREFLECTIVE STRIPES SLOPING DOWNWARD AT AN ANGLE OF 45 DEGREES IN THE DIRECTION ROAD USERS ARE TO PASS. THE STRIPES SHALL BE 6 INCHES WIDE. THE MINIMUM RAIL LENGTH FOR A TYPE II BARRICADE IS 36 INCHES.

WHERE BARRICADES EXTEND ENTIRELY ACROSS A ROADWAY, THE STRIPES SHOULD SLOPE DOWNWARD IN THE DIRECTION TOWARD WHICH ROAD USERS MUST TURN. WHERE BOTH RIGHT AND LEFT TURNS ARE PROVIDED, THE STRIPES MAY SLOPE DOWNWARD IN BOTH DIRECTIONS FROM THE CENTER OF THE BARRICADE OR BARRICADES. WHERE NO TURNS ARE INTENDED, THE STRIPES SHOULD SLOPE DOWNWARD TOWARD THE CENTER OF THE BARRICADE OR BARRICADES.

BARRICADE RAILS SHOULD BE SUPPORTED IN A MANNER THAT WILL ALLOW THEM TO BE SEEN BY THE ROAD USER, AND IN A MANNER THAT PROVIDES A STABLE SUPPORT THAT IS NOT EASILY BLOWN OVER OR DISPLACED.

ON HIGH-SPEED ROADWAYS OR IN OTHER SITUATIONS WHERE BARRICADES MAY BE SUSCEPTIBLE TO OVERTURNING IN THE WIND, SANDBAGS SHOULD BE USED FOR BALLASTING. SANDBAGS MAY BE PLACED ON LOWER PARTS OF THE FRAME OR STAYS TO PROVIDE THE REQUIRED BALLAST BUT SHALL NOT BE PLACED ON TOP OF ANY STRIPED RAIL. BARRICADES SHALL NOT BE BALLASTED BY HEAVY OBJECTS SUCH AS ROCKS OR CHUNKS OF CONCRETE.

THE BARRICADE OWNERS NAME, NOT TO EXCEED 15 SQUARE INCHES SHALL BE SHOWN ON THE BARRICADE BACK OR SUPPORT BUT NOT ON ITS FACE.

✳✳ WHEN LATERAL SPACE IS LIMITED, SOME TYPE III BARRICADES WITH A 4 FOOT LENGTH OF RAIL, MAY BE ALLOWED WHEN APPROVED BY THE ENGINEER.

APPLICATION

TYPE II BARRICADES ARE INTENDED FOR USE IN SITUATIONS WHERE TRAFFIC IS MAINTAINED THROUGH THE TEMPORARY TRAFFIC CONTROL ZONE. THEY MAY BE USED INDIVIDUALLY OR IN GROUPS TO MARK A SPECIFIC CONDITION, OR THEY MAY BE USED IN A SERIES FOR CHANNELIZING TRAFFIC. ON THE INTERSTATE, FREEWAY AND EXPRESSWAY SYSTEM, TYPE II BARRICADES SHALL NOT BE USED FOR CHANNELIZATION.

TYPE III BARRICADES USED AT A ROAD CLOSURE MAY EXTEND COMPLETELY ACROSS A ROADWAY FROM CURB TO CURB. WHERE PROVISION IS MADE FOR ACCESS OF AUTHORIZED EQUIPMENT AND VEHICLES, THE RESPONSIBILITY FOR THE TYPE III BARRICADES SHOULD BE ASSIGNED TO A PERSON WHO SHALL PROVIDE PROPER CLOSURE AT THE END OF EACH WORK DAY.

WHEN A HIGHWAY IS LEGALLY CLOSED BUT ACCESS MUST STILL BE ALLOWED FOR LOCAL TRAFFIC, THE TYPE III BARRICADES MAY NOT BE EXTENDED COMPLETELY ACROSS A ROADWAY. A SIGN WITH THE APPROPRIATE LEGEND CONCERNING PERMISSIBLE USE BY LOCAL TRAFFIC SHALL BE MOUNTED.

NORMALLY PERMANENT SIGNS MOUNTED ON BARRICADES SHALL BE ERECTED ABOVE THE BARRICADE. THE SIGNS "ROAD CLOSED", OR "ROAD WORK AHEAD", FOR EXAMPLE CAN EFFECTIVELY BE MOUNTED ABOVE THE BARRICADE THAT CLOSES THE ROADWAY. TYPE III BARRICADES SHALL BE SUPPLEMENTED WITH A LIGHTING DEVICE UNLESS SPECIFICALLY OMITTED BY THE ENGINEER. DETOUR ARROW AND LARGE WARNING ARROW SIGNS SHOULD BE PLACED ON THE FACE OF BARRICADE.

CONES

DESIGN

CONES SHALL BE PREDOMINANTLY ORANGE, FLOURESCENT RED-ORANGE, OR FLOURESCENT YELLOW/ORANGE. NOT LESS THAN 28 INCHES IN HEIGHT, AND SHALL BE MADE OF A MATERIAL THAT CAN BE STRUCK WITHOUT DAMAGING VEHICLES ON IMPACT. CONES WHEN ALLOWED ON THE INTERSTATE, FREEWAY OR EXPRESSWAY SYSTEM SHALL BE A MINIMUM OF 36 INCHES IN HEIGHT.

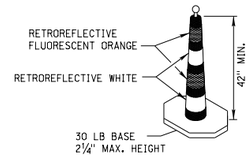
FOR NIGHTTIME USE, CONES SHALL BE RETROREFLECTIVE OR EQUIPPED WITH LIGHTING DEVICES FOR MAXIMUM VISIBILITY. RETROREFLECTION OF 28 INCH OR 36 INCH CONES SHALL BE PROVIDED BY A WHITE BAND 6 INCHES WIDE, NO MORE THAN 4 INCHES FROM THE TOP OF THE CONE, AND AN ADDITIONAL 4 INCH WIDE WHITE BAND A MINIMUM OF 2 INCHES BELOW THE 6 INCH BAND.

APPLICATION

TRAFFIC CONES ARE USED TO CHANNELIZE TRAFFIC, DIVIDE OPPOSING TRAFFIC LANES, DIVIDE TRAFFIC LANES WHEN TWO OR MORE LANES ARE KEPT OPEN IN THE SAME DIRECTION, AND DELINEATE SHORT-DURATION MAINTENANCE AND UTILITY WORK. CONES SHALL NOT BE USED FOR LANE CLOSURE TAPERS OR SHIFTS, CONES SMALLER THAN 42 INCHES SHALL NOT BE USED AT NIGHT ON RURAL HIGHWAYS, UNLESS SHOWN ON THE PLANS OR AS APPROVED OR DIRECTED BY THE ENGINEER.

STEPS SHOULD BE TAKEN TO ENSURE THAT CONES WILL NOT BE BLOWN OVER OR DISPLACED BY WIND OR MOVING TRAFFIC. CONES CAN BE DOUBLED UP TO INCREASE THEIR WEIGHT. SOME CONES ARE CONSTRUCTED WITH BASES THAT CAN BE FILLED WITH BALLAST. OTHERS HAVE SPECIAL WEIGHTED BASES, OR WEIGHTS SUCH AS SANDBAG RINGS THAT CAN BE DROPPED OVER THE CONES AND ONTO THE BASE TO PROVIDE ADDED STABILITY. BALLAST, HOWEVER, SHOULD NOT PRESENT A HAZARD IF THE CONES ARE INADVERTENTLY STRUCK.

42 INCH CONES



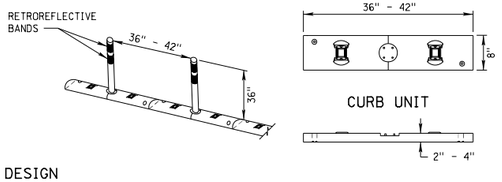
DESIGN

42 INCH CONES SHALL INCLUDE A 30 POUND RUBBER BASE AND DISPLAY FOUR 6 INCH WIDE BANDS OF RETROFEFLECTIVE SHEETING, ALTERNATING FLUORESCENT ORANGE-WHITE-FLOURESCENT ORANGE-WHITE.

APPLICATION

WHEN APPROVED BY THE ENGINEER OR SHOWN IN THE PLANS, 42 INCH REFLECTIVE CONES MAY BE USED IN LIEU OF TYPE II BARRICADES OR REFLECTORIZED DRUMS. 42 INCH CONES SHALL NOT BE USED FOR LANE-CLOSURE TAPERS OR SHIFTS. IF A RECTANGULAR BASE IS USED, THE LONG SIDE OF THE BASE SHOULD BE ORIENTED PARALLEL TO THE DIRECTION OF TRAFFIC.

TUBULAR POST AND CURB SYSTEM



DESIGN

TUBULAR POSTS USED IN THE SYSTEM SHALL BE 36 INCHES HIGH AND A MINIMUM OF 2 INCHES WIDE WHEN FACING TRAFFIC. THE TUBULAR POST AND CURB SYSTEM SHALL BE MADE OF A MATERIAL THAT CAN BE STRUCK WITHOUT DAMAGING IMPACTING VEHICLES. THE COLOR SHALL BE AS SHOWN IN THE PLANS.

THE TUBULAR POSTS SHALL BE RETROREFLECTIVE. RETROREFLECTION OF TUBULAR POSTS SHALL BE PROVIDED BY TWO 3-INCH WIDE RETROREFLECTIVE BANDS PLACED A MAXIMUM OF 2 INCHES FROM THE TOP WITH A MAXIMUM OF 6 INCHES BETWEEN THE BANDS. EACH CURB SECTION SHALL CONTAIN ONE RETROREFLECTIVE MARKER FACING EACH DIRECTION OF TRAFFIC. THE COLOR OF THE RETROREFLECTIVE BANDS AND MARKERS SHALL MATCH THE POST/CURB COLOR.

THE CURB SECTIONS SHALL BE CONFIGURED TO ALLOW FOR DRAINAGE FROM THE PAVEMENT SURFACE.

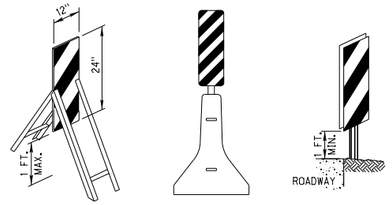
APPLICATION

TUBULAR POST AND CURB SYSTEMS MAY BE USED TO DIVIDE OPPOSING LANES OF TRAFFIC OR TO DIVIDE TRAFFIC LANES WHEN TWO OR MORE LANES ARE KEPT OPEN IN THE SAME DIRECTION.

FASTENING THE CURBS TO THE PAVEMENT WITH ANCHOR BOLTS OR OTHER SUITABLE METHODS AS DIRECTED BY THE MANUFACTURER IS REQUIRED TO MINIMIZE THE CHANCE OF BEING MOVED BY TRAFFIC.

TUBULAR POST AND CURB SYSTEMS SHALL BE INSTALLED IN THE LOCATIONS SHOWN IN THE PLANS OR DIRECTED BY THE ENGINEER.

VERTICAL PANELS



DESIGN

RETROREFLECTIVE MATERIAL ON VERTICAL PANELS SHALL BE 12 INCHES WIDE AND AT LEAST 24 INCHES HIGH. THEY SHALL HAVE ALTERNATING ORANGE AND WHITE STRIPES, WHERE THE HEIGHT OF THE RETROREFLECTIVE MATERIAL ON THE VERTICAL PANEL IS MORE THAN 36 INCHES, A PANEL STRIPE WIDTH OF 6 INCHES SHALL BE USED. WHERE THE HEIGHT OF THE RETROREFLECTIVE MATERIAL ON THE VERTICAL PANEL IS 36 INCHES OR LESS, A PANEL STRIPE WIDTH OF 4 INCHES SHALL BE USED. IF USED FOR TWO-WAY TRAFFIC, BACK-TO-BACK PANELS SHALL BE USED.

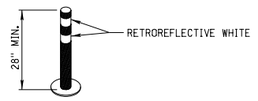
MARKINGS FOR VERTICAL PANELS SHALL BE ALTERNATING ORANGE AND WHITE RETROREFLECTORIZED STRIPES SLOPING DOWNWARD AT AN ANGLE OF 45 DEGREES IN THE DIRECTION TRAFFIC IS TO PASS.

POST MOUNTED VERTICAL PANELS SHALL BE MOUNTED WITH THE BOTTOM A MINIMUM OF 1 FOOT ABOVE THE ROADWAY. VERTICAL PANELS ON A TEMPORARY STAND SHALL BE MOUNTED WITH THE BOTTOM A MAXIMUM OF 1 FOOT ABOVE THE ROADWAY.

APPLICATION

WHERE SPACE IS LIMITED VERTICAL PANELS MAY BE USED TO CHANNEL TRAFFIC, DIVIDE OPPOSING LANES OF TRAFFIC, DIVIDE TRAFFIC LANES OR REPLACE BARRICADES. WHEN APPROVED BY THE ENGINEER, VERTICAL PANELS MAY BE POST-MOUNTED ALONG THE SIDE OF THE ROADWAY.

TUBULAR POSTS



DESIGN

TUBULAR POSTS SHALL BE PREDOMINANTLY ORANGE, NOT LESS THAN 28 INCHES HIGH, BE A MINIMUM OF 2 INCHES WIDE WHEN FACING TRAFFIC, AND MADE OF A MATERIAL THAT CAN BE STRUCK WITHOUT DAMAGING IMPACTING VEHICLES.

TUBULAR POSTS SHALL BE RETROREFLECTIVE. RETROREFLECTION OF TUBULAR POSTS SHALL BE PROVIDED BY TWO 3 INCHES WIDE WHITE BANDS PLACED A MAXIMUM OF 2 INCHES FROM THE TOP, WITH A MAXIMUM OF 6 INCHES BETWEEN THE BANDS. THE BASE SHALL NOT BE WIDER THAN 12 INCHES OR HIGHER THAN 2 INCHES.

APPLICATION

TUBULAR POSTS HAVE LESS VISIBLE AREA THAN OTHER DEVICES AND SHOULD BE USED ONLY WHERE SPACE RESTRICTIONS DO NOT ALLOW FOR THE USE OF OTHER MORE VISIBLE DEVICES. THEY MAY BE USED EFFECTIVELY TO DIVIDE OPPOSING LANES OF TRAFFIC OR TO DIVIDE TRAFFIC LANES WHEN TWO OR MORE LANES ARE KEPT OPEN IN THE SAME DIRECTION.

STEPS SHOULD BE TAKEN TO ASSURE THAT TUBULAR POSTS WILL NOT BE BLOWN OVER OR DISPLACED BY TRAFFIC BY EITHER AFFIXING THEM TO THE PAVEMENT WITH ANCHOR BOLTS OR ADHESIVE, IF A NONCYLINDRICAL DEVICE IS USED, IT SHALL BE ATTACHED TO THE PAVEMENT TO ENSURE THAT THE WIDTH FACING TRAFFIC MEETS THE MINIMUM REQUIREMENTS.

TUBULAR POSTS SHOULD NOT BE USED FOR PEDESTRIAN CHANNELIZATION OR A PEDESTRIAN BARRIERS IN TEMPORARY TRAFFIC CONTROL ZONES ON OR ALONG SIDEWALKS.

REV. NO.	DATE	DESCRIPTION OF REVISION
R7	JAN 18	NDOR BORDER TO NDOT BORDER
R6	JUN 14	2009 MUTCD UPDATE
R5	OCT 98	REVISE CHANNELIZATION DEVICES, TAPER

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 920-R7

TRAFFIC CONTROL, CONSTRUCTION AND MAINTENANCE

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
DANIEL J. WADDLE
E-6289
STATE OF NEBRASKA

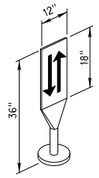
DATE

ORIGINAL: OCTOBER 1998
DATE

1/3

File: 92000e07.dgn Date: 29-JUN-2021 09:21 Computer: NDOTDESIGN134

OPPOSING TRAFFIC LANE DIVIDERS



DESIGN

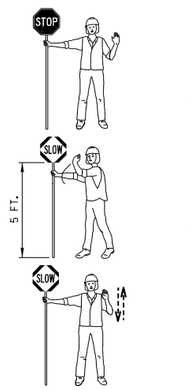
OPPOSING TRAFFIC LANE DIVIDERS SHALL BE A TWO SIDED UPRIGHT RETROREFLECTORIZED ORANGE PANEL, WITH A WIDTH OF 12 INCHES AND A HEIGHT OF 18 INCHES. THE TOP OF THE PANEL SHALL BE 36 INCHES ABOVE THE PAVEMENT. THE SYMBOL ON EACH SIDE SHALL BE TWO OPPOSING BLACK ARROWS. THE LANE DIVIDER SHALL BE MADE OF LIGHTWEIGHT MATERIAL THAT WILL YIELD UPON IMPACT BY A VEHICLE. THE LANE DIVIDER BASE SHALL NOT BE WIDER THAN 12 INCHES OR HIGHER THAN 4 INCHES. THE BASE SHALL BE ATTACHED TO THE EXISTING SURFACE BY EPOXY OR OTHER SUITABLE ADHESIVE, TO ENSURE THAT THE PANEL REMAINS FACING TRAFFIC.

APPLICATION

OPPOSING TRAFFIC LANE DIVIDERS ARE DELINEATION DEVICES USED AS CENTER LANE DIVIDERS TO SEPARATE OPPOSING TRAFFIC ON A TWO-LANE, TWO-WAY OPERATION.

FLAGGERS

REQUIRED METHOD



EMERGENCY USE ONLY

FLAGGER PADDLE

THE STOP/SLOW PADDLE SHALL HAVE AN OCTAGONAL SHAPE ON A RIGID HANDLE. STOP/SLOW PADDLES SHALL BE AT LEAST 18 INCHES WIDE WITH LETTERS AT LEAST 6 INCHES HIGH. IF THE STOP/SLOW PADDLE IS PLACED ON A RIGID STAFF, THE MINIMUM LENGTH OF THE STAFF, MEASURED FROM THE BOTTOM OF THE SIGN TO THE END OF THIS STAFF THAT RESTS ON THE GROUND, SHOULD BE 5 FEET. THE STOP/SLOW PADDLE SHOULD BE THE PRIMARY AND PREFERRED HAND-SIGNALING DEVICE BECAUSE THE STOP/SLOW PADDLE GIVES ROAD USERS MORE POSITIVE GUIDANCE THAN RED FLAGS. USE OF FLAGS SHOULD BE LIMITED TO EMERGENCY SITUATIONS.

FLAGGERS

A FLAGGER MUST BE DRESSED FOR SAFETY. IN ADDITION TO THE REQUIREMENTS OF THE "WORKER VISIBILITY" SECTION LISTED BELOW, FLAGGERS SHALL WEAR:

1. AN ORANGE OR YELLOW/GREEN CAP OR HARD HAT.
2. A SHIRT WITH SLEEVES, PANTS AND SHOES (TANK TOPS, SHORTS OR SANDALS SHALL NOT BE WORN).

FLAGGERS SHALL BE INSTRUCTED IN THE PROPER LOCATION, DUTIES AND PROCEDURES FOR FLAGGING AS OUTLINED IN THE CURRENT MUTCD AND THE DEPARTMENT OF ROADS FLAGGER'S HANDBOOK. AS REQUIRED BY THE DEPARTMENT OF ROADS, THE FLAGGER SHALL BE CERTIFIED, AND HAVE IN THEIR POSSESSION, A VALID FLAGGER CERTIFICATION CARD.

WORKER VISIBILITY

ALL WORKERS WITHIN THE RIGHT-OF-WAY WHO ARE EXPOSED EITHER TO TRAFFIC (VEHICLES USING THE HIGHWAY FOR PURPOSES OF TRAVEL) OR TO CONSTRUCTION EQUIPMENT WITHIN THE WORK AREA SHALL WEAR HIGH-VISIBILITY SAFETY APPAREL. HIGH-VISIBILITY SAFETY APPAREL IS DEFINED TO MEAN PERSONAL PROTECTIVE SAFETY CLOTHING THAT;

1. IS INTENDED TO PROVIDE CONSPICUITY DURING BOTH DAYTIME AND NIGHTTIME USAGE, AND
2. MEETS THE PERFORMANCE CLASS 2 OR CLASS 3 REQUIREMENTS OF THE ANSI/ISEA 107-2004 PUBLICATION ENTITLED "AMERICAN NATIONAL STANDARDS FOR HIGH-VISIBILITY SAFETY APPAREL AND HEADWEAR"

LIGHTING DEVICES

FUNCTION

CONSTRUCTION AND MAINTENANCE ACTIVITIES OFTEN CREATE CONDITIONS ON OR NEAR THE TRAVELED WAY THAT ARE PARTICULARLY HAZARDOUS AT NIGHT. IT IS OFTEN DESIRABLE AND NECESSARY TO SUPPLEMENT THE REFLECTORIZED SIGNS, BARRIERS, AND CHANNELIZING DEVICES WITH LIGHTING DEVICES. STROBE TYPE LIGHTS ARE NOT PERMITTED.

BARRICADE WARNING LIGHTS DESIGN (BATTERY OPERATED)

TYPE "A" LOW INTENSITY FLASHING WARNING LIGHTS ARE MOST COMMONLY MOUNTED ON BARRICADES, OR WITH SIGNS AND ARE INTENDED TO WARN THE DRIVER THAT THEY ARE PROCEEDING IN A HAZARDOUS AREA. THESE LIGHTS SHALL NOT BE USED FOR DELINEATION, AS A SERIES OF FLASHING LIGHTS IN A ROW WOULD TEND TO OBSCURE THE DESIRED PATH.

TYPE "A" HIGH INTENSITY FLASHING WARNING LIGHTS ARE NORMALLY MOUNTED ON THE TYPE III BARRICADE THAT ACCOMPANIES THE ADVANCE WARNING SIGNS.

TYPE "C" STEADY BURN LIGHTS AS USED HEREIN, SHALL MEAN A SERIES OF LOW WATTAGE YELLOW ELECTRIC LIGHTS. WHERE LIGHTS ARE NEEDED TO DELINEATE OR MARK THE TRAVELED WAY THROUGH AND AROUND OBSTRUCTIONS IN A CONSTRUCTION MAINTENANCE AREA, THE DELINEATION SHALL BE ACCOMPLISHED BY USE OF STEADY BURNING LIGHTS. WHEN USED TO SUPPLEMENT CHANNELIZATION, THE MAXIMUM SPACING FOR WARNING LIGHTS SHOULD BE IDENTICAL TO THE CHANNELIZING DEVICE SPACING REQUIREMENTS. WHEN USED TO DELINEATE A CURVE, TYPE "C" WARNING LIGHTS SHOULD ONLY BE USED ON DEVICES ON THE OUTSIDE OF THE CURVE, AND NOT ON THE INSIDE OF THE CURVE.

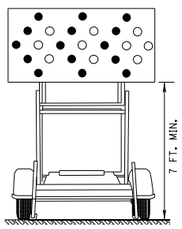
FLASHING ARROW PANEL (DISPLAY)

AN ARROW PANEL IS A SIGN WITH A MATRIX OF ELEMENTS, CAPABLE OF EITHER FLASHING OR SEQUENTIAL DISPLAYS. THIS SIGN SHALL PROVIDE ADDITIONAL WARNING AND DIRECTIONAL INFORMATION TO ASSIST IN MERGING AND CONTROLLING ROAD USERS THROUGH OR AROUND A TEMPORARY TRAFFIC CONTROL ZONE. AN ARROW PANEL SHOULD BE USED IN COMBINATION WITH APPROPRIATE SIGNS, CHANNELIZING DEVICES OR OTHER TRAFFIC CONTROL DEVICES.

DESIGN

ARROW PANELS SHALL MEET THE SIZE AND SPECIFICATIONS OF THE MUTCD FOR TYPE "C" ARROW DISPLAYS.

FLASHING ARROW PANEL SHALL BE RECTANGULAR, OF SOLID APPEARANCE AND FINISHED IN NON-REFLECTIVE BLACK. THE PANEL SHALL BE MOUNTED ON A VEHICLE, TRAILER OR OTHER SUITABLE SUPPORT. MINIMUM MOUNTING HEIGHT MEASURED VERTICALLY FROM THE BOTTOM OF THE PANEL TO THE ROADWAY BELOW IT OR TO THE ELEVATION OF THE NEAR EDGE OF THE ROADWAY. SHALL BE 7 FEET EXCEPT ON VEHICLE-MOUNTED PANELS, WHICH SHOULD BE AS HIGH AS PRACTICAL.



THE FOLLOWING SELECTIONS SHALL BE PROVIDED ON THE ARROW PANEL	
OPERATING MODE	PANEL DISPLAY
FLASHING ARROW	RIGHT SHOWN; LEFT OPPOSITE
SEQUENTIAL ARROW	RIGHT SHOWN; LEFT OPPOSITE
SEQUENTIAL CHEVRON	RIGHT SHOWN; LEFT OPPOSITE
FLASHING DOUBLE ARROW	
FLASHING OR ALTERNATING CAUTION	FLASHING LINE OR FLASHING CORNERS OR ALTERNATING DIAMOND CAUTION

THE ARROW PANEL SHALL HAVE A MINIMUM SIZE OF 96 INCHES WIDE AND 48 INCHES HIGH. THE MINIMUM LEGIBILITY DISTANCE SHALL BE 1 MILE. THE PANEL SHALL CONTAIN 25 LAMP ELEMENTS. ARROW PANEL ELEMENTS SHALL BE CAPABLE OF A MINIMUM 50 PERCENT DIMMING, AUTOMATICALLY WHEN AMBIENT LIGHT FALLS BELOW 50 LUX.

THE MINIMUM ELEMENT "ON TIME" SHALL BE 50 PERCENT FOR THE FLASHING MODE AND EQUAL INTERVALS OF 25 PERCENT FOR EACH SEQUENTIAL CHEVRON PHASE. THE FLASHING RATE SHALL BE NO FEWER THAN 25 NOR MORE THAN 40 FLASHES PER MINUTE.

APPLICATION

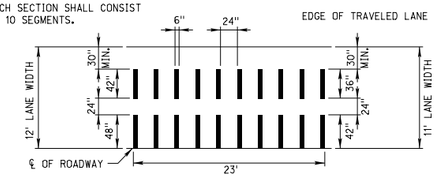
A FLASHING ARROW OR SEQUENTIAL CHEVRON MODE SHALL ONLY BE USED FOR STATIONARY OR MOVING LANE CLOSURES.

FOR SHOULDER WORK BLOCKING THE SHOULDER, FOR ROADSIDE WORK NEAR THE SHOULDER, OR FOR TEMPORARILY CLOSING ONE LANE ON A TWO-LANE, TWO-WAY ROADWAY, AN ARROW PANEL SHALL BE USED ONLY IN THE CAUTION MODE.

AN ARROW DISPLAY MODE SHALL NOT BE USED ON A TWO-LANE TWO-WAY ROADWAY FOR TEMPORARY ONE-LANE OPERATION OR LANE SHIFTS. AN ARROW DISPLAY SHALL NOT BE USED TO LATERALLY SHIFT TRAFFIC.

TEMPORARY RUMBLE STRIPS

EACH SECTION SHALL CONSIST OF 10 SEGMENTS.



DESIGN

TEMPORARY RUMBLE STRIPS MAY BE MADE OF ASPHALT PAVING MATERIAL, EPOXY AND AGGREGATE OR OTHER SUITABLE MATERIAL WHICH WILL MAINTAIN A DESIRABLE RUMBLE EFFECT. THE TEMPORARY RUMBLE STRIP SHOULD HAVE AN INSTALLED HEIGHT OF 5⁄8". PREFORMED RUMBLE STRIPS MAY BE USED PROVIDED THEY HAVE A MINIMUM ½" HEIGHT.

TRAFFIC SIGNALS

TRAFFIC SIGNALS MAY BE ALLOWED AT CERTAIN EQUIPMENT CROSSINGS WHERE THE VOLUME OF FILL MATERIAL AND THE NUMBER OF EQUIPMENT CROSSINGS PER HOUR IS HIGH. TRAFFIC SIGNALS MAY BE ALLOWED AT CERTAIN BRIDGE CONSTRUCTION SITES WHERE A COMBINATION OF ONE-WAY TRAFFIC AND HIGH TRAFFIC VOLUMES WOULD BE BEST SERVED WITH THIS TYPE OF TRAFFIC CONTROL.

ALL TRAFFIC SIGNAL REQUESTS AND METHOD OF INSTALLATION ON THE STATE HIGHWAY SYSTEM SHALL BE IN COMPLIANCE WITH THE MUTCD AND MUST BE APPROVED BY THE STATE TRAFFIC ENGINEER.

IF, AFTER THE SIGNAL ASSEMBLIES ARE ERECTED AND THE ROAD IS OPEN TO PUBLIC TRAVEL, THE SIGNAL SYSTEM IS NOT PUT IMMEDIATELY INTO OPERATION, THE SIGNAL FACES SHALL BE COVERED WITH BURLAP OR OTHER OPAQUE MATERIAL SUBJECT TO THE APPROVAL OF THE ENGINEER. INOPERATIVE SIGNALS ON ROADS OPEN TO THE PUBLIC SHALL ALWAYS BE COVERED. TILTING THE SIGNALS UPWARD IS NOT AN ACCEPTABLE ALTERNATIVE TO COVERING THE HEADS.

FLOODLIGHTS

WHEN NIGHTTIME WORK IS REQUIRED, FLOODLIGHTS SHALL BE USED TO ILLUMINATE FLAGGER STATIONS. FLOODLIGHTS SHOULD BE USED TO ILLUMINATE EQUIPMENT CROSSINGS, AND OTHER AREAS WHERE EXISTING LIGHT IS NOT ADEQUATE FOR THE WORK TO BE PERFORMED SAFELY.

IN NO CASE SHALL FLOODLIGHTING BE PERMITTED TO CREATE A DISABLING GLARE FOR DRIVERS. THE ADEQUACY OF THE FLOODLIGHT PLACEMENT AND ELIMINATION OF POTENTIAL GLARE SHOULD BE CHECKED BY DRIVING THROUGH THE PROJECT.

PAVEMENT MARKING

IT IS INTENDED TO THE EXTENT POSSIBLE, THAT MOTORISTS BE PROVIDED MARKINGS WITHIN A WORK AREA COMPARABLE TO THE MARKINGS NORMALLY MAINTAINED ALONG ADJACENT ROADWAYS, PARTICULARLY AT EITHER END OF THE WORK AREA.

ALL MARKINGS AND DEVICES USED TO DELINEATE VEHICLE AND PEDESTRIAN PATHS SHALL BE CAREFULLY REVIEWED DURING DAYTIME AND NIGHTTIME PERIODS TO AVOID INADVERTENTLY LEADING DRIVERS OR PEDESTRIANS FROM THE INTENDED PATH.

PAVEMENT MARKINGS NO LONGER APPLICABLE SHALL BE REMOVED UNLESS OTHERWISE APPROVED BY THE ENGINEER.

TAPERS

TAPERS ARE CREATED USING A SERIES OF CHANNELIZING DEVICES OR PAVEMENT MARKINGS TO MOVE TRAFFIC OUT OF OR INTO ITS NORMAL PATH.

MERGING TAPER

A MERGING TAPER REQUIRES THE LONGEST DISTANCE BECAUSE DRIVERS ARE REQUIRED TO MERGE INTO COMMON ROAD SPACE. THE TAPER SHOULD BE LONG ENOUGH TO ENABLE MERGING DRIVERS TO HAVE ADEQUATE ADVANCE WARNING AND SUFFICIENT LENGTH TO ADJUST THEIR SPEEDS AND MERGE INTO A SINGLE LANE BEFORE THE DOWNSTREAM END OF THE TRANSITION.

SHIFTING TAPER

A SHIFTING TAPER IS USED WHEN MERGING IS NOT REQUIRED, BUT A LATERAL SHIFT IS NEEDED. APPROXIMATELY ONE-HALF "L" HAS BEEN FOUND TO BE ADEQUATE. WHERE MORE SPACE IS AVAILABLE, IT MAY BE BENEFICIAL TO USE LONGER TAPERS. GUIDANCE FOR CHANGES IN ALIGNMENT MAY ALSO BE ACCOMPLISHED BY USING HORIZONTAL CURVES DESIGNED FOR NORMAL HIGHWAY SPEEDS.

SHOULDER TAPERS

A SHOULDER TAPER MAY BE BENEFICIAL ON HIGH-SPEED ROADWAYS WHERE SHOULDERS ARE PART OF THE ACTIVITY AREA AND ARE CLOSED, OR WHEN IMPROVED SHOULDERS MIGHT BE MISTAKEN AS A DRIVING LANE IN THESE INSTANCES, THE SAME TYPE, BUT ABBREVIATED, CLOSURE PROCEDURES USED ON A NORMAL PORTION OF THE ROADWAY CAN BE USED. IF USED, SHOULDER TAPERS APPROACHING THE ACTIVITY AREA SHOULD HAVE A LENGTH OF ABOUT ONE-THIRD "L".

DOWNSTREAM TAPERS

THE DOWNSTREAM TAPER MAY BE USEFUL IN TERMINATION AREAS TO PROVIDE A VISUAL CUE TO THE DRIVER THAT ACCESS IS AVAILABLE TO THE ORIGINAL LANE OR PATH THAT WAS CLOSED. WHEN USED, IT SHOULD HAVE A MINIMUM LENGTH OF ABOUT 100 FEET PER LANE, WITH DEVICES SPACED ABOUT 20 FEET APART.

ONE LANE, TWO WAY TAPER

THE ONE-LANE, TWO-WAY TAPER IS USED IN ADVANCE OF AN ACTIVITY AREA THAT OCCUPIES PART OF A TWO-WAY ROADWAY IN SUCH A WAY THAT A PORTION OF THE ROAD IS USED ALTERNATELY BY TRAFFIC IN EACH DIRECTION. A SHORT TAPER HAVING A MINIMUM LENGTH OF 50 FEET AND A MAXIMUM LENGTH OF 100 FEET WITH CHANNELZING DEVICES AT APPROXIMATELY 20 FOOT SPACINGS SHOULD BE USED TO GUIDE TRAFFIC INTO THE ONE-LANE-SECTION AND A DOWNSTREAM TAPER WITH A LENGTH OF APPROXIMATELY 100 FEET SHOULD BE USED TO GUIDE TRAFFIC BACK INTO THEIR ORIGINAL LANE.

TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES	
TYPE OF TAPER	TAPER LENGTH (FEET)
MERGING TAPER	L MINIMUM
SHIFTING TAPER	1/2 L MINIMUM
SHOULDER TAPER	1/3 L MINIMUM
TWO-WAY TAPER	100 FEET MAXIMUM

FORMULAS FOR L	
SPEED	FORMULA
40 MPH OR LESS	$L = \frac{WS^2}{60}$
45 MPH OR GREATER	L = WS

L = TAPER LENGTH IN FEET
W = WIDTH OF OFFSET IN FEET
S = POSTED SPEED LIMIT PRIOR TO WORK IN MPH

TAPER LENGTH L (FEET)			
SPEED (MPH)	LANE WIDTH		
S	10 FT.	11 FT.	12 FT.
25	105	115	125
30	150	165	180
35	205	225	245
40	270	295	320
45	450	495	540
50	500	550	600
55	550	605	660
60	600	660	720
65	650	715	780
75	750	825	900

REV. NO.	DATE	DESCRIPTION OF REVISION
R7	JAN 18	NDOR BORDER TO NDOT BORDER
R6	JUN 14	2009 MUTCD UPDATE
R5	OCT 98	REVISE CHANNELIZATION DEVICES, TAPER

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 920-R7

TRAFFIC CONTROL, CONSTRUCTION AND MAINTENANCE

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
DANIEL J. WADDLE
E-6289
STATE OF NEBRASKA

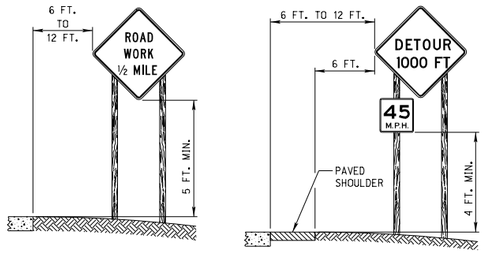
DATE

ORIGINAL: OCTOBER 1998
DATE

ROADWAY DESIGN DIVISION

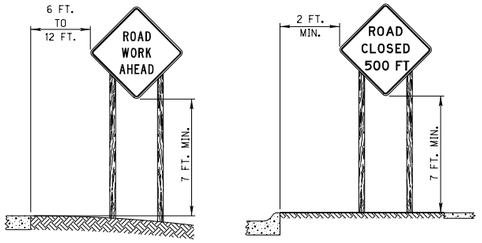
ROADSIDE SIGNS

HEIGHT AND LATERAL LOCATION OF SIGNS
RURAL AREA



WITH SPEED ADVISORY PLATE

URBAN AREA



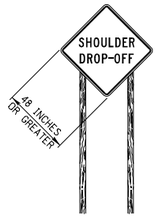
TYPICAL FIRST SIGN AT CONSTRUCTION SITE

WITH TYPE "A" FLASHING WARNING LIGHT MOUNTED ABOVE TYPE III BARRICADE

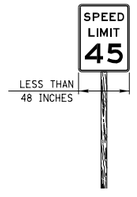
PORTABLE AND TEMPORARY MOUNTING

TYPICAL SIGN MOUNTINGS

POST MOUNTED



SIGNS 48 INCHES OR WIDER REQUIRE TWO POSTS



SIGN WIDTHS LESS THAN 48 INCHES MAY BE MOUNTED WITH ONE POST

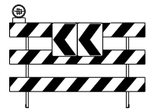
TYPICAL SIGN MOUNTINGS

OTHER THAN POST MOUNTED

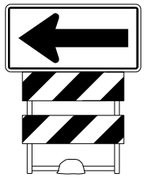
TYPE III BARRICADE WITH SIGN

PORTABLE AND TEMPORARY MOUNTING

TYPE III BARRICADE WITH SIGN AND DETOUR ARROW



TYPE III BARRICADE WITH CHEVRONS



TYPE II BARRICADE WITH DETOUR ARROW OR SIGN

PLASTIC DRUM WITH CHEVRON OR SIGN

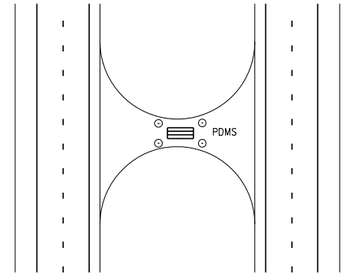
TEMPORARY SIGN SUPPORTS

ALL "TEMPORARY SIGN" SUPPORTS (BASES) SHALL BE NCHRP 350 OR MASH (TL-3) APPROVED.

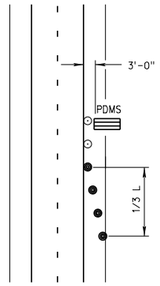
"TEMPORARY SIGNS" ARE ALL TEMPORARILY MOUNTED WORK ZONE SIGNS THAT ARE NOT POST MOUNTED IN THE GROUND AT THE TYPICAL 5 FOOT MOUNTING HEIGHT. TEMPORARY SIGNS ARE CONSIDERED NCHRP 350 OR MASH CATEGORY 2 DEVICES AND ARE MOUNTED ON TEMPORARY SIGN STANDS. TEMPORARY SIGNS SHALL BE MOUNTED A MINIMUM OF 1 FOOT ABOVE THE GROUND, UNLESS OTHERWISE REQUIRED TO BE MOUNTED AT A HIGHER HEIGHT.

TEMPORARY SIGNS AND THEIR SUPPORTS SHALL NOT BE IN PLACE LONGER THAN 3 DAYS. ANY SIGN THAT IS TO BE IN PLACE LONGER THAN 3 DAYS SHALL BE POST MOUNTED OR MOUNTED TO A DRUM, BARRICADE, OR BARRIER, AS REQUIRED BY THE PLANS OR SPECIFICATIONS.

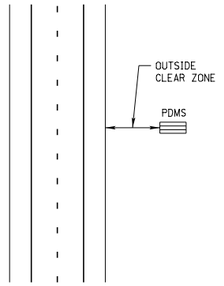
PORTABLE DYNAMIC MESSAGE SIGN DELINEATION



IN MEDIAN



ON SHOULDER



OFF SHOULDER

PORTABLE DYNAMIC MESSAGE SIGNS (PDMS)

THE PLACEMENT OF PDMS SHOULD BE IN THE FOLLOWING ORDER:

WHENEVER POSSIBLE, PDMS SHOULD BE PLACED OFF OF ANY USABLE PORTION OF THE ROADWAY ON THE RIGHT SIDE OF THE ROADWAY. WHEN PLACED OUTSIDE THE CLEAR ZONE OR BEHIND GUARDRAIL OR CONCRETE PROTECTION BARRIERS, DELINEATION IS NOT REQUIRED.

WHERE FIELD CONDITIONS DO NOT ALLOW FOR THIS PLACEMENT, THE SIGNS MAY BE LOCATED ON THE OUTSIDE SHOULDER OF THE ROADWAY OR WITHIN THE MEDIAN.

A. A MINIMUM CLEARANCE OF 3 FEET MEASURED HORIZONTALLY FROM THE EDGE OF THE SIGN TO THE EDGE OF THE TRAVELED WAY IS RECOMMENDED.
B. THE PDMS SHOULD HAVE A MINIMUM MOUNTED HEIGHT OF 7 FEET ON FREEWAYS, EXPRESSWAYS AND IN URBAN AREAS.
C. ALL OTHER RURAL APPLICATIONS SHOULD HAVE A MINIMUM HEIGHT OF 5 FEET.

THESE HEIGHTS ARE MEASURED VERTICALLY FROM THE BOTTOM OF THE SIGN TO THE ELEVATION OF THE NEAR EDGE OF THE PAVEMENT.

REFLECTORIZED PLASTIC DRUMS SHOULD BE USED TO DELINEATE EACH SIGN USING A 1/3 L TAPER. THESE DRUMS SHOULD BE POSITIONED ON THE UPSTREAM END OF THE SIGN TO FORM A TAPER LEADING UP TO THE TRAFFIC SIDE OF THE SIGN. FOR A SIGN LOCATED IN THE MEDIAN, THE SIGN SHOULD BE DELINEATED WITH A 42 INCH CONE ON ALL FOUR CORNERS.

WHEN DEPLOYED, THE SIGN SHALL BE SIGHTED AND ALIGNED WITH APPROACHING TRAFFIC TO ENSURE VISIBILITY OF THE MESSAGE. IF MULTIPLE SIGNS ARE USED, THE SIGNS SHOULD BE LOCATED ON THE SAME SIDE OF THE ROAD AND SEPARATED ACCORDING TO PROPER SIGN SPACING.

WHEN PRACTICAL, PDMS SHOULD NOT BE USED TO REPLACE STATIC SIGNS FOR LONG TERM USAGE (OVER 10 DAYS).

WHEN PDMS ARE TO BE DEPLOYED FOR LONG PERIODS, SUCH AS INCIDENT MANAGEMENT ROLES, CONCRETE PADS WITH APPROPRIATE TIE DOWNS SHOULD BE CONSTRUCTED FOR THEIR PLACEMENT.

PDMS NOT ACTIVELY BEING USED IN A CONSTRUCTION OR INCIDENT MANAGEMENT ROLE SHOULD BE REMOVED.

REFER TO NDOR "DMS GUIDELINES" FOR PROPER PDMS MESSAGE INFORMATION.

NOTES

1. ALL TRAFFIC CONTROL DEVICES SHALL MEET THE APPLICABLE STANDARDS AND SPECIFICATIONS PRESCRIBED IN PART 6 OF THE LATEST ADOPTED EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (MUTCD)" AND THE STATE OF NEBRASKA SUPPLEMENT TO THE MUTCD. ALL TRAFFIC CONTROL DEVICES SHALL BE CRASHWORTHY AND QUALIFY AS SUCH ACCORDING TO THE TESTING AND ACCEPTANCE GUIDELINES OF THE NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM (NCHRP) REPORT 350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
2. TRAFFIC CONTROL PLANS AND DEVICES SHOULD FOLLOW THE PRINCIPLES SET FORTH, BUT MAY DEVIATE FROM THE TYPICAL DRAWINGS TO ALLOW FOR CONDITIONS AND REQUIREMENTS OF THE PROJECT.
3. TRAFFIC CONTROL DEVICES SHALL BE INSTALLED SO AS NOT TO OBSTRUCT THE VIEW OF OTHER TRAFFIC CONTROL DEVICES.
4. THE ENGINEER SHALL HAVE THE AUTHORITY TO REQUIRE THE USE, AND APPROVE THE LOCATION OF ANY OF THE DEVICES SHOWN IN THESE PLANS.

WORK ZONE SPEED LIMIT NOTES

A. WORK ZONE SPEED LIMITS SHALL NOT BE INSTALLED WITHOUT A SPEED ZONE AUTHORIZATION COMPLETED BY THE DEPARTMENT.
B. REDUCED SPEED LIMITS SHOULD BE USED ONLY IN THE SPECIFIC PORTION OF THE WORK ZONE WHERE CONDITIONS OR RESTRICTIVE FEATURES ARE PRESENT. HOWEVER, FREQUENT CHANGES IN THE SPEED LIMIT SHOULD BE AVOIDED. THE REDUCTION OF SPEED SHOULD BE DESIGNED SO VEHICLES CAN SAFELY TRAVEL THROUGH THE WORK ZONE WITH A SPEED LIMIT REDUCTION OF NO MORE THAN 10 MPH UNLESS OTHERWISE NOTED IN THE PLANS.
C. WORK ZONE SPEED LIMITS SHOWN ARE TYPICAL APPLICATIONS ONLY AND ARE NOT TO BE ASSUMED AS THE SPEED LIMITS REQUIRED FOR THE WORK.
D. EXISTING SPEED LIMIT SIGNS SHALL BE REMOVED OR COVERED WHEN A REDUCED WORK ZONE SPEED LIMIT IS IN EFFECT IN THE SAME AREA.
E. WORK ZONE SPEED LIMIT SIGNS SHALL BE INSTALLED EVERY MILE THROUGH THE WORK AREA WHEN SPEED ZONE IS REDUCED.
F. A SPEED LIMIT SIGN ENDING THE REDUCED SPEED ZONE SHALL BE INSTALLED AT THE END OF EACH ZONE.
G. DOUBLE FINES AND REDUCED SPEED ZONE SIGNING ARE NOT REQUIRED FOR SHORT-DURATION WORK LESS THAN 12 HOURS.

TAPER FORMULA

L = S x W FOR SPEEDS OF 45 MPH OR MORE.

L = $\frac{WS^2}{60}$ FOR SPEEDS OF 40 MPH OR LESS.

WHERE:

L = MINIMUM LENGTH OF TAPER.

S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK.

W = WIDTH OF OFFSET (LANE WIDTH).

LEGEND

- TYPE III BARRICADE
- REFLECTORIZED PLASTIC DRUM
- REFLECTORIZED PLASTIC DRUM OR 42" CONE
- PORTABLE DYNAMIC MESSAGE SIGN

REV. NO.	DATE	DESCRIPTION OF REVISION
R7	JAN 18	NDOR BORDER TO NDOT BORDER
R6	JUN 14	2009 MUTCD UPDATE
R5	OCT 98	REVISE CHANNELIZATION DEVICES, TAPER

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 920-R7

TRAFFIC CONTROL, CONSTRUCTION AND MAINTENANCE

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
DANIEL J. WADDLE
E-6289
STATE OF NEBRASKA

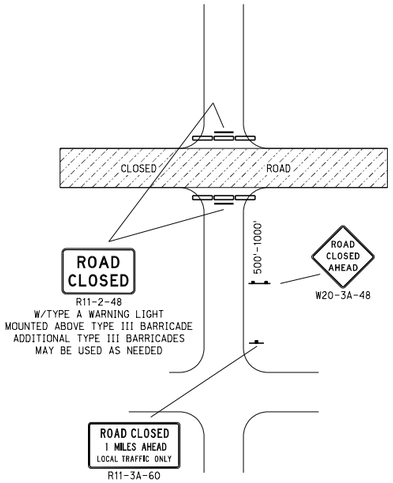
DATE

ORIGINAL: OCTOBER 1998
DATE

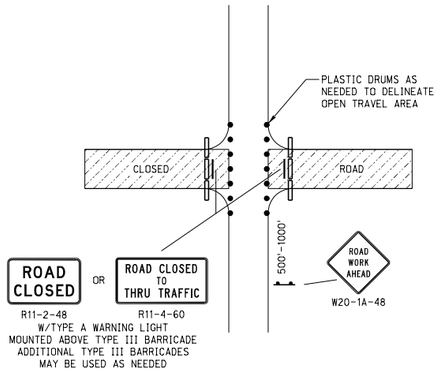
3/3

Computer: NDOTDESIGN134
Date: 29-JUN-2021 09:21
File: 92000e07.dgn

CROSS ROAD INTERSECTING CLOSED ROAD

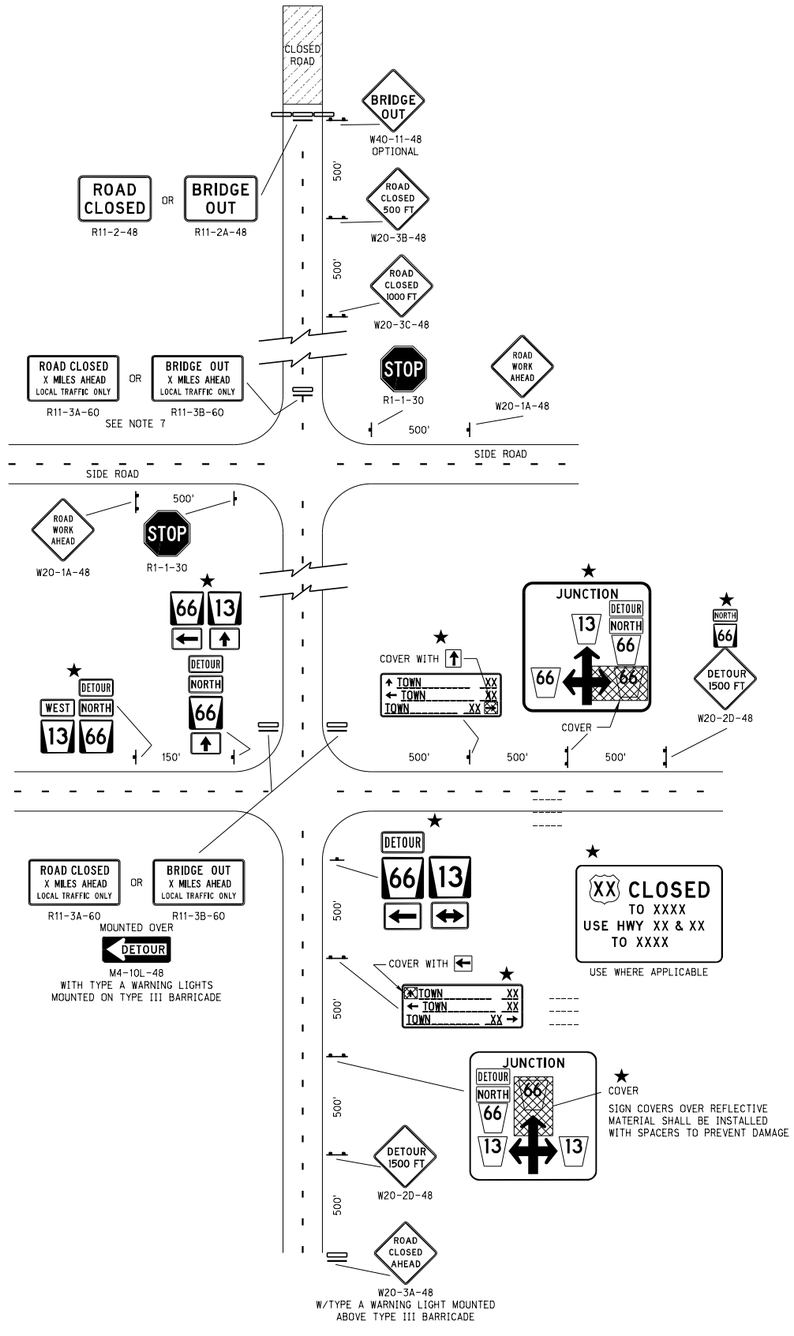


TRAFFIC NOT ALLOWED TO CROSS CLOSED ROAD



TRAFFIC ALLOWED TO CROSS CLOSED ROAD

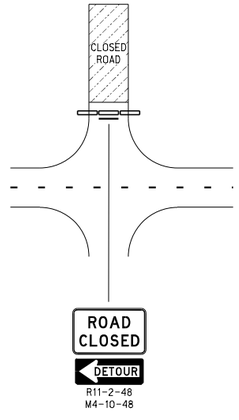
ROAD CLOSED BEYOND JUNCTION



NOTES

1. SIGNS SHOWN ARE USUALLY FOR ONE DIRECTION OF TRAVEL ONLY.
2. THE CONTRACTOR SHALL INSTALL, MAINTAIN, AND REMOVE ALL SIGNS IN ACCORDANCE WITH THE DETAILS OF AND AT THE LOCATIONS SHOWN IN THE PLANS. SIGNS INSTALLED BY THE DEPARTMENT OR OTHER GOVERNMENT AGENCY SHALL BE MAINTAINED AND REMOVED BY THEIR FORCES.
3. WHEN MESSAGE IS NOT PERTINENT, SIGNS SHALL BE TAKEN DOWN, COVERED OR FOLDED. TAPE IS NOT PERMITTED ON THE FACE OF THE SIGN.
4. VEHICLES OR EQUIPMENT SHALL NOT BE PARKED SO AS TO OBSCURE OR DISTRACT FROM TRAFFIC CONTROL DEVICES.
5. FLAGS MAY BE USED TO CALL ATTENTION TO WARNING SIGNS.
6. WHEN APPROPRIATE THE SIGN R11-2B "BRIDGE OUT" MAY BE USED INSTEAD OF R11-2 "ROAD CLOSED".
7. BARRICADE AND SIGN MAY BE PLACED ALONG EDGE OF ROAD IF NEEDED FOR LOCAL TRAFFIC.
8. REFER TO STANDARD PLAN 920 FOR GENERAL INFORMATION NOT SHOWN.

ROAD CLOSED AT JUNCTION



LEGEND

- TYPE III BARRICADE
- REFLECTORIZED PLASTIC DRUM
- SINGLE POSTED SIGN
- DOUBLE POSTED SIGN
- ★ INSTALLED BY OTHERS

TAPER FORMULA

L = S x W FOR SPEEDS OF 45 MPH OR MORE.

L = $\frac{WS^2}{60}$ FOR SPEEDS OF 40 MPH OR LESS.

WHERE:

L = MINIMUM LENGTH OF TAPER.

S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK.

W = WIDTH OF OFFSET (LANE WIDTH).

REV. NO.	DATE	DESCRIPTION OF REVISION
R2	JAN 18	NDOR BORDER TO NDOT BORDER
R1	JUN 14	2009 MUTCD UPDATES

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 923-R2

TRAFFIC CONTROL ROAD CLOSURE

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

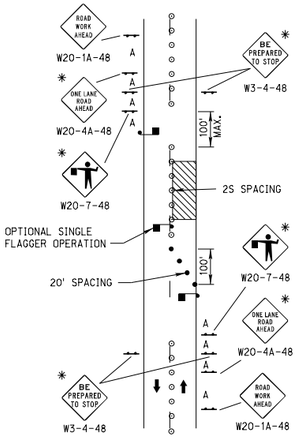
PROFESSIONAL CIVIL ENGINEER
DANIEL J. WADDLE
E-6289
STATE OF NEBRASKA

DATE

ORIGINAL: AUGUST 1998
DATE

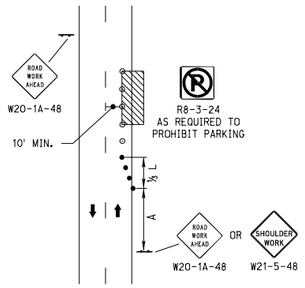
1/1

File: 923l0e02.dgn
Date: 29-JUN-2021 09:21
Computer: NDOTDESIGN134

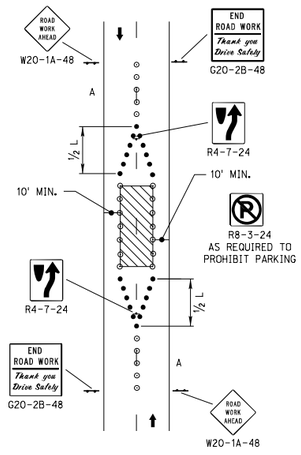


ONE LANE CLOSED
WITH FLAGGER

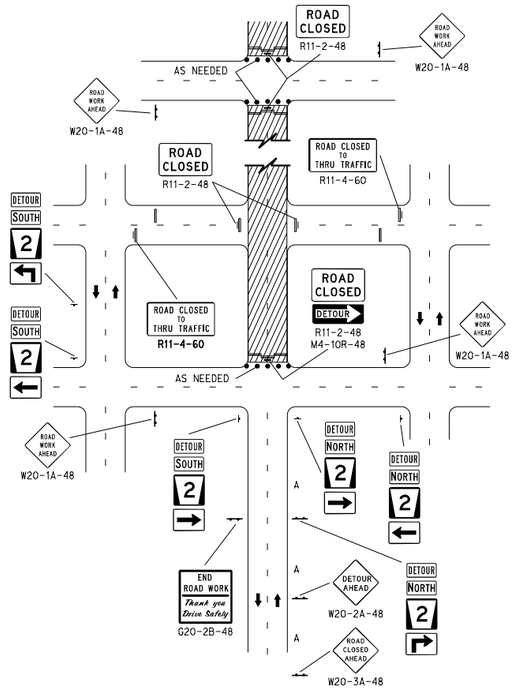
✱ SIGNS AND CONES ARE SUBSIDIARY TO THE FLAGGING OPERATION.



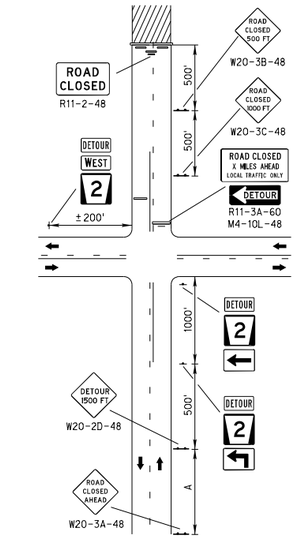
SHOULDER OR PARKING
LANE CLOSED



WORK IN CENTER OF
ROAD WITH LOW
TRAFFIC VOLUMES



ROAD CLOSED AT DETOUR



ROAD CLOSED BEYOND DETOUR

LEGEND

- FLASHING ARROW PANEL
- TYPE III BARRICADE
- REFLECTORIZED PLASTIC DRUM
- TUBULAR POST
- REFLECTORIZED PLASTIC DRUM OR 42" CONE
- SINGLE POSTED SIGN
- DOUBLE POSTED SIGN
- FLAGGER
- xxxx PAVEMENT MARKING REMOVAL

TAPER FORMULA

L = S x W FOR SPEEDS OF 45 MPH OR MORE.

$L = \frac{WS^2}{60}$ FOR SPEEDS OF 40 MPH OR LESS.

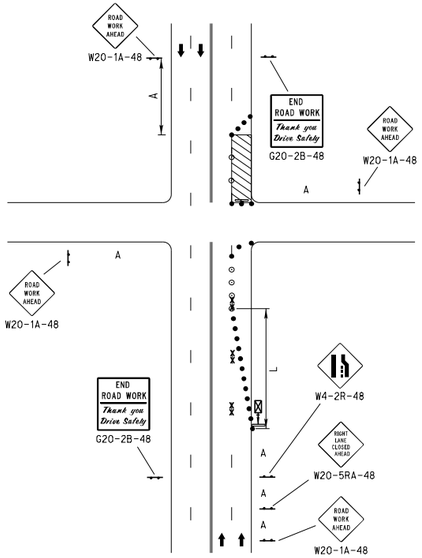
WHERE:
L = MINIMUM LENGTH OF TAPER.

S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK.

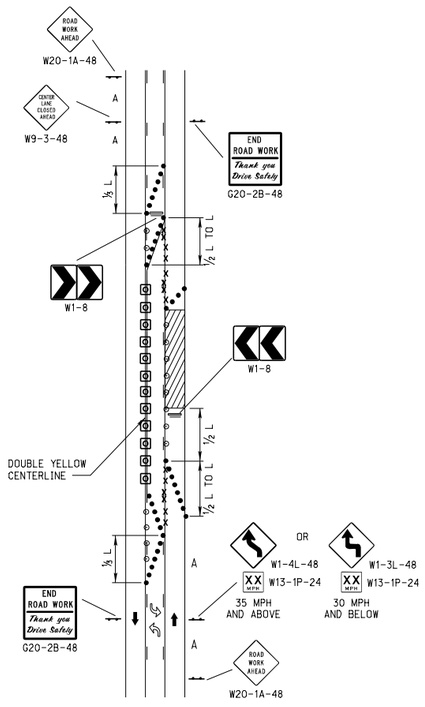
W = WIDTH OF OFFSET (LANE WIDTH).

NOTES

1. ALL BARRICADE AND SIGN LOCATIONS ON THIS PLAN ARE APPROXIMATE, AND MAY BE ADJUSTED TO FIT FIELD CONDITIONS. THE SIGNS SHALL BE INSTALLED SO AS NOT TO OBSCURE THE VIEW OF OTHER TRAFFIC CONTROL DEVICES.
2. MINIMUM WIDTH OF TRAVELLED LANE SHALL BE AS REQUIRED BY THE ENGINEER.
3. FLASHING ARROW PANEL REQUIRED ON ALL ROADWAYS WITH POSTED SPEED LIMIT 45 MPH OR HIGHER. THE USE OF A FLASHING ARROW PANEL IS OPTIONAL ON ROADWAYS WITH A POSTED SPEED OF 40 MPH OR LOWER.
4. LONG-TERM FLASHING ARROW PANELS IN URBAN RESIDENTIAL AREAS WHERE DIESEL ENGINE NOISE WILL BE DISRUPTIVE TO RESIDENTS, MAY BE REQUIRED TO OPERATE BY 120 VAC, OR IF SIGHT DISTANCE ALLOWS, A SOLAR POWERED ARROW PANEL MAY BE USED.
5. FOR SHORT-TERM WORK (LESS THAN 24 HOURS) SIGN G20-2B-48 (END ROAD WORK, THANK YOU, DRIVE SAFELY) MAY BE OMITTED.
6. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT (S). WHERE CHANNELIZING DEVICES ARE USED ALONG THE WORK AREA, THE SPACING MAY BE INCREASED TO THE DISTANCE IN FEET EQUAL TO THE SPEED LIMIT, DOUBLED (2 × S). SEE "TAPER FORMULA" TABLE FOR MORE INFORMATION.
7. FOR LANE CLOSURES OVER 72 HOURS, ALL CONFLICTING PAVEMENT MARKINGS SHALL BE REMOVED. ON ASPHALT SURFACES, DURABLE PAVEMENT MARKINGS MAY BE COVERED WITH APPROVED BLACK TEMPORARY PAVEMENT MARKING TAPE.
8. DESIGNATION OF SPEED SHOWN ON ADVISORY SPEED SIGNS W13-1P SHALL BE DETERMINED BY THE ENGINEER IN ACCORDANCE WITH MUTCD. THE SPEED DESIGNATION SHALL BE AS HIGH AS PRACTICAL AND FEASIBLE.

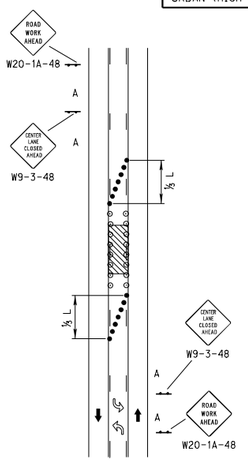


LANE CLOSED NEAR INTERSECTION
(RIGHT LANE CLOSED)

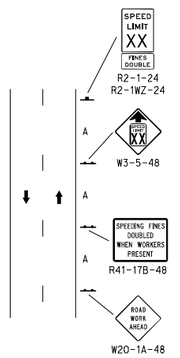


3-LANE ROADWAY
ONE LANE CLOSED

ROAD TYPE	MINIMUM DISTANCE BETWEEN SIGNS
	A
URBAN (LOW SPEED - 25 MPH TO 40 MPH)	100'
URBAN (HIGH SPEED - 45 MPH OR HIGHER)	350'



TWO-WAY LEFT TURN
LANE CLOSED



TYPICAL ADVANCED
SIGNING

REV. NO.	DATE	DESCRIPTION OF REVISION
R4	JUL 20	ADDED NOTE TO SHEET ONE
R3	JAN 19	TOOK OUT 1/2 L ON SHEET 2
R2	JAN 18	NDOR BORDER TO NDOT BORDER

NEBRASKA DEPARTMENT OF TRANSPORTATION
STANDARD PLAN NO. 924-R4

URBAN TRAFFIC CONTROL PLAN

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

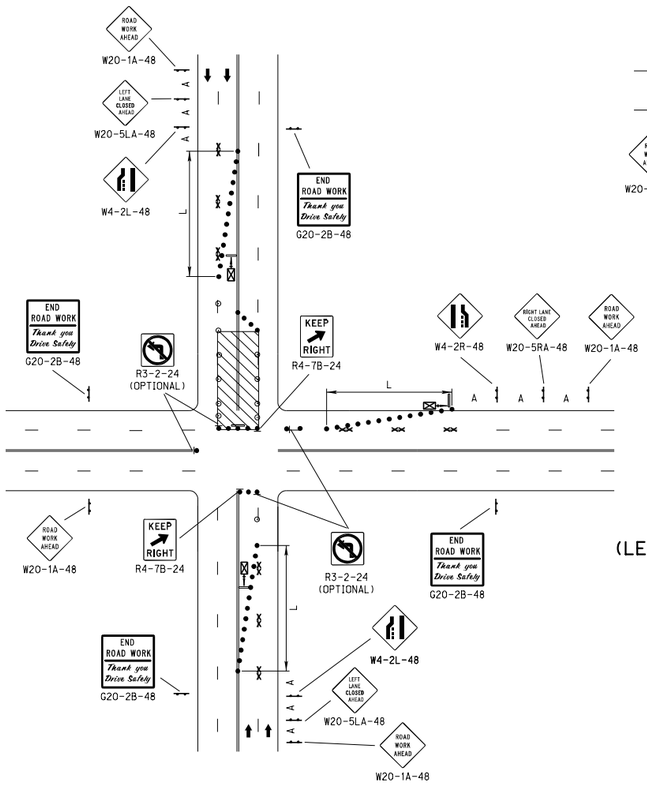
PROFESSIONAL CIVIL ENGINEER
DANIEL J. WADDLE
E-6289
STATE OF NEBRASKA

DATE

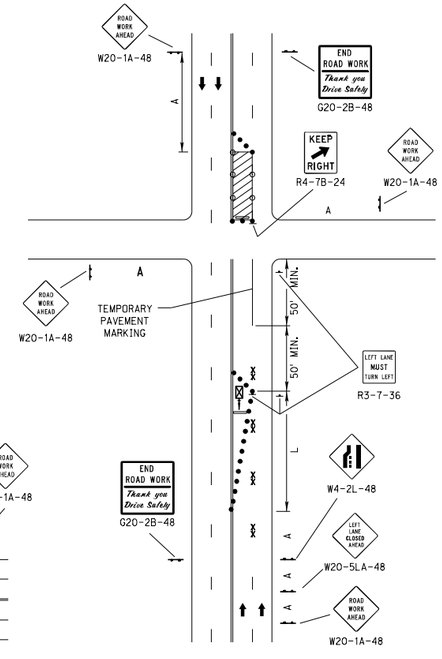
ORIGINAL:
FEBRUARY 1, 2010
DATE

1
3

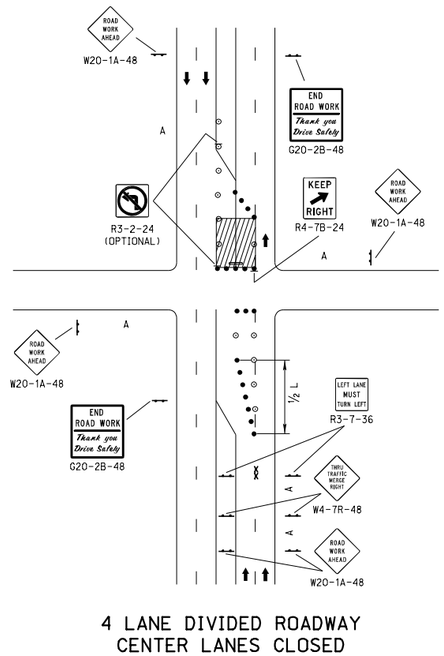
ROADWAY DESIGN DIVISION



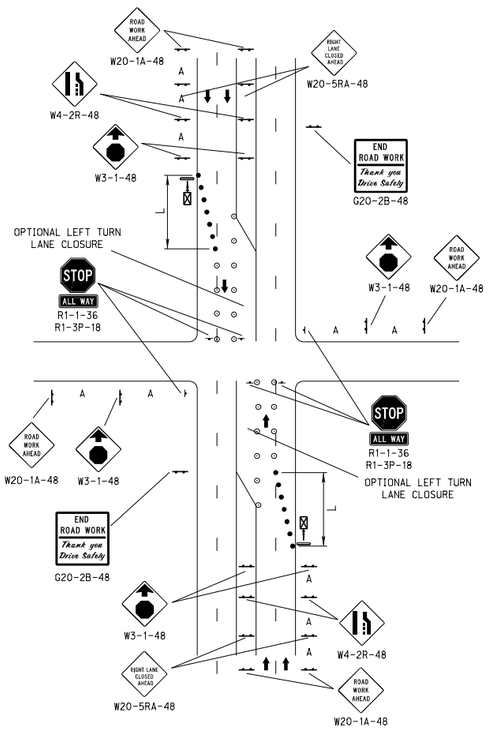
4 LANE UNDIVIDED ROADWAY
CENTER LANES CLOSED
NEAR INTERSECTION



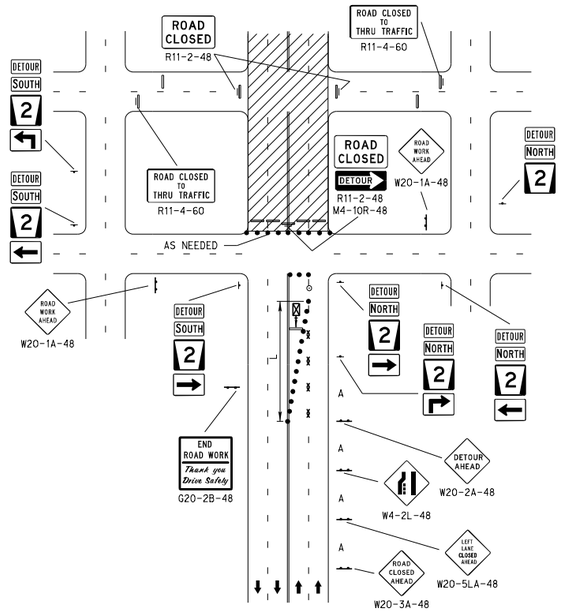
LANE CLOSED NEAR INTERSECTION
(LEFT LANE CLOSURE FORMING A TURNBAY)



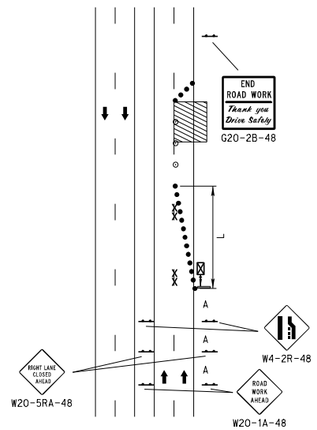
4 LANE DIVIDED ROADWAY
CENTER LANES CLOSED
NEAR INTERSECTION



TEMPORARY ALL-WAY STOP
FOR SIGNAL WORK



ROAD CLOSED AT DETOUR
(OPTIONAL LANE CLOSURE)



DIVIDED ROADWAY
ONE LANE CLOSED

ROAD TYPE	MINIMUM DISTANCE BETWEEN SIGNS
	A
URBAN (LOW SPEED - 25 MPH TO 40 MPH)	100'
URBAN (HIGH SPEED - 45 MPH OR HIGHER)	350'

LEGEND

- FLASHING ARROW PANEL
- TYPE III BARRICADE
- REFLECTORIZED PLASTIC DRUM
- TUBULAR POST
- REFLECTORIZED PLASTIC DRUM OR 42" CONE
- SINGLE POSTED SIGN
- DOUBLE POSTED SIGN
- FLAGGER
- xxxx PAVEMENT MARKING REMOVAL

TAPER FORMULA

L = S x W FOR SPEEDS OF 45 MPH OR MORE.

$L = \frac{WS^2}{60}$ FOR SPEEDS OF 40 MPH OR LESS.

WHERE:
L = MINIMUM LENGTH OF TAPER.

S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK.

W = WIDTH OF OFFSET (LANE WIDTH).

REV. NO.	DATE	DESCRIPTION OF REVISION
R4	JUL 20	ADDED NOTE TO SHEET ONE
R3	JAN 19	TOOK OUT 1/2 L ON SHEET 2
R2	JAN 18	NDOR BORDER TO NDOT BORDER

NEBRASKA DEPARTMENT OF TRANSPORTATION
STANDARD PLAN NO. 924-R4

URBAN TRAFFIC CONTROL PLAN

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

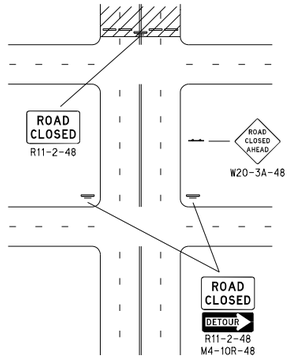
PROFESSIONAL CIVIL ENGINEER
DANIEL J. WADDLE
E-6289
STATE OF NEBRASKA

DATE

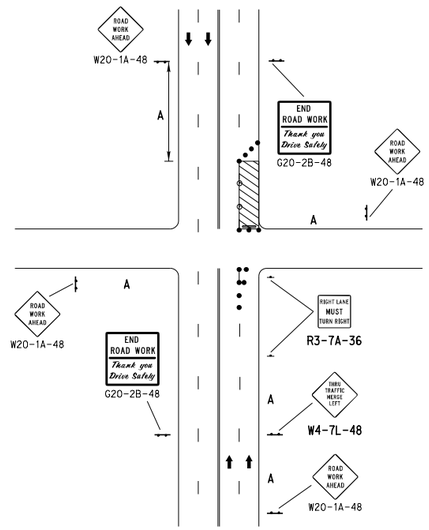
ORIGINAL:
FEBRUARY 1, 2010
DATE

File: 924006e04.dgn
Date: 29-JUN-2021 09:21
Computer: NDOTDESIGN134

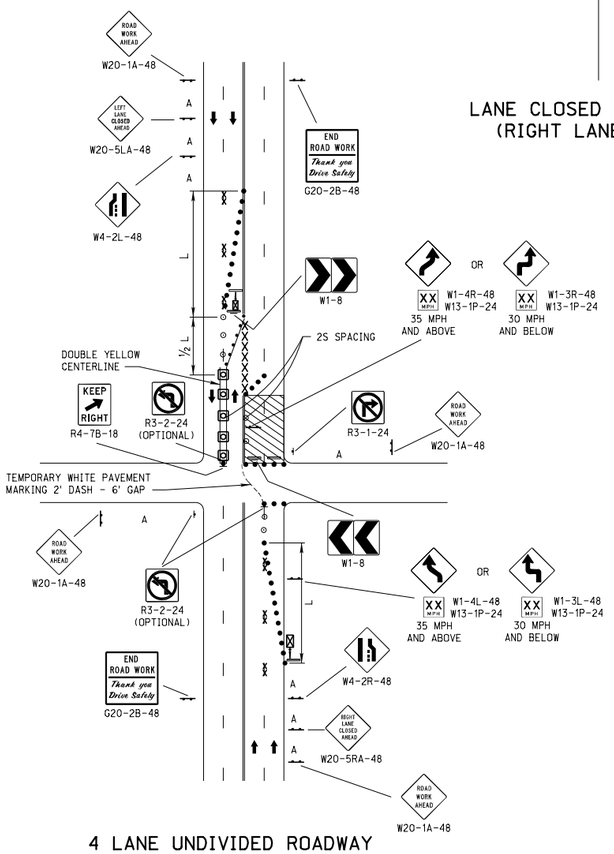
ROADWAY DESIGN DIVISION
Computer: NDOTDESIGN34
Date: 29-JUN-2021 09:21
File: 92400e04.dgn



ROAD CLOSED
BEYOND DETOUR



LANE CLOSED NEAR INTERSECTION
(RIGHT LANE REMAINS OPEN)



4 LANE UNDIVIDED ROADWAY
TWO LANES CLOSED NEAR INTERSECTION

LEGEND

- FLASHING ARROW PANEL
- TYPE III BARRICADE
- REFLECTORIZED PLASTIC DRUM
- TUBULAR POST
- REFLECTORIZED PLASTIC DRUM OR 42" CONE
- SINGLE POSTED SIGN
- DOUBLE POSTED SIGN
- FLAGGER
- XXXX PAVEMENT MARKING REMOVAL

TAPER FORMULA

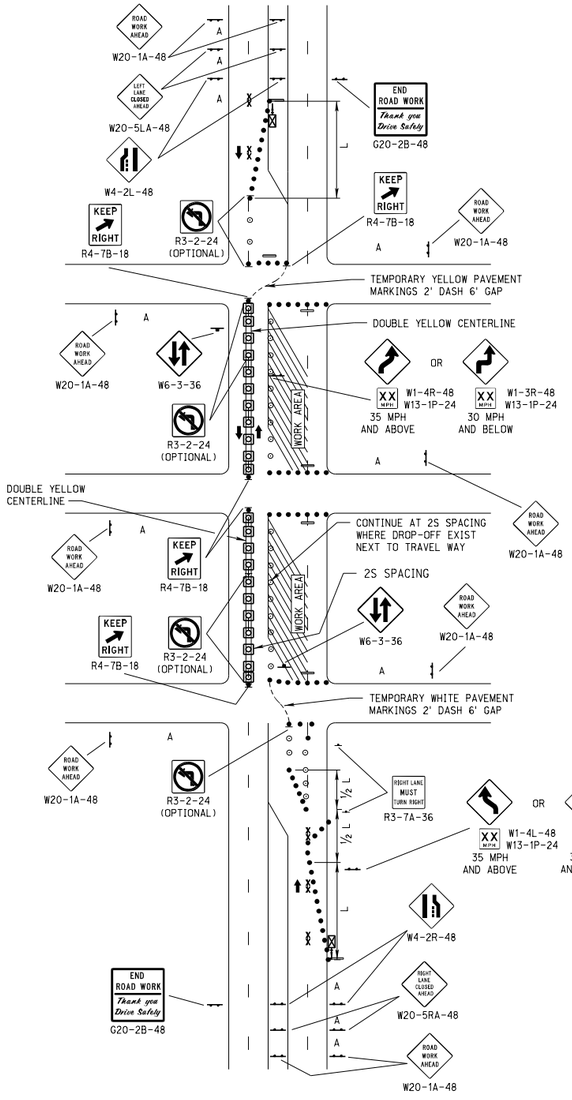
$L = S \times W$ FOR SPEEDS OF 45 MPH OR MORE.

$L = \frac{WS^2}{60}$ FOR SPEEDS OF 40 MPH OR LESS.

WHERE:
L = MINIMUM LENGTH OF TAPER.

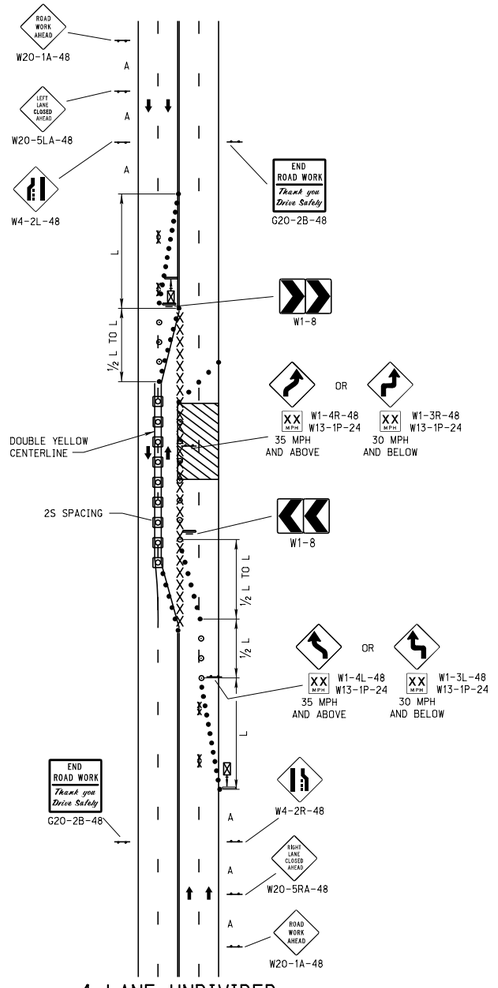
S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK.

W = WIDTH OF OFFSET (LANE WIDTH).



4-LANE DIVIDED
HALF CLOSED

ROAD TYPE	MINIMUM DISTANCE BETWEEN SIGNS
	A
URBAN (LOW SPEED - 25 MPH TO 40 MPH)	100'
URBAN (HIGH SPEED - 45 MPH OR HIGHER)	350'



4-LANE UNDIVIDED
2 LANES CLOSED

REV. NO.	DATE	DESCRIPTION OF REVISION
R4	JUL 20	ADDED NOTE TO SHEET ONE
R3	JAN 19	TOOK OUT 1/2 L ON SHEET 2
R2	JAN 18	NDOR BORDER TO NDOT BORDER

NEBRASKA DEPARTMENT OF TRANSPORTATION
STANDARD PLAN NO. 924-R4

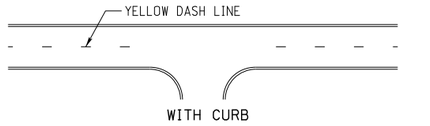
URBAN TRAFFIC CONTROL PLAN

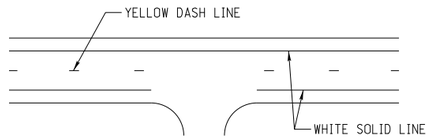
ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
DANIEL J. WADDLE
E-6289
STATE OF NEBRASKA

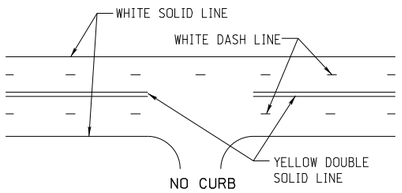
DATE

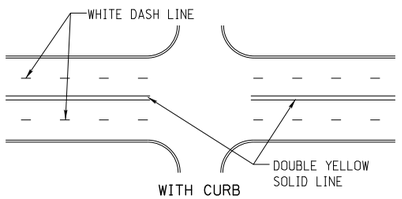
ORIGINAL:
FEBRUARY 1, 2010
DATE



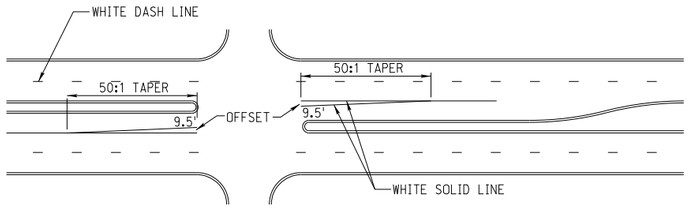


2 LANE ROADWAY

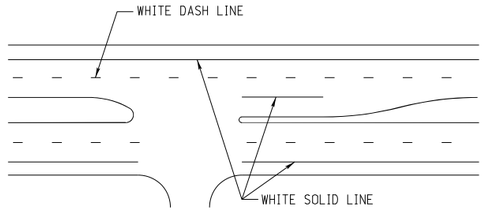




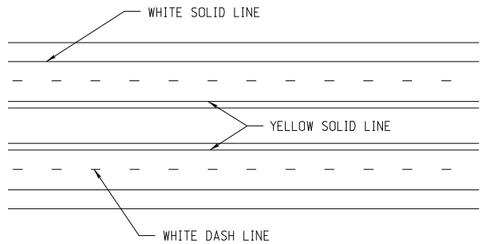
4 LANE UNDIVIDED ROADWAY



WITH CURB

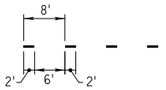


WITH SHOULDERS

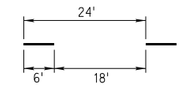


DEPRESSED MEDIAN

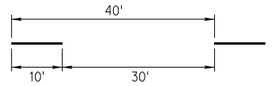
4 LANE DIVIDED ROADWAY



DOTTED LINE DETAIL

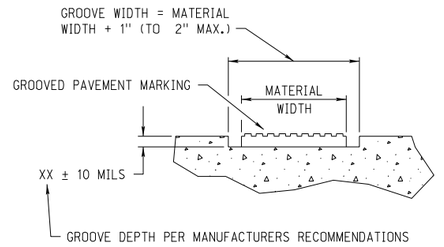


URBAN

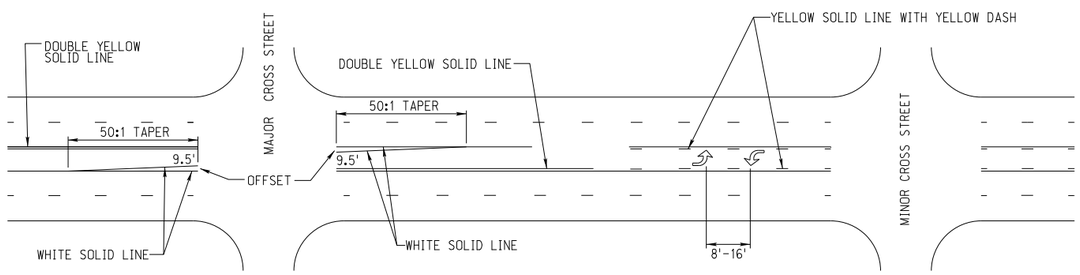


RURAL

DASH LINE DETAIL



PERMANENT PAVEMENT MARKINGS INSTALLED IN GROOVES



3 OR 5 LANE WITH TWO-WAY LEFT TURN LANE

2-LANE ROADWAY REQUIRED LOCATION FOR EDGE LINES		
ROADWAY WIDTH	SHOULDER TYPE	DISTANCE FROM CENTERLINE OF ROADWAY TO OUTSIDE EDGE OF PAVEMENT EDGELINE
LESS THAN 24 FT	SURFACED	12 FT 0 IN
LESS THAN 24 FT	EARTH	PAVEMENT EDGE
24 FT	EARTH	PAVEMENT EDGE
24 FT	SURFACED	12 FT 0 IN
GREATER THAN 24 FT	EARTH	12 FT 0 IN

REV. NO.	DATE	DESCRIPTION OF REVISION
R1	SEP 21	CHANGE 3-GUN TO 2-GUN LAYOUT

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 941-R1

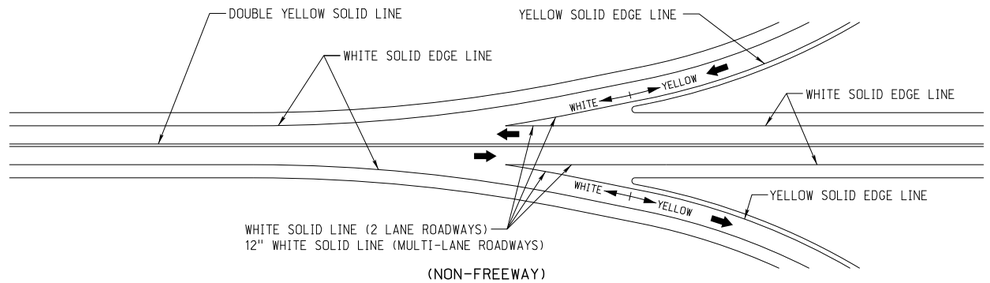
PAVEMENT MARKING

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
DANIEL J. WADDLE
E-6289
STATE OF NEBRASKA

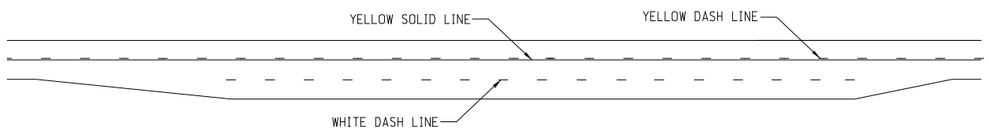
DATE

ORIGINAL: OCT. 2018
DATE

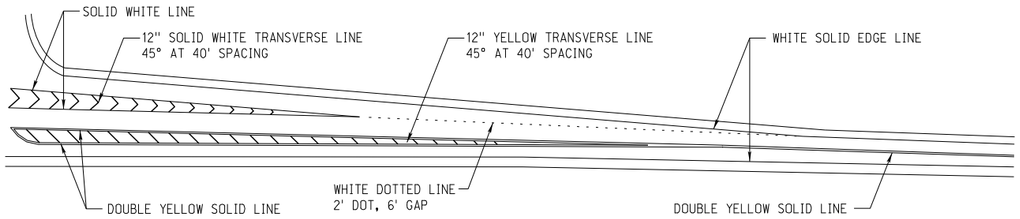


(NON-FREEWAY)

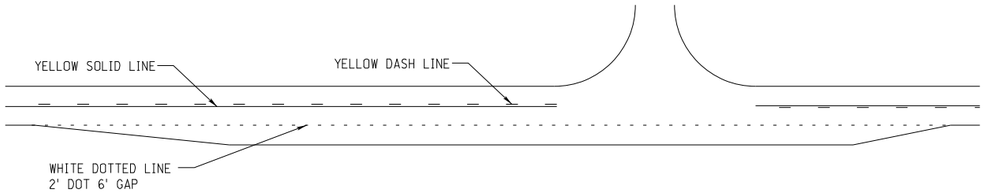
GORE MARKING



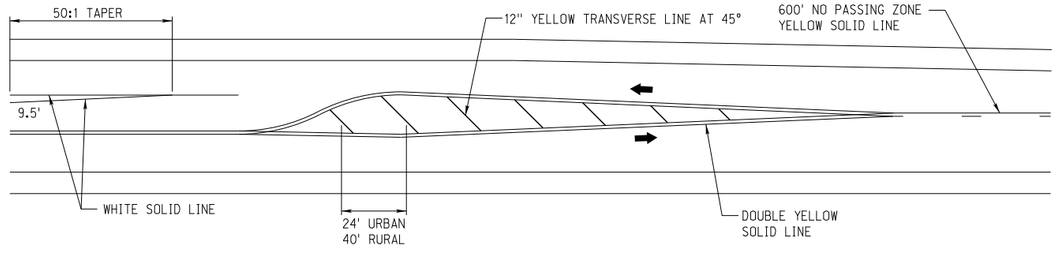
PASSING LANE MARKING



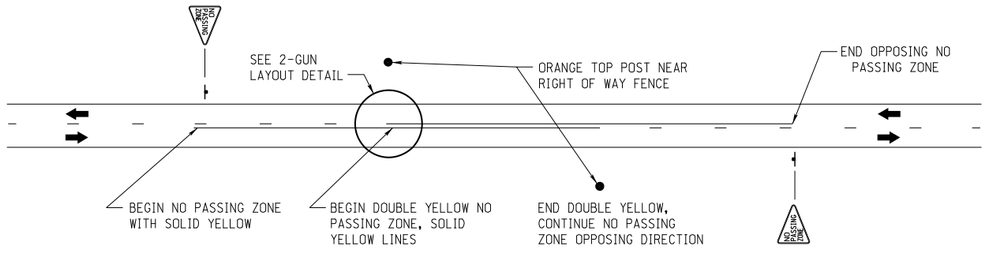
OFFSET RIGHT TURN LANE



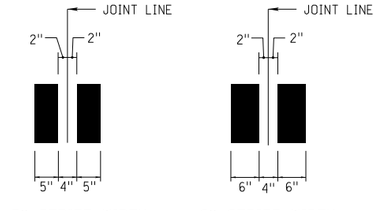
FLY-BY LANE MARKING



LEFT TURN LANE MARKING



NO PASSING ZONE MARKING



5" STRIPE WIDTH 6" STRIPE WIDTH

2-GUN LAYOUT

LEGEND

TRAFFIC FLOW

REV. NO.	DATE	DESCRIPTION OF REVISION
R1	SEP 21	CHANGE 3-GUN TO 2-GUN LAYOUT

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 941-R1

PAVEMENT MARKING

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

DATE

PROFESSIONAL CIVIL ENGINEER
DANIEL J. WADDLE
E-6289
STATE OF NEBRASKA

ORIGINAL:
OCT. 2018
DATE

2
2

File: 941000e01.dgn
Date: 29-JUN-2021 09:21
Computer: NDOTDESIGN34

SCHEMMER

Design with Purpose. Build with Confidence.

Project: Worthman Blvd
Extension Cost Estimate

Job No.: SCHEMMER 09336001-C

WORTHMAN BOULEVARD - 100% OPINION OF PROBABLE CONSTRUCTION COSTS

COMPUTED BY: Jed Stonacek DATE: 2/12/2025

CHECKED BY: Alex Roth DATE: 2/28/2025

UPDATES: DATE: 3/13/2025

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
0005.01	TRAFFIC CONTROL	1	LS	$10,000.00	$10,000.00
0030.00	MOBILIZATION (8%)	1	LS	$204,000.00	$204,000.00
1009.00	GENERAL CLEARING AND GRUBBING	1	LS	$5,000.00	$5,000.00
1030.00	EARTHWORK MEASURED IN EMBANKMENT (ESTABLISHED QUANTITY)	13,045	CY	$27.00	$352,223.20
1011.00	WATER	174	MGAL	$50.00	$8,718.33
1031.00	ROCK RIPRAP, TYPE B	149	TON	$110.00	$16,390.00
1041.00	SALVAGING AND PLACING TOPSOIL	52,525	SY	$1.00	$52,525.44
1043.50	RIPRAP FILTER FABRIC	189	SY	$5.00	$945.00
1101.00	REMOVE PAVEMENT	775	SY	$14.00	$10,850.00
1101.25	SAWING PAVEMENT	314	LF	$20.00	$6,280.00
1103.00	REMOVE BRICK SURFACE	78	SY	$18.00	$1,404.00
1117.00	REMOVE MANHOLE	2	EA	$2,000.00	$4,000.00
1119.00	REMOVE INLET	2	EA	$900.00	$1,800.00
W600.36	ADJUST WATER VALVE BOX TO GRADE	3	EA	$1,000.00	$3,000.00
4015.00	ADJUST MANHOLE TO GRADE	1	EA	$1,000.00	$1,000.00
1995.00	STABILIZED CONSTRUCTION EXIT	1	EA	$4,000.00	$4,000.00
8029.25	FOUNDATION COURSE	11,103	SY	$16.00	$177,645.97
9170.00	EARTH SHOULDER CONSTRUCTION	42.4	STA	$1,100.00	$46,662.00
9173.20	SUBGRADE PREPARATION	11,103	SY	$4.50	$49,962.93
7316.12	SWPPP SIGN	1	EA	$600.00	$600.00
3016.39	DETECTABLE WARNING PANEL	100	SF	$50.00	$5,000.00
3016.50	4" CONCRETE CLASS 47B-3500 SIDEWALKS	160	SY	$60.00	$9,600.00
3075.36	8" DOWELED CONCRETE PAVEMENT, CLASS 47B-3500	9,721	SY	$75.00	$729,075.00
4011.14	CURB INLET	18	EA	$8,000.00	$144,000.00
4016.48	48" MANHOLE	11	EA	$7,500.00	$82,500.00
4016.48	84" MANHOLE	1	EA	$15,000.00	$15,000.00
4043.00	REMOVE CULVERT PIPE	55	LF	$35.00	$1,925.00
4043.50	REMOVE STORM SEWER PIPE	154	LF	$26.00	$4,004.00
4107.04	CLASS 47B-3000 CONCRETE FOR CONCRETE COLLARS	1.30	CY	$1,300.00	$1,690.00
4157.00	REINFORCING STEEL FOR COLLARS	116	LB	$2.50	$290.00
4460.36	36" CONCRETE FLARED-END SECTION	2	EA	$2,000.00	$4,000.00
4460.48	48" CONCRETE FLARED-END SECTION	4	EA	$3,500.00	$14,000.00
P700.15	15" STORM SEWER PIPE, TYPE 1,7 OR 8	388	LF	$100.00	$38,800.00
P700.18	18" STORM SEWER PIPE, TYPE 1,7 OR 8	805	LF	$125.00	$100,625.00
P700.36	36" STORM SEWER PIPE, TYPE 1,7 OR 8	44	LF	$225.00	$9,900.00
P700.48	48" STORM SEWER PIPE, TYPE 1,7 OR 8	373	LF	$300.00	$111,900.00
	BUILD HEADWALL	1	EA	$12,000.00	$12,000.00
	BUILD PRINCIPAL SPILLWAY STRUCTURE	1	EA	$25,000.00	$25,000.00
4732.12	12" P.V.C. SANITARY SEWER PIPE	934	LF	$75.00	$70,050.00
4790.10	SANITARY MANHOLE	3	EA	$8,000.00	$24,000.00
7308.10	REMOVE SIGN	3	EA	$250.00	$750.00
7321.00	TYPE A SIGN	45	SF	$100.00	$4,500.00
7515.04	4" YELLOW POLYUREA PAVEMENT MARKING, GROOVED	3,685	LF	$5.00	$18,425.00
7515.12	12" WHITE POLYUREA PAVEMENT MARKING, GROOVED	154	LF	$10.00	$1,540.00
7515.24	24" WHITE POLYUREA PAVEMENT MARKING, GROOVED	282	LF	$30.00	$8,460.00
0009.00	PERMANENT BARRICADE	2	EA	$1,000.00	$2,000.00
A001.12	PULL BOX, TYPE PB-5	4	EA	$1,200.00	$4,800.00
	INSTALL LIGHT POLE (POLE PROVIDED BY CITY, INSTALLED BY CONTRACTOR)	16	EA	$3,000.00	$48,000.00
A070.08	1 1/2-INCH CONDUIT IN TRENCH	3,513	LF	$13.00	$45,669.00
A070.10	1 1/2-INCH CONDUIT UNDER ROADWAY	103	LF	$25.00	$2,575.00
A080.22	STREET LIGHTING CABLE, NO. 6 BARE	3,616	LF	$3.00	$10,848.00
A080.24	STREET LIGHTING CABLE, NO. 6 USE	7,232	LF	$4.00	$28,928.00
A001.58	SPLICE CONDUIT	1	EA	$300.00	$300.00
	REMOVE PULL BOX	2	EA	$500.00	$1,000.00
L001.02	SEEDING, TYPE B	5.96	AC	$3,000.00	$17,880.00
	SEEDING, TYPE C (FLOODPLAIN MIX)	2.74	AC	$4,000.00	$10,960.00
L019.13	EROSION CONTROL, CLASS 1D	28,902	SY	$3.50	$101,157.00
L019.14	EROSION CONTROL, CLASS 1E	13,265	SY	$3.75	$49,743.75
L021.72	CURB INLET PROTECTION	18	EA	$400.00	$7,200.00
L022.11	FABRIC SILT FENCE ' LOW POROSITY'	5,310	LF	$5.00	$26,550.00

SCHEMMER

Design with Purpose. Build with Confidence.

Project: Worthman Blvd Extension Cost Estimate

Job No.: SCHEMMER 09336001-C

WORTHMAN BOULEVARD - 100% OPINION OF PROBABLE CONSTRUCTION COSTS

COMPUTED BY: Jed Stonacek DATE: 2/12/2025

CHECKED BY: Alex Roth DATE: 2/28/2025

UPDATES: DATE: 3/13/2025

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
	SUBTOTAL CONSTRUCTION				$2,751,651.62
	CONSTRUCTION CONTINGENCIES (10% OF CONSTRUCTION)				$275,165.16
	TOTAL CONSTRUCTION COST				**$3,026,816.79**
ROW (Approximate Impacts and Costs)					.
	PERMANENT EASEMENT	0	SF	$0.00	$0
	TOTAL RIGHT-OF-WAY COSTS				**$0**
	CONSTRUCTION ENGINEERING & INSPECTION	**12%**			**$363,218.01**
	GRAND TOTAL				**$3,390,034.80**

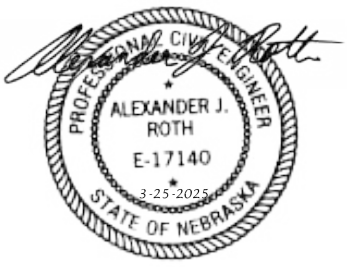
CONTRACT DOCUMENTS

CITY OF SEWARD, NE
WORTHMAN BOULEVARD EXTENSION

SCHEMMER PROJECT NO. 09336.001-C

SCHEMMER

Design with Purpose. Build with Confidence.



MARCH 2025

TABLE OF CONTENTS

NOTICE TO CONTRACTORS

CITY OF SEWARD, WORTHMAN BOULEVARD EXTENSION

Sealed proposals will be received by the CITY CLERK, CITY OF SEWARD – CITY HALL, 537 Main Street, P.O. Box 38, SEWARD, NE 68434 until 10:00 a.m. on the 29th day of April 2025, for furnishing all labor, tools, materials, and equipment required to complete all work designated as WORTHMAN BOULEVARD EXTENSION as per plans and specifications for such work now on file with the A&D Technical Supply website. An optional paper set of project documents is available for a non-refundable price through A&D Technical Supply. If you have any questions, contact Michael Oneby, P.E. at 402-643-4000 extension number 203. To bid the project, the contract documents must be issued directly by A&D Technical Supply.

The project consists of:

Extending Worthman Boulevard west from Pine Street on new alignment, which will consists of roadway embankment and detention basin grading, paving (approximately 9,700 square yards), 1,610 feet of storm sewer, 934 feet of sanitary sewer, curb inlets, sidewalk, and street lighting.

This project utilizes Community Development Block Grant (CDBG) funding, which includes Federal Labor Standards Provisions and Build America, Buy America (BABA) Requirements. The Contractor is required to follow all conditions set forth in the Bid Package Requirements.

Proposals will be taken for said construction work described above by unit prices, as an aggregate bid for the entire project. A general Davis-Bacon wage determination is attached to the Bid Package Requirements and will be updated via addenda 10 days prior to bid opening.

All proposals for said construction work must be made on blanks furnished by the Engineer and must be accompanied by Bid Security of not less than 5% of the amount bid. Bid Security to be made payable to the City of Seward as liquidated damages in case the bid is accepted and the bidder neglects or refuses, to enter into contract and furnish bond in accordance herewith.

No bidder may withdraw the submitted proposal for a period of forty-five (45) days after the date set for the opening of bids. The City of Seward reserves the right to reject any or all bids received and to waive informalities.

MICHAEL ONEBY, P.E.
PROJECT COORDINATOR/CITY ENGINEER
City of Seward, Nebraska – City Hall
537 Main Street
P.O. Box 38
Seward, NE 68434

Published: Seward County Independent, April 9th, April 16th, April 23rd, 2025

Defined Terms

1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:

A. *Issuing Office* – The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

2.01 Complete sets of the Bidding Documents in the number and for the deposit sum, if any, stated in the advertisement or invitation to bid may be obtained from the Issuing Office.

2.02 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.03 Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not authorize or confer a license for any other use.

ARTICLE 3 – QUALIFICATIONS OF BIDDERS

3.01 To demonstrate Bidder's qualifications to perform the Work, within 5 days of Owner's request, Bidder shall submit written evidence such as financial data, previous experience or present commitments.

3.02 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

ARTICLE 4 – EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA, AND SITE

4.01 *Subsurface and Physical Conditions*

A. The Supplementary Conditions identify:

1. Those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site.

2. Those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).

B. Copies of reports and drawings referenced in Paragraph 4.01.A will be made available by Owner to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which Bidder is entitled to rely as provided in Paragraph 4.02 of the General Conditions has been identified and established in Paragraph 4.02 of the Supplementary Conditions. Bidder is responsible for any interpretation

or conclusion Bidder draws from any "technical data" or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

4.02 *Underground Facilities*

A. Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site is based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.

4.03 *Hazardous Environmental Condition*

A. The Supplementary Conditions identify any reports and drawings known to Owner relating to a Hazardous Environmental Condition identified at the Site.

B. Copies of reports and drawings referenced in Paragraph 4.03.A will be made available by Owner to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which Bidder is entitled to rely as provided in Paragraph 4.06 of the General Conditions has been identified and established in Paragraph 4.06 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any "technical data" or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

4.04 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated subsurface or physical conditions appear in Paragraphs 4.02, 4.03, and 4.04 of the General Conditions.

4.05 On request, Owner will provide Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies as Bidder deems necessary for submission of a Bid. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies. Bidder shall comply with all applicable Laws and Regulations relative to excavation and utility locates.

4.06 A. Reference is made to Article 7 of the Supplementary Conditions for the identification of the general nature of other work that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) that relates to the Work contemplated by these Bidding Documents. On request, Owner will provide to each Bidder for examination access to or copies of contract documents (other than portions thereof related to price) for such other work.

B. Paragraph 6.13.C of the General Conditions indicates that if an Owner safety program exists, it will be noted in the Supplementary Conditions.

4.07 It is the responsibility of each Bidder before submitting a Bid to:

A. examine and carefully study the Bidding Documents, and the other related data identified in the Bidding Documents;

B. visit the Site and become familiar with and satisfy Bidder as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;

C. become familiar with and satisfy Bidder as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work;

D. carefully study all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) that have been identified in Paragraph 4.02 of the Supplementary Conditions as containing reliable "technical data,"

E. consider the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Bidder's safety precautions and programs;

F. agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price(s) bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;

G. become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;

H. promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder; and

I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

4.08 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying any specific means, methods, techniques, sequences, and procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents and the written resolutions thereof by Engineer are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

ARTICLE 5 – PRE-BID CONFERENCE

5.01 A pre-Bid conference will not be held for this project

ARTICLE 6 – SITE AND OTHER AREAS

6.01 The Site is identified in the Bidding Documents. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by Owner unless otherwise provided in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by Contractor.

ARTICLE 7 – INTERPRETATIONS AND ADDENDA

7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by Engineer as having received the Bidding Documents. Questions received less than ten days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

7.02 Addenda may be issued to clarify, correct, or change the Bidding Documents as deemed advisable by Owner or Engineer.

ARTICLE 8 – BID SECURITY

8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of 5 percent of Bidder's maximum Bid price and in the form of a certified check, bank money order, or a Bid bond (on the form attached) issued by a surety meeting the requirements of Paragraphs 5.01 and 5.02 of the General Conditions.

8.02 The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract Documents, furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults. The Bid security of other Bidders whom Owner believes to

have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Agreement or 46 days after the Bid opening, whereupon Bid security furnished by such Bidders will be returned.

8.03 Bid security of other Bidders whom Owner believes do not have a reasonable chance of receiving the award will be returned within seven days after the Bid opening.

ARTICLE 9 – CONTRACT TIMES

9.01 The number of days within which, or the dates by which, [Milestones are to be achieved and] the Work is to be substantially completed and ready for final payment are set forth in the Agreement.

ARTICLE 10 – LIQUIDATED DAMAGES

10.01 Provisions for liquidated damages, if any, are set forth in the Agreement.

ARTICLE 11 – SUBSTITUTE AND "OR-EQUAL" ITEMS

11.01 The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration of possible substitute or "or-equal" items. Whenever it is specified or described in the Bidding Documents that a substitute or "or-equal" item of material or equipment may be furnished or used by Contractor if acceptable to Engineer, application for such acceptance will not be considered by Engineer until after the Effective Date of the Agreement.

ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS AND OTHERS

12.01 If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, individuals, or entities to be submitted to Owner in advance of a specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner a list of all such Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, individual, or entity if requested by Owner. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit a substitute, *without an increase in the Bid.*

12.02 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, individuals, or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to revocation of such acceptance after the Effective Date of the Agreement as provided in Paragraph 6.06 of the General Conditions.

12.03 Contractor shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom Contractor has reasonable objection.

ARTICLE 13 – PREPARATION OF BID

13.01 The Bid Form is included with the Bidding Documents. Additional copies may be obtained from Engineer.

13.02 All blanks on the Bid Form shall be completed in ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each [section, Bid item, alternative, adjustment unit price item, and unit price item] listed therein. In the case of optional alternatives the words "No Bid," "No Change," or "Not Applicable" may be entered.

13.03 A Bid by a corporation shall be executed in the corporate name by the president or a vice-president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown.

13.04 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be shown.

13.05 A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown.

13.06 A Bid by an individual shall show the Bidder's name and official address.

13.07 A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid Form. The official address of the joint venture shall be shown.

13.08 All names shall be printed in ink below the signatures**.**

13.09 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.

13.10 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.

13.11 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder's state contractor license number, if any, shall also be shown on the Bid Form.

ARTICLE 14 – BASIS OF BID; COMPARISON OF BIDS

14.01 *Unit Price*

A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the Bid schedule.

B. The total of all estimated prices will be the sum of the products of the estimated quantity of each item and the corresponding unit price. The final quantities and Contract Price will be determined in accordance with Paragraph 11.03 of the General Conditions.

C. Discrepancies between the multiplications of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

ARTICLE 15 – SUBMITTAL OF BID

15.01 With each copy of the Bidding Documents, a Bidder is furnished one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the following documents:

15.02 A Bid shall be submitted no later than the date and time prescribed and at the place indicated in the advertisement or invitation to bid and shall be enclosed in a plainly marked package with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid shall be addressed to CITY OF SEWARD, 142 N. 7TH STREET, SEWARD, NE 68434.

ARTICLE 16 – MODIFICATION AND WITHDRAWAL OF BID

16.01 A Bid may be modified or withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids.

16.02 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

ARTICLE 17 – OPENING OF BIDS

17.01 Bids will be opened at the time and place indicated in the Advertisement or Invitation to Bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 18 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE

18.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT

19.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to not be responsible. Owner may also reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project to make an award to that Bidder. Owner also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder.

19.02 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.

19.03 In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.

19.04 In evaluating Bidders, Owner will consider the qualifications of Bidders and may consider the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the Supplementary Conditions.

19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work in accordance with the Contract Documents.

19.06 If the Contract is to be awarded, Owner will award the Contract to the Bidder whose Bid is in the best interests of the Project.

ARTICLE 20 – CONTRACT SECURITY AND INSURANCE

20.01 Article 5 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds and insurance. When the

Successful Bidder delivers the executed Agreement to Owner, it shall be accompanied by such bonds.

ARTICLE 21 – SIGNING OF AGREEMENT

21.01 When Owner issues a Notice of Award to the Successful Bidder, it shall be accompanied by the required number of unsigned counterparts of the Agreement along with the other Contract Documents which are identified in the Agreement as attached thereto. Within 15 days thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to Owner. Within ten days thereafter, Owner shall deliver one fully signed counterpart to Successful Bidder with a complete set of the Drawings with appropriate identification.

ARTICLE 22 – SALES AND USE TAXES

22.01 Owner is exempt from state sales and use taxes on materials and equipment to be incorporated in the Work. Refer to Paragraph 6.10 of the Supplementary Conditions for additional information.

ARTICLE 23 – RETAINAGE

23.01 Provisions concerning Contractor's rights to deposit securities in lieu of retainage are set forth in the Agreement.

BID PACKAGE REQUIREMENTS

ATTACHMENT 1:
BONDING AND INSURANCE REQUIREMENTS

2 C.F.R § 200.326 Bonding Requirements.

Community Development Block Grant Regulations

For construction or facility improvement contracts or subcontracts exceeding the Simplified Acquisition Threshold[29], the Federal awarding agency or pass-through entity may accept the bonding policy and requirements of the non-Federal entity provided that the Federal awarding agency or pass-through entity has made a determination that the Federal interest is adequately protected. If such a determination has not been made, the minimum requirements must be as follows:

(a) A bid guarantee from each bidder equivalent to five percent of the bid price. The "bid guarantee" must consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of the bid, execute such contractual documents as may be required within the time specified.

(b) A performance bond on the part of the contractor for 100 percent of the contract price. A "performance bond" is one executed in connection with a contract to secure fulfillment of all the contractor's requirements under such contract.

(c) A payment bond on the part of the contractor for 100 percent of the contract price. A "payment bond" is one executed in connection with a contract to assure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contract.

[29] 41 U.S.C.A. § 134 indicates the simplified acquisition threshold at $250,000.

ATTACHMENT 2:
CIVIL RIGHTS AND EQUAL OPPORTUNITY PROVISIONS

Public Law 88-352, Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000(d), et. seq.) (24 CFR part 1).
The law provides that, "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

Section 109 of the Housing and Community Development Act of 1974, As Amended.
The law requires that, "[n]o person in the United States shall on the ground of race, color, national origin, religion, or sex be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity funded in whole or in part with funds made available under this chapter. Any prohibition against discrimination on the basis of age under the Age Discrimination Act of 1975 [42 U.S.C. 6101 et seq.] or with respect to an otherwise qualified handicapped individual as provided in section 794 of Title 29 also shall apply to any such program or activity."

Age Discrimination Act of 1975, As Amended (42 U.S.C. 6101, Et, seq.).
The law provides that, "no person in the United States shall, on the basis of age, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under, any program or activity receiving Federal financial assistance."

Section 504 of the Rehabilitation Act of 1973, As Amended (29 U.S.C. 794).
"Section 504 provides that no otherwise qualified individual with a disability shall, solely by reason of his or her disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

Section 3 of the Housing and Urban Development Act of 1968, As Amended (12 U.S.C. 170lu).
The law provides that, "to the greatest extent feasible, recipients of HUD funds (and their contractors and subcontractors) provide jobs and other economic opportunities to low-income persons, particularly public housing residents. Section 3 helps create employment for low-income persons and contracting opportunities for businesses that are owned by low-income people or that provide employment to low-income people."

ATTACHMENT 3A:
CERTIFICATION OF BIDDER REGARDING SECTION 3 AND SEGREGATED FACILITIES

Name of Prime Contractor	Project Name and Number

The undersigned herby certifies that:

(a) Section 3 provisions are included in the contract.

(b) A written Section 3 plan was prepared and submitted as part of the bidding proceedings (if bid equals or exceeds $100,000).

(c) No segregated facilities will be maintained.

Name & Title of Signer (Print or Type)

Signature	Date

ATTACHMENT 3B: CONTRACTOR

Section 3 Plan

_____ agrees to implement the following specific affirmative action steps directed at increasing the utilization of lowest income residents and businesses within the Village/City/County of _____.

A. To ascertain from the locality's CDBG program official the exact boundaries of the Section 3 covered project area and where advantageous, seek the assistance of local officials in preparing and implementing the affirmative action plan.

B. To attempt to recruit from within the city the necessary number of lower income residents through local advertising media; signs placed at the proposed site for the project; and community organizations and public or private institutions operating within or serving the project area, such as Service Employment and Redevelopment (SER), Opportunities Industrialization Center (OIC), Urban League, Concentrated Employment Program, Hometown Plan, or the U.S. Employment Service.

C. To maintain a list of all lower income residents who have applied either on their own or on referral from any source, and to employ such persons, if otherwise eligible and if a vacancy exists.

D. *To insert this Section 3 plan in all bid documents, and to require all bidders and subcontracts to submit a Section 3 affirmative action plan that includes utilization goals and the specific steps planned to accomplish these goals.

E. *To ensure that subcontracts (typically let on a negotiated rather than bid basis in areas other than Section 3 covered project areas), also are let on a negotiated basis, where feasible, when let in a Section 3 covered project area.

F. To formally contact unions, subcontractors and trade associations to secure their cooperation for this program.

G. To ensure that all appropriated project area business concerns are notified of pending sub contractual opportunities.

H. To maintain records, including copies of correspondence, memoranda, etc., that document all above affirmative action steps have been taken.

I. To appoint or recruit an executive official of the company or agency as Equal Opportunity Officer to coordinate the implementation of the Section 3 plan.

*Loans, grants, contracts and subsidies for less than $100,000 will be exempt.

ATTACHMENT 4:
SPECIAL EQUAL OPPORTUNITY PROVISIONS

A. Activities and Contracts Not Subject to Executive Order 11246, As Amended
(Applicable to Federally assisted construction contracts and related subcontracts $10,000 and under)
During the performance of this contract.

(1) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor shall take affirmative action to ensure that applicants for employment are employed, and that employees are treated during employment, without regard to their race, color, religion, or national origin. Such action shall include, but not be limited to: employment upgrade, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay, or other forms of compensation; and selection for training, including apprenticeship.

(2) The contractor shall post in conspicuous places, available to employees and applicants for employment, notices to be provided by contracting officer setting forth the provisions of the nondiscrimination clause. The contractor shall state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(3) Contractors shall incorporate foregoing requirements in all subcontracts.

B. Executive Order 11246 (contract/subcontracts above $10,000)

1. SEC. 202. Except in contracts exempted in accordance with Section 204 of this order, all Government contracting agencies shall include in every government contract hereafter entered into the following:
During the performance of this contract:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to: employment upgrade, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay, or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of the nondiscrimination clause.

(2) The contractor will, in all solicitations or advancements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining contract or other contract or understanding, a notice, to be provided by the [Contract Compliance Officer], advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order No. 11246 of Sept. 24, 1965, and the rules, regulations, and relevant orders of the U.S. Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to their books, records, and accounts by the [Department] and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract, or with any of such rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further government contracts in accordance with procedures authorized in Executive Order No. 11246 of Sept. 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor *will* take such action with respect to any subcontract or purchase order as may be directed by the [Department and the] Secretary of Labor as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction [by DED Department], the contractor may request the United States to enter into such litigation to protect the interests of the United States [italics added]."

ATTACHMENT 5:
ACCESS TO AND MAINTENANCE OF RECORDS

The Consultant/Contractor agrees to maintain such records and follow such procedures as may be required under HUD Community Planning and Development (CPD) subpart J, 570.502 (paragraph a. 16.) and 2 CFR 200.318(i) and any such procedures that DED may prescribe. In general, such records will include information pertaining to the contract, obligations and unobligated balances, assets and liabilities, outlays, equal opportunity, labor standards (as appropriate), and performance.

All such records and all other records pertinent to this contract and work undertaken under this contract shall be retained by the Consultant/Contractor or Subrecipient for a period of three years after the final audit of the Subrecipient's CDBG project, unless a longer period is required to resolve audit findings or litigation. In such cases, the Subrecipient shall request a longer period for record retention.

The Subrecipient, DED and duly authorized officials of the state and federal government shall have full access and the right to examine any pertinent documents, papers, records and books of the Consultant/Contractor involving transactions to this local program and contract.

Conflict of Interest
From 2 CFR 200.318(c)(1)., no officer, employee or agent of the Subrecipient who will participate in the selection, the award, or the administration of this grant, may obtain a personal or financial interest or benefit from the activity or have an interest in any contract, subcontract or contract with respect thereto, or the proceeds thereunder either for themselves or those with whom they have family or business ties, during their tenure or for one year thereafter. It is further required that this stipulation be included in all subcontracts to this contract. Upon written request, exceptions may be granted on a case-by-case basis when it is determined that such an exception will serve to further the purposes of the Act and the effective and efficient administration of the recipient's program or project. These exceptions are granted by the Department.

ATTACHMENT 6:
CLEAN AIR AND WATER ACTS – REQUIRED CLAUSES

This clause is required in all third-party contracts involving projects subject to the Clean Air Act (42 U.S.C. s/s 7401 et seq. (1970)), the Federal Water Pollution Control Act (33 U.S.C. 1251 et. seq.), and the regulation of the Environmental Protection Agency with respect to 40 CFR32 as amended. It also should be mentioned in the bid document.

During the performance of this contract:

(1) The CONTRACTOR will certify that any facility to be utilized in the performance of any nonexempt contract or subcontract is not listed on the List of Violating Facilities issued by the Environmental Protection Agency pursuant to 48 CFR 9.40 and 40CFR32.20.

(2) The CONTRACTOR agrees to comply with all the requirements of Section 114 of the Clean Air Act, as amended, (42 U.S.C. 7414) and Section 308 of the Clean Water Act, as amended (33 U.S.C. 1318) relating to inspection, monitoring, entry, reports, and information, as well as all other requirements specified in said Section 114 and Section 308, and all regulations and guidelines issued thereunder.

(3) The CONTRACTOR agrees that as a condition for the award of the contract, prompt notice will be given of any notification received from the Director, Office of Federal Activities, and Environmental Protection Agency, indicating that a facility utilized, or to be utilized for the contract is under consideration to be listed on the Environmental Protection Agency List of Violating Facilities.

(4) The CONTRACTOR agrees that it will include or cause to be included the criteria and requirements in Paragraphs (1) through (4) of this section in every nonexempt subcontract and require every subcontractor to take such action as the government may direct as a means of enforcing such provisions.

A. APPLICABILITY

The Project or Program to which the construction work covered by this Contract pertains is being assisted by the United States of America, and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

1. Minimum wages and fringe benefits

i. All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of basic hourly wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. As provided in 29 CFR 5.5(d) and (e), the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act (40 U.S.C. 3141(2)(B)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(v) of these contract clauses; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided,* That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under 29 CFR 5.5(a)(1)(iii)) and the Davis-Bacon poster (WH-1321) must be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

ii. Frequently recurring classifications

A. In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in 29 CFR part 1, a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to 29 CFR 5.5(a)(1)(iii), provided that:

1. The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;
2. The classification is used in the area by the construction industry; and
3. The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

B. The Administrator will establish wage rates for such classifications in accordance with 29 CFR 5.5(a)(1)(iii)(A)(3). Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

iii. Conformance

A. The contracting officer must require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract be

classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:

1. The work to be performed by the classification requested is not performed by a classification in the wage determination; and
2. The classification is used in the area by the construction industry; and
3. The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

B. The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

C. If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the contracting officer by email to DBAconformance@dol.gov. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30–day period that additional time is necessary.

D. In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer will, by email to DBAconformance@dol.gov, refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30–day period that additional time is necessary.

E. The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division under 29 CFR 5.5 (a)(1)(iii)(C) and (D). The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to 29 CFR 5.5 (a)(1)(iii)(C) or (D) must be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

iv. Fringe benefits not expressed as an hourly rate

Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

v. Unfunded plans

If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided,* That the Secretary of Labor has found, upon the written request of the contractor, in accordance with the criteria set forth in 29 CFR 5.28, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

vi. Interest In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. **Withholding**

   i. **Withholding requirements**

   The U. S. Department of Housing and Urban Development may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in 29 CFR 5.5(a) for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in 29 CFR 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work (or otherwise working in construction or development of the project under a development statute) all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in 29 CFR 5.5(a)(3)(iv), HUD may on its own initiative and after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

   ii. **Priority to withheld funds**

   The Department has priority to funds withheld or to be withheld in accordance with 29 CFR 5.5(a)(2)(i) or (b)(3)(i), or both, over claims to those funds by:

   A. A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

   B. A contracting agency for its reprocurement costs;

   C. A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

   D. A contractor's assignee(s);

   E. A contractor's successor(s); or

   F. A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901-3907.

3. **Records and certified payrolls**

   i. **Basic record requirements**

   A. Length of record retention. All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

   B. Information required Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

   C. Additional records relating to fringe benefits. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(v) that the wages of any laborer or mechanic include the amount of any

costs reasonably anticipated in providing benefits under a plan or program described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act, the contractor must maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

D. **Additional records relating to apprenticeship** Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

ii. **Certified payroll requirements**

A. **Frequency and method of submission** The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to HUD if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the certified payrolls to the applicant, sponsor, owner, or other entity, as the case may be, that maintains such records, for transmission to HUD. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system

B. **Information required** The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i)(B), except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (*e.g.*, the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH-347 or in any other format desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/wh347.pdf or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the sponsoring government agency (or the applicant, sponsor, owner, or other entity, as the case may be, that maintains such records).

C. **Statement of Compliance** Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

1. That the certified payroll for the payroll period contains the information required to be provided under 29 CFR 5.5(a)(3)(ii), the appropriate information and basic records are being maintained under 29 CFR 5.5 (a)(3)(i), and such information and records are correct and complete;
2. That each laborer or mechanic (including each helper and apprentice) working on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly

from the full wages earned, other than permissible deductions as set forth in 29 CFR part 3; and

3. That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

D. **Use of Optional Form WH-347** The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 will satisfy the requirement for submission of the "Statement of Compliance" required by 29 CFR 5.5(a)(3)(ii)(C).

E. **Signature** The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

F. **Falsification** The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 3729.

G. **Length of certified payroll retention** The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

iii. **Contracts, subcontracts, and related documents** The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

iv **Required disclosures and access**

A. **Required record disclosures and access to workers** The contractor or subcontractor must make the records required under 29 CFR 5.5(a)(3)(i)–(iii), and any other documents that HUD or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by 29 CFR 5.1, available for inspection, copying, or transcription by authorized representatives of HUD or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

B. **Sanctions for non-compliance with records and worker access requirements** If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to 29 CFR 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under 29 CFR part 6 any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

C. **Required information disclosures** Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address of each covered worker, and must provide them upon request to HUD if the agency is a party to

the contract, or to the Wage and Hour Division of the Department of Labor. If the Federal agency is not such a party to the contract, the contractor, subcontractor, or both, must, upon request, provide the full Social Security number and last known address, telephone number, and email address of each covered worker to the applicant, sponsor, owner, or other entity, as the case may be, that maintains such records, for transmission to HUD, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity

i. Apprentices

A. Rate of pay Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

B. Fringe benefits Apprentices must be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.

C. Apprenticeship ratio The allowable ratio of apprentices to journeyworkers on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to 29 CFR 5.5(a)(4)(i)(D). Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in 29 CFR 5.5(a)(4)(i)(A), must be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

D. Reciprocity of ratios and wage rates Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

ii Equal employment opportunity The use of apprentices and journeyworkers under this part must be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

5 Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6 **Subcontracts.** The contractor or subcontractor must insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (11), along with the applicable wage determination(s) and such other clauses or contract modifications as the U.S. Department of Housing and
Urban Development may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate.

7 Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8 Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9 Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

i. By entering into this contract, the contractor certifies that neither it nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of 40 U.S.C. 3144(b) or 29 CFR 5.12(a).

ii. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of 40 U.S.C. 3144(b) or 29 CFR 5.12(a).

iii. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, 18 U.S.C. 1001.

11 **Anti-retaliation** It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

- **i.** Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, or 29 CFR parts 1, 3, or 5;
- **ii.** Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, or 29 CFR parts 1, 3, or 5;
- **iii.** Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, or 29 CFR parts 1, 3, or 5; or
- **iv.** Informing any other person about their rights under the DBA, Related Acts, or 29 CFR parts 1, 3, or 5.

B. Contract Work Hours and Safety Standards Act (CWHSSA)

The Agency Head must cause or require the contracting officer to insert the following clauses set forth in 29 CFR 5.5(b)(1), (2), (3), (4), and (5) in full, or (for contracts covered by the Federal Acquisition Regulation) by reference, in any contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses must

be inserted in addition to the clauses required by 29 CFR 5.5(a) or 4.6. As used in this paragraph, the terms "laborers and mechanics" include watchpersons and guards.

1. **Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
2. **Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in 29 CFR 5.5(b)(1) the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchpersons and guards, employed in violation of the clause set forth in 29 CFR 5.5(b)(1), in the sum of $31 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in 29 CFR 5.5(b)(1).
3. **Withholding for unpaid wages and liquidated damages**

i. **Withholding process** The U.S Department of Housing and Urban Development or the recipient of Federal assistance may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in 29 CFR 5.5(b) on this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act that is held by the same prime contractor (as defined in 29 CFR 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

ii **Priority to withheld funds** The Department has priority to funds withheld or to be withheld in accordance with 29 CFR 5.5(a)(2)(i) or (b)(3)(i), or both, over claims to those funds by:

- **A.** A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- **B.** A contracting agency for its reprocurement costs;
- **C.** A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- **D.** A contractor's assignee(s);
- **E.** A contractor's successor(s); or
- **F.** A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901-3907.

4. ***Subcontracts***. The contractor or subcontractor must insert in any subcontracts the clauses set forth in 29 CFR 5.5(b)(1) through (5) and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in 29 CFR 5.5(b)(1) through (5). In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss,

due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5 **Anti-retaliation** It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

- **i.** Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in 29 CFR part 5;
- **ii.** Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or 29 CFR part 5;
- **iii.** Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or 29 CFR part 5; or
- **iv.** Informing any other person about their rights under CWHSSA or 29 CFR part 5.

C. CWHSSA required records clause In addition to the clauses contained in 29 CFR 5.5(b), in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other laws referenced by 29 CFR 5.1, the Agency Head must cause or require the contracting officer to insert a clause requiring that the contractor or subcontractor must maintain regular payrolls and other basic records during the course of the work and must preserve them for a period of 3 years after all the work on the prime contract is completed for all laborers and mechanics, including guards and watchpersons, working on the contract. Such records must contain the name; last known address, telephone number, and email address; and social security number of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid; daily and weekly number of hours actually worked; deductions made and actual wages paid. Further, the Agency Head must cause or require the contracting officer to insert in any such contract a clause providing that the records to be maintained under this paragraph must be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the (write the name of agency) and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview workers during working hours on the job.

D. Incorporation of contract clauses and wage determinations by reference Although agencies are required to insert the contract clauses set forth in this section, along with appropriate wage determinations, in full into covered contracts, and contractors and subcontractors are required to insert them in any lower-tier subcontracts, the incorporation by reference of the required contract clauses and appropriate wage determinations will be given the same force and effect as if they were inserted in full text.

E. Incorporation by operation of law The contract clauses set forth in this section (or their equivalent under the Federal Acquisition Regulation), along with the correct wage determinations, will be considered to be a part of every prime contract required by the applicable statutes referenced by 29 CFR 5.1 to include such clauses, and will be effective by operation of law, whether or not they are included or incorporated by reference into such contract, unless the Administrator grants a variance, tolerance, or exemption from the application of this paragraph. Where the clauses and applicable wage determinations are effective by operation of law under this paragraph, the prime contractor must be compensated for any resulting increase in wages in accordance with applicable law.

F. HEALTH AND SAFETY

The provisions of this paragraph (F) are applicable where the amount of the prime contract exceeds **$100,000**.

1. No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his or her health and safety, as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.
2. The contractor shall comply with all regulations issued by the Secretary of Labor pursuant to 29 CFR Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, (Public Law 91-54, 83 Stat 96), 40 U.S.C. § 3701 et seq.
3. The contractor shall include the provisions of this paragraph in every subcontract, so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontractor as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

XI. Subrecipient Compliance with BABA Requirements

"Pursuant to the Build America, Buy America Act (BABA), enacted as part of the Infrastructure Investment and Jobs Act (IIJA). Pub. L. 117-58, 41 U.S.C. § 8301 note, the Federal Financial Assistance used to fund this infrastructure project is required to apply a domestic content procurement preference (the "Buy America Preference" or "BAP") for all construction, alteration, maintenance, or repair of infrastructure, including buildings and real property, unless application of the BAP has been waived by HUD. Additional details on fulfilling the BABA requirements can be found at https://www.hud.gov/baba."

BUY AMERICA, BUILD AMERICA (BABA) SELF-CERTIFICATION

Nebraska Department of Economic Development (DED)

[*Please refer to DED's Build America Buy America Policy Guidance when completing this form.*]

NEBRASKA
DEPT. OF ECONOMIC DEVELOPMENT

SELF-CERTIFICATION FORM

Project: _____

Location: _____

DED Award No. _____

For NEBRASKA DEPARTMENT OF ECONOMIC DEVELOPMENT (DED) programs, including HOME, HTF, and CDBG (not including CDBG-DR, CDBG-CV or HOME-ARP), subject to The Build America Buy America Act (BABA), subrecipients, developers, contractors, subcontractors and vendors, must complete and submit this Self-Certification to the next tier (e.g., subcontractor/vendor to contractor; contractor to subrecipient; subrecipient to non-federal entity, etc.) for each bid or offer relating to an "infrastructure project".

The undersigned understands and agrees that it must comply with the requirements of BABA, and any applicable regulations and notices, as amended from time to time, regarding funds obligated by the U.S. Department of Housing and Urban Development (HUD).

Under BABA, all "iron, steel, manufactured products, and construction materials" used for federally funded public "infrastructure projects" must be produced in the United States, unless subject to a waiver.

With respect to the above project, the undersigned hereby certifies to the best of his/her/its knowledge and belief after due inquiry, that [check one]:

☐ All iron, steel, manufactured products, and construction materials used in the project were produced in the United States; or

☐ Some or all iron, steel, manufactured products, and construction materials used in the project were not produced in the United States.

GENERAL WAIVERS. For iron, steel, manufactured products, and construction materials ***not produced in the United States***, the undersigned maintains documentation confirming its determination that a **General Waiver(s)** is applicable [check one or more, AND attach purchase order, contract, or brief description and cost of item(s) subject to waiver]:

☐ De Minimis Waiver – the total cost of the iron, steel, manufactured products, and construction materials not produced in the United States is equal to or less than 5% of the total project cost of iron, steel, manufactured products, and construction materials, up to $1 million;

☐ Small Grants Waiver - total project cost is equal to or less than $250,000;

☐ Exigent Circumstances - an urgent need existed by grantee to immediately complete the project because of a threat to life, safety, or property of residents and the community; or

☐ Tribal Consultations – regarding Tribal recipients.

SPECIFIC WAIVERS. For iron, steel, manufactured products, and construction materials ***not produced in the United States***, the undersigned intends to or has applied for a project or product **Specific Waiver** on the **BABA Specific Waiver Submission Site** [check one or more, if applicable, and insert application date and approval status]:

☐ Public Interest, Application Date _____, Approved Yes/No/Pending _____
Requiring the use of the USA made product would be inconsistent with the public interest;

☐ Nonavailability, Application Date _____, Approved Yes/No/Pending _____
Product needed is not produced in the USA in sufficient quantities or of a satisfactory quality; or

☐ Unreasonable Cost, Application Date _____, Approved Yes/No/Pending _____
Inclusion of the product produced in the USA will increase the cost of the overall project by more than 25%.

The undersigned certifies and affirms the truthfulness and accuracy of each statement contained herein. In addition, the undersigned understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification.

_____
Legal Name of Entity or Sole Proprietorship

_____
Signature of Authorized Individual or Official

_____
Printed Name and Title of Authorized Official

_____
Signature Date

"General Decision Number: NE20250053 03/14/2025

Superseded General Decision Number: NE20240053

State: Nebraska

Construction Type: Heavy

County: Seward County in Nebraska.

HEAVY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least $17.75 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least $13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2025.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at http://www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/03/2025
1	03/14/2025

* ELEC0265-006 03/03/2025

	Rates	Fringes
Electricians:		
Zone 1	$ 33.50	18.20
Zone 2	$ 33.80	18.24
Zone 3	$ 34.10	18.27
Zone 4	$ 34.50	18.31

ZONE DEFINITIONS [Mileage from main Post Office in Lincoln]
Zone 1: 0 to 35 miles
Zone 2: 36 to 50 miles
Zone 3: 51 to 75 miles
Zone 4: 76 miles and over

FOOTNOTE:
Work on scaffolds, hanging scaffolds, boatswains chairs or ladders, etc., in any area where the worker is in a position to fall 40 ft. or more, or where objects above the worker can fall 40 ft. or more: to be paid one and one-half times the straight- time rate of pay.

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* SUNE2011-020 08/31/2011

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 16.72 **	0.00
FORM WORKER	$ 17.59 **	5.74
LABORER: Common or General	$ 13.11 **	3.23
LABORER: Pipelayer	$ 16.33 **	5.60
OPERATOR: Backhoe/Excavator	$ 19.43	3.59
OPERATOR: Crane	$ 24.00	5.56
OPERATOR: Loader	$ 17.67 **	2.98
TRUCK DRIVER, Includes Dump and Tandem Truck	$ 13.62 **	2.60
TRUCK DRIVER: Lowboy Truck	$ 21.49	7.40

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 ($17.75) or 13658 ($13.30). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this

contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to

reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

a) a survey underlying a wage determination
b) an existing published wage determination
c) an initial WHD letter setting forth a position on a wage determination matter
d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

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END OF GENERAL DECISION"

"General Decision Number: NE20250027 03/14/2025

Superseded General Decision Number: NE20240027

State: Nebraska

Construction Type: Highway

Counties: Lancaster, Saunders and Seward Counties in Nebraska.

HIGHWAY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least $17.75 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least $13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2025.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at http://www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/03/2025
1	03/14/2025

ELEC0022-018 06/01/2024

Saunders County - East of Highway 109 and North of Alternate Highway 30)

	Rates	Fringes
ELECTRICIAN	$ 44.50	19.69

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* ELEC0265-005 03/03/2025

REMAINDER OF SAUNDERS COUNTY

	Rates	Fringes
Electricians:		
Zone 1	$ 33.50	18.20
Zone 2	$ 33.80	18.24
Zone 3	$ 34.10	18.27
Zone 4	$ 34.50	18.31

ZONE DEFINITIONS [Mileage from main Post Office in Lincoln]
Zone 1: 0 to 35 miles
Zone 2: 36 to 50 miles
Zone 3: 51 to 75 miles
Zone 4: 76 miles and over

FOOTNOTE:
Work on scaffolds, hanging scaffolds, boatswains chairs or ladders, etc., in any area where the worker is in a position to fall 40 ft. or more, or where objects above the worker can fall 40 ft. or more: to be paid one and one-half times the straight- time rate of pay.

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* SUNE2011-023 08/29/2011

	Rates	Fringes
CARPENTER (Includes Form Work)	$ 18.51	
CEMENT MASON/CONCRETE FINISHER		
Lancaster County	$ 18.48	5.86
Seward, Saunders Counties	$ 18.17	5.86
ELECTRICIAN, Includes Installation of Traffic Signals		
Lancaster, Seward Counties	$ 28.83	
HIGHWAY/PARKING LOT STRIPING:		
Laborer		
Lancaster County	$ 11.82 **	
Saunders County	$ 12.37 **	
Seward County	$ 11.27 **	
IRONWORKER, REINFORCING	$ 19.35	
LABORER (COMMON OR GENERAL)		
Lancaster County	$ 12.58 **	
Saunders County	$ 12.55 **	
Seward County	$ 12.20 **	
LABORER: Concrete Saw (Hand		

Held/Walk Behind).....$ 16.07 ** 6.55

LABORER: Mason Tender
(Cement/Concrete).....$ 10.44 **

LABORER: Traffic Control -
Flagger and Cone/Barrel Setter
Lancaster County.....$ 11.87 **
Seward County.....$ 9.00 **

Operating Engineers: (Skid
Loader)
Lancaster County.....$ 10.56 **
Saunders County.....$ 12.51 **
Seward County.....$ 14.85 **

OPERATOR: Asphalt Spreader.....$ 18.74

OPERATOR: Backhoe Loader
Combo.....$ 15.94 **

OPERATOR: Backhoe/Excavator
Lancaster County.....$ 19.91 6.07
Saunders County.....$ 19.47 6.07
Seward County.....$ 16.15 **

OPERATOR: Broom/Sweeper.....$ 11.43 **

OPERATOR: Bulldozer
Lancaster County.....$ 16.78 **
Seward, Saunders Counties...$ 16.34 **

OPERATOR: Compactor.....$ 13.36 **

OPERATOR: Concrete Saw
Lancaster, Seward Counties..$ 20.87

OPERATOR: Crane.....$ 22.38

OPERATOR: Hydrohammer.....$ 17.03 **

OPERATOR: Loader
Lancaster County.....$ 17.44 **
Saunders County.....$ 17.19 **
Seward County.....$ 16.04 **

OPERATOR: Mechanic.....$ 19.58

OPERATOR: Milling Machine.....$ 12.80 **

OPERATOR: Oiler.....$ 16.21 **

OPERATOR: Paver (Asphalt,
Aggregate, and Concrete)
Lancaster County.....$ 14.79 **
Seward, Saunders Counties...$ 16.13 **

OPERATOR: Roller
Lancaster County.....$ 13.00 **
Saunders County.....$ 13.45 **
Seward County.....$ 14.04 **

OPERATOR: Scraper
Lancaster County.....$ 14.80 **
Seward, Saunders Counties...$ 14.83 **

OPERATOR: Tractor
Lancaster County.....$ 9.50 **
Seward, Saunders Counties...$ 10.65 **

OPERATOR: Grader/Blade
Lancaster County.....$ 16.09 **
Seward, Saunders Counties...$ 16.04 **

TRUCK DRIVER, Includes Dump
and Tandem Truck
Lancaster County.....$ 14.51 **
Saunders County.....$ 14.47 **
Seward County.....$ 14.16 **

TRUCK DRIVER: Lowboy Truck.....$ 15.93 **

TRUCK DRIVER: Semi-Trailer
Truck
Lancaster County.....$ 13.48 **
Seward, Saunders Counties...$ 14.09 **

TRUCK DRIVER: Water Truck.....$ 18.00 6.40

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

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** Workers in this classification may be entitled to a higher
minimum wage under Executive Order 14026 ($17.75) or 13658
($13.30). Please see the Note at the top of the wage
determination for more information. Please also note that the
minimum wage requirements of Executive Order 14026 are not
currently being enforced as to any contract or subcontract to
which the states of Texas, Louisiana, or Mississippi, including
their agencies, are a party.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave
for Federal Contractors applies to all contracts subject to the
Davis-Bacon Act for which the contract is awarded (and any
solicitation was issued) on or after January 1, 2017. If this
contract is covered by the EO, the contractor must provide
employees with 1 hour of paid sick leave for every 30 hours
they work, up to 56 hours of paid sick leave each year.
Employees must be permitted to use paid sick leave for their
own illness, injury or other health-related needs, including
preventive care; to assist a family member (or person who is
like family to the employee) who is ill, injured, or has other
health-related needs, including preventive care; or for reasons
resulting from, or to assist a family member (or person who is
like family to the employee) who is a victim of, domestic
violence, sexual assault, or stalking. Additional information
on contractor requirements and worker protections under the EO
is available at
https://www.dol.gov/agencies/whd/government-contracts.

Unlisted classifications needed for work not included within
the scope of the classifications listed may be added after
award only as provided in the labor standards contract clauses
(29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

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A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

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A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey

is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

a) a survey underlying a wage determination
b) an existing published wage determination
c) an initial WHD letter setting forth a position on a wage determination matter
d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

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Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.

Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

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END OF GENERAL DECISION"

BID FORM

Project Identification:

CITY OF SEWARD, WORTHMAN BOULEVARD EXTENSION

Contract Identification and Number:

Schemmer Project No. 09336.001-C

ARTICLE 1-BID RECIPIENT

1.01 This Bid is submitted to:

City of Seward, Nebraska – City Hall
Attn. Michael Oneby, P.E.
537 Main Street
P.O. Box 38
Seward, NE 68434

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 45 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

Addendum No.	Addendum Date
_____	_____
_____	_____
_____	_____

B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) that have been identified in SC-4.02 as containing reliable "technical data,"

E. Bidder has considered the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Bidder's safety precautions and programs.

F. Based on the information and observations referred to in Paragraph 3.01.E above, Bidder does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer is acceptable to Bidder.

1. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

Worthman Boulevard Extension					
Item	Description	Estimate Quantity	Unit	Bid Unit Price	Bid Price
1	TRAFFIC CONTROL	1	LS	$	$
2	MOBILIZATION	1	LS	$	$
3	GENERAL CLEARING AND GRUBBING	1	LS	$	$
4	EARTHWORK MEASURED IN EMBANKMENT (ESTABLISHED QUANTITY)	12,526	CY	$	$
5	WATER	174	MGAL	$	$
6	ROCK RIPRAP, TYPE B	149	TON	$	$
7	SALVAGING AND PLACING TOPSOIL	52,525	SY	$	$
8	RIPRAP FILTER FABRIC	189	SY	$	$
9	REMOVE PAVEMENT	775	SY	$	$
10	SAWING PAVEMENT	314	LF	$	$
11	REMOVE BRICK SURFACE	78	SY	$	$
12	REMOVE MANHOLE	2	EA	$	$
13	REMOVE INLET	2	EA	$	$
14	ADJUST WATER VALVE BOX TO GRADE	3	EA	$	$
15	ADJUST MANHOLE TO GRADE	1	EA	$	$
16	STABILIZED CONSTRUCTION EXIT	1	EA	$	$
17	FOUNDATION COURSE	11,103	SY	$	$
18	EARTH SHOULDER CONSTRUCTION	42.4	STA	$	$
19	SUBGRADE PREPARATION	11,103	SY	$	$
20	SWPPP SIGN	1	EA	$	$
21	DETECTABLE WARNING PANEL	100	SF	$	$

22	4" CONCRETE CLASS 47B-3500 SIDEWALKS	160	SY	$	$
23	8" DOWELED CONCRETE PAVEMENT, CLASS 47B-3500	9,721	SY	$	$
24	CURB INLET	18	EA	$	$
25	MANHOLE	12	EA	$	$
26	REMOVE CULVERT PIPE	55	LF	$	$
27	REMOVE STORM SEWER PIPE	154	LF	$	$
28	CLASS 47B-3000 CONCRETE FOR CONCRETE COLLARS	1.30	CY	$	$
29	REINFORCING STEEL FOR COLLARS	116	LB	$	$
30	36" CONCRETE FLARED-END SECTION	2	EA	$	$
31	48" CONCRETE FLARED-END SECTION	4	EA	$	$
32	15" STORM SEWER PIPE, TYPE 1,7 OR 8	388	LF	$	$
33	18" STORM SEWER PIPE, TYPE 1,7 OR 8	805	LF	$	$
34	36" STORM SEWER PIPE, TYPE 1,7 OR 8	44	LF	$	$
35	48" STORM SEWER PIPE, TYPE 1,7 OR 8	373	LF	$	$
36	BUILD HEADWALL	1	EA	$	$
37	BUILD PRINCIPAL SPILLWAY STRUCTURE	1	EA	$	$
38	12" P.V.C. SANITARY SEWER PIPE	934	LF	$	$
39	SANITARY MANHOLE	3	EA	$	$
40	REMOVE SIGN	3	EA	$	$
41	TYPE A SIGN	45	SF	$	$
42	4" YELLOW POLYUREA PAVEMENT MARKING, GROOVED	3,685	LF	$	$
43	12" WHITE POLYUREA PAVEMENT MARKING, GROOVED	154	LF	$	$

44	24" WHITE POLYUREA PAVEMENT MARKING, GROOVED	282	LF	$	$
45	PERMANENT BARRICADE	2	EA	$	$
46	PULL BOX, TYPE PB-5	4	EA	$	$
47	INSTALL LIGHT POLE (POLE PROVIDED BY CITY, INSTALLED BY CONTRACTOR)	16	EA	$	$
48	1 1/2-INCH CONDUIT IN TRENCH	3,513	LF	$	$
49	1 1/2-INCH CONDUIT UNDER ROADWAY	103	LF	$	$
50	STREET LIGHTING CABLE, NO. 6 BARE	3,616	LF	$	$
51	STREET LIGHTING CABLE, NO. 6 USE	7,232	LF	$	$
52	SPLICE CONDUIT	1	EA	$	$
53	REMOVE PULL BOX	2	EA	$	$
54	SEEDING, TYPE B	5.96	AC	$	$
55	SEEDING, TYPE C (FLOODPLAIN MIX)	2.74	AC	$	$
56	EROSION CONTROL, CLASS 1D	28,902	SY	$	$
57	EROSION CONTROL, CLASS 1E	13,265	SY	$	$
58	CURB INLET PROTECTION	18	EA	$	$
59	FABRIC SILT FENCE ' LOW POROSITY'	5,310	LF	$	$
				TOTAL BID	$

Unit Prices have been computed in accordance with Paragraph 11.03.B of the General Conditions.

Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid security in the form of _____;

Defined Terms

7.02 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 8 – BID SUBMITTAL

9.01 This Bid is submitted by:

If Bidder is:

An Individual

Name (typed or printed): _____

By: _____
(Individual's signature)

Doing business as: _____

A Partnership

Partnership Name: _____

By: _____
(Signature of general partner -- attach evidence of authority to sign)

Name (typed or printed): _____

A Corporation

Corporation Name: _____
(SEAL)

State of Incorporation: _____
Type (General Business, Professional, Service, Limited Liability):_____

By: _____
(Signature -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____
(CORPORATE SEAL)

Attest _____

Date of Qualification to do business in *[State where Project is located]* is ____/____/____.

A Joint Venture

Name of Joint Venture: _____

First Joint Venturer Name: _____
(SEAL)

By: _____
(Signature of first joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Second Joint Venturer Name: _____
_____(SEAL)

By: _____
(Signature of second joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

Bidder's Business Address _____

_____

Phone No. _____ Fax No. _____

E-mail _____

SUBMITTED on _____, 20____.

State Contractor License No. _____. *[If applicable]*

BID BOND

Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

BIDDER *(Name and Address)*:

SURETY *(Name and Address of Principal Place of Business)*:

OWNER *(Name and Address)*:

BID

Bid Due Date:

Description *(Project Name and Include Location)*:

BOND

Bond Number:

Date *(Not earlier than Bid due date)*:

Penal sum _____ $ _____

(Words) (Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER	**SURETY**
_____ (Seal)	_____ (Seal)
Bidder's Name and Corporate Seal	Surety's Name and Corporate Seal
By: _____	By: _____
Signature	Signature (Attach Power of Attorney)
_____	_____
Print Name	Print Name
_____	_____
Title	Title
Attest: _____	Attest: _____
Signature	Signature
_____	_____
Title	Title

Note: Above addresses are to be used for giving any required notice. Provide execution by any additional parties, such as joint venturers, if necessary.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.

2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.

3. This obligation shall be null and void if:

3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or

3.2 All Bids are rejected by Owner, or

3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).

4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.

5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from Bid due date without Surety's written consent.

6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after Bid due date.

7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.

8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.

9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.

10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

SUGGESTED FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

THIS AGREEMENT is by and between City of Seward, Nebraska ("Owner") and

("Contractor").

Owner and Contractor hereby agree as follows:

ARTICLE 1 – WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

Furnish all labor, materials and equipment for WORTHMAN BOULEVARD EXTENSION. Work, per the plans and specifications, shall include clearing and grubbing, excavation, storm sewer construction, sanitary sewer construction, concrete paving, sidewalk construction, street lighting, signing, seeding, and all incidental work necessary to complete the Project as required by the plans and specifications.

ARTICLE 2 – THE PROJECT

2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

CITY OF SEWARD
WORTHMAN BOULEVARD EXTENSION
SCHEMMER PROJECT NO. 09336.001-C

ARTICLE 3 – ENGINEER

3.01 The Project has been designed by the Schemmer Associates (Engineer), which is to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 – CONTRACT TIMES

4.01 *Time of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Days to Achieve Substantial Completion and Final Payment*

A. The Work will be completed per the CONTRACT TIME section of the special provisions after the date when the Contract Times commence to run as provided in Paragraph 2.03 of the General Conditions for WORTHMAN BOULEVARD WATERMAIN PHASE II.

4.03 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial loss if the Work is not completed within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay Owner $500.00 for each day that expires after the time specified in Paragraph 4.02 above for Substantial Completion until the Work is substantially complete. After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by Owner, Contractor shall pay Owner $250.00 for each day that expires after the time specified in Paragraph 4.02 above for completion and readiness for final payment until the Work is completed and ready for final payment.

ARTICLE 5 – CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to Paragraphs 5.01.A below:

A. For all Unit Price Work, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the actual quantity of that item:

UNIT PRICE WORK

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
	"UNIT PRICE" AND "BID PRICE" AS DEVELOPED ON BID TAB				

Total of all Bid Prices (Unit Price Work) $

The Bid prices for Unit Price Work set forth as of the Effective Date of the Agreement are based on estimated quantities. As provided in Paragraph 11.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer as provided in Paragraph 9.07 of the General Conditions.

ARTICLE 6 – PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

A. Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the 20th day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below. All such payments will be measured by the schedule of values established as provided in Paragraph 2.07.A of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Engineer may determine or Owner may withhold, including but not limited to liquidated damages, in accordance with Paragraph 14.02 of the General Conditions.

a. 95 percent of Work completed (with the balance being retainage). If the Work has been 50 percent completed as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and

b. 95 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 99 percent of the Work completed, less such amounts as Engineer shall determine in accordance with Paragraph 14.02.B.5 of the General Conditions

6.03 *Final Payment*

A. Upon final completion and acceptance of the Work in accordance with Paragraph 14.07 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 14.07.

ARTICLE 7 – INTEREST

7.01 All moneys not paid when due as provided in Article 14 of the General Conditions shall bear interest at the rate of 8 percent per annum.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

8.01 In order to induce Owner to enter into this Agreement, Contractor makes the following representations:

A. Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.

B. Contractor has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Contractor is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities), if any, that have been identified in Paragraph SC-4.02 of the Supplementary Conditions as containing reliable "technical data,"

E. Contractor has considered the information known to Contractor; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Contract Documents; and (3) Contractor's safety precautions and programs.

F. Based on the information and observations referred to in Paragraph 8.01.E above, Contractor does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.

G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 *Contents*

A. The Contract Documents consist of the following:

1. Cover Page
2. Table of Contents
3. Notice to Contractors (page NC-1)
4. Instructions to Bidders (pages 200-1: 200-9)
5. Bid Form (pages 410-1: 410-9)
6. Bid Bond (pages 430-1: 430-2)
7. This Agreement (pages 520-1 to 520-8, inclusive).
8. Performance bond (pages 610-1 to 610-3, inclusive).
9. Payment bond (pages 615-1 to 615-3, inclusive).
10. Other bonds (pages – to --, inclusive).
    a. _____ (pages _____ to _____, inclusive).
    b. _____ (pages _____ to _____, inclusive).
    c. _____ (pages _____ to _____, inclusive).
11. General Conditions (pages 700-1 to 700-62, inclusive).
12. Supplementary Conditions (pages 800-1 to 800-9, inclusive).
13. Special Provisions (pages 1 to 66).
14. Drawings consisting of the Drawings listed on attached sheet index.
15. Addenda (numbers _____ to _____, inclusive).
16. Exhibits to this Agreement (enumerated as follows):
    a. Contractor's Bid (pages _____ to _____, inclusive).

b. Documentation submitted by Contractor prior to Notice of Award (pages _____ to _____, inclusive).

17. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:

a. Notice of Award (pages 1 to 1, inclusive).

b. Notice to Proceed (pages 1 to 1, inclusive).

c. Work Change Directives.

d. Change Orders.

B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 9.

D. The Contract Documents may only be amended, modified, or supplemented as provided in Paragraph 3.04 of the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 *Terms*

A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

10.02 *Assignment of Contract*

A. No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 *Successors and Assigns*

A. Owner and Contractor each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

10.04 *Severability*

A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

10.05 *Contractor's Certifications*

A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process or in the Contract execution;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

10.06 *Other Provisions*

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement. Counterparts have been delivered to Owner and Contractor. All portions of the Contract Documents have been signed or have been identified by Owner and Contractor or on their behalf.

This Agreement will be effective on _____ (which is the Effective Date of the Agreement).

OWNER:	CONTRACTOR
City of Seward, Nebraska	_____
By: _____	By: _____
Title: _____	Title: _____
	(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)
Attest: _____	Attest: _____
Title: _____	Title: _____
Address for giving notices:	Address for giving notices:
_____	_____
_____	_____
_____	_____
	License No.: _____ (Where applicable)
(If Owner is a corporation, attach evidence of authority to sign. If Owner is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)	*NOTE TO USER: Use in those states or other jurisdictions where applicable or required.*
	Agent for service of process:
	_____

PERFORMANCE BOND

Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

CONTRACTOR (*Name and Address*):

SURETY (*Name, and Address of Principal Place of Business*):

OWNER (*Name and Address*):

CONTRACT

Effective Date of Agreement:
Amount:
Description (*Name and Location*):

BOND

Bond Number:
Date (*Not earlier than Effective Date of Agreement*):
Amount:
Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL	**SURETY**
_____ (Seal)	_____ (Seal)
Contractor's Name and Corporate Seal	Surety's Name and Corporate Seal
By: _____	By: _____
Signature	Signature (Attach Power of Attorney)
_____	_____
Print Name	Print Name
_____	_____
Title	Title
Attest: _____	Attest: _____
Signature	Signature
_____	_____
Title	Title

Note: Provide execution by additional parties, such as joint venturers, if necessary.

Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner for the performance of the Contract, which is incorporated herein by reference.

1. If Contractor performs the Contract, Surety and Contractor have no obligation under this Bond, except to participate in conferences as provided in Paragraph 2.1.

2. If there is no Owner Default, Surety's obligation under this Bond shall arise after:
   2.1 Owner has notified Contractor and Surety, at the addresses described in Paragraph 9 below, that Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with Contractor and Surety to be held not later than 15 days after receipt of such notice to discuss methods of performing the Contract. If Owner, Contractor, and Surety agree, Contractor shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive Owner's right, if any, subsequently to declare a Contractor Default; and
   2.2 Owner has declared a Contractor Default and formally terminated Contractor's right to complete the Contract. Such Contractor Default shall not be declared earlier than 20 days after Contractor and Surety have received notice as provided in Paragraph 2.1; and
   2.3 Owner has agreed to pay the Balance of the Contract Price to:
      1. Surety in accordance with the terms of the Contract; or
      2. Another contractor selected pursuant to Paragraph 3.3 to perform the Contract.

3. When Owner has satisfied the conditions of Paragraph 2, Surety shall promptly, and at Surety's expense, take one of the following actions:

   3.1 Arrange for Contractor, with consent of Owner, to perform and complete the Contract; or
   3.2 Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or
   3.3 Obtain bids or negotiated proposals from qualified contractors acceptable to Owner for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by Owner and contractor selected with Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Contract, and pay to Owner the amount of damages as described in Paragraph 5 in excess of the Balance of the Contract Price incurred by Owner resulting from Contractor Default; or
   3.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:
      1. After investigation, determine the amount for which it may be liable to Owner and, as soon as practicable after the amount is determined, tender payment therefor to Owner; or
      2. Deny liability in whole or in part and notify Owner citing reasons therefor.

4. If Surety does not proceed as provided in Paragraph 3 with reasonable promptness, Surety shall be deemed to be in default on this Bond 15 days after receipt of an additional written notice from Owner to Surety demanding that Surety perform its obligations under this Bond, and Owner shall be entitled to enforce any remedy available to Owner. If Surety proceeds as provided in Paragraph 3.4, and Owner refuses the payment tendered or Surety has denied liability, in whole or in part, without further notice Owner shall be entitled to enforce any remedy available to Owner.

5. After Owner has terminated Contractor's right to complete the Contract, and if Surety elects to act under Paragraph 3.1, 3.2, or 3.3 above, then the responsibilities of Surety to Owner shall not be greater than those of Contractor under the Contract, and the responsibilities of Owner to Surety shall not be greater than those of Owner under the Contract. To the limit of the amount of this Bond, but subject to commitment by Owner of the Balance of the Contract Price to mitigation of costs and damages on the Contract, Surety is obligated without duplication for:

5.1 The responsibilities of Contractor for correction of defective Work and completion of the Contract;
5.2 Additional legal, design professional, and delay costs resulting from Contractor's Default, and resulting from the actions of or failure to act of Surety under Paragraph 3; and
5.3 Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of Contractor.

6. Surety shall not be liable to Owner or others for obligations of Contractor that are unrelated to the Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than Owner or its heirs, executors, administrators, or successors.

7. Surety hereby waives notice of any change, including changes of time, to Contract or to related subcontracts, purchase orders, and other obligations.

8. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located, and shall be instituted within two years after Contractor Default or within two years after Contractor ceased working or within two years after Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

9. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the address shown on the signature page.

10. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

11. Definitions.

11.1 Balance of the Contract Price: The total amount payable by Owner to Contractor under the Contract after all proper adjustments have been made, including allowance to Contractor of any amounts received or to be received by Owner in settlement of insurance or other Claims for damages to which Contractor is entitled, reduced by all valid and proper payments made to or on behalf of Contractor under the Contract.
11.2 Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.
11.3 Contractor Default: Failure of Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.
11.4 Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract or to perform and complete or otherwise comply with the other terms thereof.

FOR INFORMATION ONLY – (*Name, Address and Telephone*) Surety Agency or Broker: Owner's Representative (*Engineer or other party*):

PAYMENT BOND

Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

CONTRACTOR (*Name and Address*):

SURETY (*Name, and Address of Principal Place of Business*):

OWNER (*Name and Address*):

CONTRACT

Effective Date of Agreement:
Amount:
Description *(Name and Location)*:

BOND

Bond Number:
Date (*Not earlier than Effective Date of Agreement*):
Amount:
Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL	**SURETY**
_____ (Seal)	_____ (Seal)
Contractor's Name and Corporate Seal	Surety's Name and Corporate Seal
By: _____	By: _____
Signature	Signature (Attach Power of Attorney)
_____	_____
Print Name	Print Name
_____	_____
Title	Title
Attest: _____	Attest: _____
Signature	Signature
_____	_____
Title	Title

Note: Provide execution by additional parties, such as joint venturers, if necessary.

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner to pay for labor, materials, and equipment furnished by Claimants for use in the performance of the Contract, which is incorporated herein by reference.

2. With respect to Owner, this obligation shall be null and void if Contractor:

2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants, and

2.2 Defends, indemnifies, and holds harmless Owner from all claims, demands, liens, or suits alleging non-payment by Contractor by any person or entity who furnished labor, materials, or equipment for use in the performance of the Contract, provided Owner has promptly notified Contractor and Surety (at the addresses described in Paragraph 12) of any claims, demands, liens, or suits and tendered defense of such claims, demands, liens, or suits to Contractor and Surety, and provided there is no Owner Default.

3. With respect to Claimants, this obligation shall be null and void if Contractor promptly makes payment, directly or indirectly, for all sums due.

4. Surety shall have no obligation to Claimants under this Bond until:

4.1 Claimants who are employed by or have a direct contract with Contractor have given notice to Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.

4.2 Claimants who do not have a direct contract with Contractor:

1. Have furnished written notice to Contractor and sent a copy, or notice thereof, to Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials or equipment were furnished or supplied, or for whom the labor was done or performed; and
2. Have either received a rejection in whole or in part from Contractor, or not received within 30 days of furnishing the above notice any communication from Contractor by which Contractor had indicated the claim will be paid directly or indirectly; and
3. Not having been paid within the above 30 days, have sent a written notice to Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to Contractor.

5. If a notice by a Claimant required by Paragraph 4 is provided by Owner to Contractor or to Surety, that is sufficient compliance.

6. Reserved.

7. Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by Surety.

8. Amounts owed by Owner to Contractor under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any performance bond. By Contractor furnishing and Owner accepting this Bond, they agree that all funds earned by Contractor in the performance of the Contract are dedicated to satisfy obligations of Contractor and Surety under this Bond, subject to Owner's priority to use the funds for the completion of the Work.

9. Surety shall not be liable to Owner, Claimants, or others for obligations of Contractor that are unrelated to the Contract. Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

10. Surety hereby waives notice of any change, including changes of time, to the Contract or to related subcontracts, purchase orders, and other obligations.

11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Paragraph 4.1 or Paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, Owner, or Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

13. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory Bond and not as a common law bond.

14. Upon request of any person or entity appearing to be a potential beneficiary of this Bond, Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15. Definitions

15.1 Claimant: An individual or entity having a direct contract with Contractor, or with a first-tier subcontractor of Contractor, to furnish labor, materials, or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of Contractor and Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

15.2 Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.

15.3 Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract, or to perform and complete or otherwise comply with the other terms thereof.

FOR INFORMATION ONLY – (*Name, Address, and Telephone*) Surety Agency or Broker: Owner's Representative (*Engineer or other*):

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly by

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Endorsed by

CONSTRUCTION SPECIFICATIONS INSTITUTE

These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor (EJCDC C-520 or C-525, 2007 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the Narrative Guide to the EJCDC Construction Documents (EJCDC C-001, 2007 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (EJCDC C-800, 2007 Edition).

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*—The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidder*—The individual or entity who submits a Bid directly to Owner.

7. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).

8. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and the Bid Form with any supplements.

9. *Change Order*—A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim*—A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*—The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

13. *Contract Price*—The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*—The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.

15. *Contractor*—The individual or entity with whom Owner has entered into the Agreement.

16. *Cost of the Work*—See Paragraph 11.01 for definition.

17. *Drawings*—That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

18. *Effective Date of the Agreement*—The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. *Engineer*—The individual or entity named as such in the Agreement.

20. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

21. *General Requirements*—Sections of Division 1 of the Specifications.

22. *Hazardous Environmental Condition*—The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.

23. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

24. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

26. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*—The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

28. *Notice to Proceed*—A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.

29. *Owner*—The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.

30. *PCBs*—Polychlorinated biphenyls.

31. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

32. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.

33. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

34. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

35. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

36. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.

37. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

38. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

39. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

40. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.

41. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

42. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.

43. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.

44. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

45. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.

46. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.

47. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or Subcontractor.

48. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

49. *Unit Price Work*—Work to be paid for on the basis of unit prices.

50. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

51. *Work Change Directive*—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a

Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 *Terminology*

A. The words and terms discussed in Paragraph 1.02.B through F are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives:*

1. The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. *Day:*

1. The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective:*

1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

a. does not conform to the Contract Documents; or

b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

c. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. *Furnish, Install, Perform, Provide:*

1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, "provide" is implied.

F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.

B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 *Starting the Work*

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 *Preconstruction Conference; Designation of Authorized Representatives*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.07 *Initial Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.

C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

A. Standards, Specifications, Codes, Laws, and Regulations

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies:*

1. *Contractor's Review of Contract Documents Before Starting Work*: Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers, or has actual knowledge of, and shall obtain a written

interpretation or clarification from Engineer before proceeding with any Work affected thereby.

2. *Contractor's Review of Contract Documents During Performance of Work*: If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation , (b) any standard, specification, manual, or code, or (c) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

a. the provisions of any standard, specification, manual, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference in the Contract Documents); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order;

2. Engineer's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or

3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions; or

2. reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor, or by Contractor to Owner or Engineer, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and

Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and

2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer's Review*: After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.

C. *Possible Price and Times Adjustments:*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

    a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and

    b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:

    a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or

    b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

    c. Contractor failed to give the written notice as required by Paragraph 4.03.A.

3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data provided by others; and

2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:

   a. reviewing and checking all such information and data;

   b. locating all Underground Facilities shown or indicated in the Contract Documents;

   c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and

   d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated:*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 *Hazardous Environmental Condition at Site*

A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.

D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to

permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 4.06.E.

E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.

F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 – BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed each bond.

C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

B. Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.

C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.

E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

5.04 *Contractor's Insurance*

A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable. Insurance requirements for work around railroad property are detailed in the special provision "Railroad Special Provision". Reference that document for additional insurance requirements.

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;

2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;

3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;

4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

   a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or

   b. by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting there from; and

6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or

entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;

4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and

6. include completed operations coverage:

    a. Such insurance shall remain in effect for two years after final payment.

    b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors,

members, partners, employees, agents, consultants, and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;

2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;

5. allow for partial utilization of the Work by Owner;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.

B. Owner shall purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.

D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under this Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or loss payees thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.

C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.

B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 – CONTRACTOR'S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

6.02 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "Or-Equals"*

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. *"Or-Equal" Items:* If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that:

1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole; and

3) it has a proven record of performance and availability of responsive service.

b. Contractor certifies that, if approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times; and

2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. *Substitute Items:*

   a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.

   b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.

   c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Engineer may decide is appropriate under the circumstances.

   d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:

      1) shall certify that the proposed substitute item will:

         a) perform adequately the functions and achieve the results called for by the general design,

         b) be similar in substance to that specified, and

         c) be suited to the same use as that specified;

      2) will state:

         a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,

         b) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and

         c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

      3) will identify:

         a) all variations of the proposed substitute item from that specified, and

         b) available engineering, sales, maintenance, repair, and replacement services; and

      4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.

B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.

C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.

D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

E. *Engineer's Cost Reimbursement*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

F. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 *Concerning Subcontractors, Suppliers, and Others*

A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or

entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity; nor

2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.

E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.

F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its

use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 *Permits*

A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner

and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *Taxes*

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas:*

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 *Record Documents*

A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 *Safety and Protection*

A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.

D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts

any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

F. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*

a. Submit number of copies specified in the General Requirements.

b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples:*

a. Submit number of Samples specified in the Specifications.

b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Submittal Procedures:*

1. Before submitting each Shop Drawing or Sample, Contractor shall have:

a. reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;

b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

c. determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.

3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. *Engineer's Review:*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the

Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. *Resubmittal Procedures:*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 *Continuing the Work*

A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 *Contractor's General Warranty and Guarantee*

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on representation of Contractor's warranty and guarantee.

B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

1. observations by Engineer;

2. recommendation by Engineer or payment by Owner of any progress or final payment;

3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. use or occupancy of the Work or any part thereof by Owner;

5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;

6. any inspection, test, or approval by others; or

7. any correction of defective Work by Owner.

6.20 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .

B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:

1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or

2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.

B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 *Related Work at Site*

A. Owner may perform other work related to the Project at the Site with Owner's employees, or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to Contractor prior to starting any such other work; and

2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.

B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner, and Owner, if Owner is performing other work with Owner's employees, proper and safe

access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;

2. the specific matters to be covered by such authority and responsibility will be itemized; and

3. the extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.

B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's wrongful actions or inactions.

C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's wrongful action or inactions.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 *Replacement of Engineer*

A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

A. Owner's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

8.06 *Insurance*

A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws

and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents.

8.12 *Compliance with Safety Program*

A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed pursuant to Paragraph 6.13.D.

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents.

9.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative*

A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.

C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.

D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations

on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.

B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of,

and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Engineer has been informed pursuant to Paragraph 6.13.D.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.D.

10.03 *Execution of Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of

executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 *Claims*

A. *Engineer's Decision Required*: All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

C. *Engineer's Action*: Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:

1. deny the Claim in whole or in part;

2. approve the Claim; or

3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 11.01.B, and shall include only the following items:

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including the following:

    a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

    b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

    c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

    d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.

    e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

    f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

    g. The cost of utilities, fuel, and sanitary facilities at the Site.

    h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, express and courier services, and similar petty cash items in connection with the Work.

    i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A.

C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 *Allowances*

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. *Cash Allowances:*

1. Contractor agrees that:

a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in

the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. *Contingency Allowance:*

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 *Unit Price Work*

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

2. there is no corresponding adjustment with respect to any other item of Work; and

3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

   a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;

   b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;

   c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

   d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

   e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and

   f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.

D. Owner, Engineer, and their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 *Notice of Defects*

A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. Defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

13.03 *Tests and Inspections*

A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;

2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and

3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation.

F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.

B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

D. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or

2. correct such defective Work; or

3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and

4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and for the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct, or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. *Applications for Payments:*

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. *Review of Applications:*

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's

review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

a. the Work has progressed to the point indicated;

b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and any other qualifications stated in the recommendation); and

c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or

b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

a. to supervise, direct, or control the Work, or

b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or

c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or

d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or

e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:

a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;

b. the Contract Price has been reduced by Change Orders;

c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or

d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. *Payment Becomes Due:*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. *Reduction in Payment:*

1. Owner may refuse to make payment of the full amount recommended by Engineer because:

a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;

b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;

c. there are other items entitling Owner to a set-off against the amount recommended; or

d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.

2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor remedies the reasons for such action.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

14.03 *Contractor's Warranty of Title*

A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 *Substantial Completion*

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.

B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the tentative certificate to Owner, notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will, within said 14 days, execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the tentative list.

14.05 *Partial Utilization*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 14.04.A through D for that part of the Work.

2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *Final Payment*

A. *Application for Payment:*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:

   a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.6;

   b. consent of the surety, if any, to final payment;

   c. a list of all Claims against Owner that Contractor believes are unsettled; and

d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. *Engineer's Review of Application and Acceptance:*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. *Payment Becomes Due:*

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);

2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;

3. Contractor's repeated disregard of the authority of Engineer; or

4. Contractor's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:

1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);

2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere; and

3. complete the Work as Owner may deem expedient.

C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B and 15.02.C.

15.03 *Owner May Terminate For Convenience*

A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other

dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. reasonable expenses directly attributable to termination.

B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 – DISPUTE RESOLUTION

16.01 *Methods and Procedures*

A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.

B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:

1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions; or

2. agrees with the other party to submit the Claim to another dispute resolution process; or

3. gives written notice to the other party of the intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 – MISCELLANEOUS

17.01 *Giving Notice*

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or

2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

Supplementary Conditions

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract, EJCDC C-700 (2007 Edition). All provisions which are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added thereto.

SC-2.02 *Copies of Documents*

SC-2.02 Delete Paragraph 2.02.A in its entirety and insert the following in its place:

A. Owner shall furnish to Contractor up to 5 printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

SC-4.02 *Subsurface and Physical Conditions*

SC-4.02 Add the following new paragraphs immediately after Paragraph 4.02.

B: Not Used

SC-4.06 *Hazardous Environmental Conditions*

SC-4.06 Delete Paragraphs 4.06.A and 4.06.B in their entirety and insert the following:

A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.

B. Not Used.

SC-5.04 *Contractor's Liability Insurance*

SC-5.04 Add the following new paragraph immediately after Paragraph 5.04.B:

C The limits of liability for the insurance required by Paragraph 5.04 of the General Conditions shall provide coverage for not less than

the following amounts or greater where required by Laws and Regulations:

1. Workers' Compensation, and related coverages under Paragraphs 5.04.A.1 and A.2 of the General Conditions:

a. State:	**Statutory**
b. Applicable Federal (e.g., Longshoreman's):	**Statutory**
c. Employer's Liability:	
Each Accident	**$1,000,000**

2. Contractor's General Liability under Paragraphs 5.04.A.3 through A.6 of the General Conditions which shall include completed operations and product liability coverages and eliminate the exclusion with respect to property under the care, custody and control of Contractor:

a. General Aggregate	**$2,000,000**
b. Products - Completed Operations Aggregate	**$2,000,000**
c. Personal and Advertising Injury	**$1,000,000**
d. Each Occurrence (Bodily Injury and Property Damage)	**$1,000,000**
e. Fire Damage Limit	**$50,000 any one fire**
f. Medical Damage Limit	**$5,000 any one person**
g. Excess or Umbrella Liability	
□ General Aggregate	**$3,000,000**

3. Automobile Liability under Paragraph 5.04.A.6 of the General Conditions:

a. Combined Single Limit of	**$1,000,000**

SC-5.06 *Property Insurance*

SC-5.06.A. Delete Paragraph 5.06.A in its entirety and insert the following in its place:

A. Contractor shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof. Contractor shall be responsible for any deductible or self-insured retention. This insurance shall:

1. **include the interests of Owner, Contractor, Subcontractors, Engineer, and the officers, directors, partners, employees, agents and other consultants and subcontractors of any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or loss payee;**

2. **be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss and damage to the Work, temporary buildings, falsework, and materials and equipment in transit and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by these Supplementary Conditions.**

3. **include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);**

4. **cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;**

5. **allow for partial utilization of the Work by Owner;**

6. **include testing and startup;**

7. **be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued; and**

8. **comply with the requirements of Paragraph 5.06.C of the General Conditions.**

SC-SC-6.08 *Permits*

SC-6.08 Add the following paragraph 6.08 B. after Paragraph 6.08 A:

B. Contractor is responsible for complying with the requirements of permits for the project that Owner has obtained, or is in the process of obtaining (per Paragraph 6.08 A, Contractor is responsible for obtaining all other permits necessary for the project.)

1. Section 404 authorization: None required.

2. Floodplain Permit: None required.

3. Construction Storm Water Notice of Intent (SWPPP): Contractor shall take all necessary management measures, and conduct its work to comply with the requirements and regulations of NPDES that Owner is in the process of obtaining from the Nebraska Department of Environmental Quality also in compliance with Lower Platte River Natural Resources District.

4. Construction Permit for Sanitary Sewer Systems: Contractor shall familiarize himself with adherence to the permit requirements.

5. Contractor shall familiarize himself with the requirements and provisions of all necessary project permits and shall be solely responsible for implementing and maintaining all measures of these permits. To the fullest extent allowed by Laws and Regulations, the Contractor shall indemnify and hold harmless the Owner, Engineer and Engineer's Consultants, and the officers, directors, partners, employees, agents, other consultants, and subcontractors of each and any of them from and against all claims, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court, arbitration, or other dispute resolution costs) arising out of or relating to the Contractor's failure to comply with the conditions and requirements of these permits.

SC-6.20 *Indemnification*

SC-6.20 Delete Article 6.20.C.2 in its entirety.

SC-9.03 *Project Representative*

SC-9.03 Add the following new paragraphs immediately after Paragraph 9.03.A:

B. The Resident Project Representative (RPR) will be Engineer's employee or agent at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions. RPR's dealings in matters pertaining to the Work in general shall be with Engineer and Contractor. RPR's dealings with Subcontractors shall be through or with the full knowledge and approval of Contractor. The RPR shall:

1. *Schedules:* Review the progress schedule, schedule of Shop Drawing and Sample submittals, and schedule of values prepared by Contractor and consult with Engineer concerning acceptability.

2. *Conferences and Meetings:* Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences and other project-related meetings, and prepare and circulate copies of minutes thereof.

3. *Liaison*:

a. Serve as Engineer's liaison with Contractor, working principally through Contractor's authorized representative, assist in providing information regarding the intent of the Contract Documents.

b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.

c. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.

4. *Interpretation of Contract Documents:* Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.

5. *Shop Drawings and Samples:*

a. Record date of receipt of Samples and approved Shop Drawings.

b. Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.

6. ***Modifications:*** **Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.**

7. ***Review of Work and Rejection of Defective Work*:**

    a. **Conduct on-Site observations of Contractor's work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.**

    b. **Report to Engineer whenever RPR believes that any part of Contractor's work in progress will not produce a completed Project that conforms generally to the Contract Documents or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.**

8. ***Inspections, Tests, and System Startups:***

    a. **Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.**

    b. **Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.**

9. ***Records:***

    a. **Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.**

    b. **Maintain records for use in preparing Project documentation.**

10. ***Reports:***

a. Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the progress schedule and schedule of Shop Drawing and Sample submittals.

b. Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.

c. Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, damage to property by fire or other causes, or the discovery of any Hazardous Environmental Condition.

11. *Payment Requests:* Review Applications for Payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the schedule of values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.

12. *Certificates, Operation and Maintenance Manuals:* During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Specifications to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.

13. *Completion*:

a. Participate in a Substantial Completion inspection, assist in the determination of Substantial Completion and the preparation of lists of items to be completed or corrected.

b. Participate in a final inspection in the company of Engineer, Owner, and Contractor and prepare a final list of items to be completed and deficiencies to be remedied.

c. Observe whether all items on the final list have been completed or corrected and make recommendations to Engineer concerning acceptance and issuance of the Notice of Acceptability of the Work.

C. The RPR shall not:

1. **Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).**

2. **Exceed limitations of Engineer's authority as set forth in the Contract Documents.**

3. **Undertake any of the responsibilities of Contractor, Subcontractors, Suppliers, or Contractor's superintendent.**

4. **Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of Contractor's work unless such advice or directions are specifically required by the Contract Documents.**

5. **Advise on, issue directions regarding, or assume control over safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.**

6. **Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.**

7. **Accept Shop Drawing or Sample submittals from anyone other than Contractor.**

8. **Authorize Owner to occupy the Project in whole or in part.**

SC-11.03 *Unit Price Work*

SC-11.03.D Delete Paragraph 11.03.D in its entirety and insert the following in its place:

1304. The unit price of an item of Unit Price Work shall be subject to reevaluation and adjustment under the following conditions:

1. **if the Bid price of a particular item of Unit Price Work amounts to <u>10</u> percent or more of the Contract Price and the variation in the quantity of that particular item of Unit Price Work performed by Contractor differs by more than <u>25</u> percent from the estimated quantity of such item indicated in the Agreement; and**

2. **if there is no corresponding adjustment with respect to any other item of Work; and**

3. **if Contractor believes that Contractor has incurred additional expense as a result thereof or if Owner believes that the quantity variation entitles Owner to an adjustment in the unit price, either Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Article 10 if the parties are unable to agree as to the effect of any such variations in the quantity of Unit Price Work performed.**

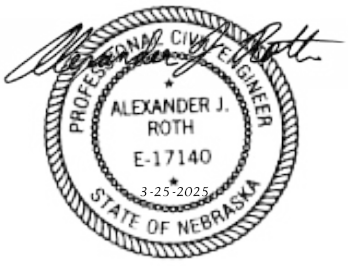
SPECIAL PROVISIONS

CITY OF SEWARD (2025)
WORTHMAN BOULEVARD EXTENSION

SCHEMMER PROJECT NO. 09336.001-C

SCHEMMER

Design with Purpose. Build with Confidence.



MARCH 2025

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GENERAL CONTRACT REQUIREMENTS

This project utilizes Community Development Block Grant (CDBG) funding, which includes Federal Labor Standards Provisions and Build America, Buy America (BABA) Requirements. The Contractor is required to follow all conditions set forth in the Bid Package Requirements.

This project will utilize Nebraska Department of Transportation Standard Plans and Specifications.

All sanitary sewer related construction will utilize the 2023 City of Lincoln Standard Specifications for Municipal Construction and 2023 Lincoln Standard Plans (LSP).

These Special Provisions amend or supplement the Nebraska Department of Transportation Standard Specifications for Highway Construction, 2017 Edition, and other provisions of the Contract Documents as indicated herein. All provisions that are not so amended or supplemented via these special provisions remain in full force and effect.

The Contractor shall not take advantage of any apparent error, discrepancy or omission in the plan, specifications or geotechnical reports. Upon discovery of such an error, discrepancy or omission, the Contractor shall notify the City's representative immediately. The City's Representative will then make such corrections or interpretations as necessary to fulfill the intent of the plans and specifications. Materials or work described in words which, so applied, have known technical or trade meaning shall be held to refer to such recognized standards.

Figured dimensions on the plans shall be taken as correct but shall be checked by the Contractor before starting construction. Any errors, omissions, or discrepancies shall be brought to the attention of the City's Representative and the City's Representative's decision thereon shall be final. Correction of errors or omissions on the drawings or specifications may be made by the City's Representative when such correction is necessary for the proper execution of the work.

LIMITATIONS OF THE WORK

The Contractor will not be permitted to use pavement along existing Worthman Boulevard or Pine Street for construction purposes and for the storage of materials and equipment. Side streets are allowed to be closed where immediate work is taking place. The location and extent of the areas so used shall be designated by the Owner. The Owner shall approve all materials to be stored on site prior to their delivery. No materials or equipment may be placed upon the property of the Owner until the Owner has agreed to the location contemplated by the Contractor to be used for storage.

It shall be understood that the responsibility for protection and safekeeping of equipment and materials on or near the site shall be entirely that of the Contractor and that no claims shall be made against the Owner by reason of any act of an employee or trespasser. It shall be further understood that should any occasion arise necessitating access to the sites occupied by these stored materials and equipment, the Contractor owning or responsible for the stored materials or equipment shall immediately move same.

The Contractor shall be solely responsible for obtaining and shall pay all costs in connection

with any additional work area, storage site, access to the site, or temporary right-of-way which may be required for proper completion of the work.

All prospective bidders shall visit the site to familiarize themselves with the existing site conditions, access locations, site constraints, existing site drainage, existing utilities and other construction currently underway or planned within the project area. In addition, the selected Contractor shall be required to verify the location, elevations and flowlines of existing utilities that may be in conflict with the proposed work or that will need to connect to the new work prior to start of construction. This may require the Contractor to pothole existing utilities in advance of the start of work to verify flowlines at outlets or connection points, location and depth of utilities, size and or material types of existing utilities. This verification work shall include but not be limited to connections to existing storm sewers, sanitary sewers and water mains. Verification of existing site conditions and utility locations shall not be paid for directly except where shown on the plans.

CONTRACT TIME

All work associated with this project shall be substantially complete by December 1, 2025 with an anticipated notice of proceed of August 1, 2025. Once construction begins, the Contractor shall have no more than 120 calendar days to complete all work associated with the project. Suspension of calendar days may be requested by the Contractor to be approved by the City.

Failure to meet the substantial completion date of the overall project shall result in liquidated damages of $500 per calendar day beyond the specified calendar days allowed.

Substantial completion shall be defined as all storm sewer construction complete; inlet and pipe shall be placed and backfilled, sanitary sewer complete, roadway and sidewalk paving complete, and all temporary construction signs and barricades removed, and site cleanup complete. Permanent seeding, permanent pavement marking, and street lighting must be complete before April 1, 2026. Final completion of all work shall be completed by April 1, 2026. Determination of Substantial Completion and Final Completion shall be subject to the City's Representative's approval.

SPECIAL PROSECUTION AND PROGRESS

The following prosecution and progress of work shall be used in developing the baseline schedule for the project. The contractor will be required to submit a schedule of construction tasks that identify an order of completion based on the complete dates identified for this construction project.

General

All work shall be confined within the limits of the existing right-of-way or easements unless the Contractor has obtained separate rights from an adjacent property owner. The Contractor shall provide to the City's Representative written copies of any agreements for separate property rights that are obtained.

CONSTRUCTION STAKING

Construction staking shall be done by the Engineer at the Owners cost. The Engineer will furnish and set construction stakes or benchmarks establishing lines and grades and will furnish the Contractor with all necessary information relating to them. The Contractor shall be responsible for the preservation of all stakes and marks. The cost of replacing any stakes or marks destroyed or disturbed by the Contractor shall be charged against, and deducted from, the payment for the work.

The Contractor shall provide one week's notice for stakes when moving onto the work and 48 hours notice for any additional staking needs.

Any errors or apparent discrepancies found in previous surveys, plans, specifications, or special provisions shall immediately be called to the attention of the Engineer by the Contractor for correction or interpretation before proceeding with the work.

STATUS OF PERMITS

The City of Seward is in the process of obtaining a Construction Permit for Wastewater Works through the Nebraska Department of Environment and Energy (NDEE).

A National Pollutant Discharge Elimination System (NPDES) permit will be required for this project. As outlined in the general conditions of the Construction Storm Water Notice of Intent, the project SWPPP shall be located on site and be accessible by the public at all times during construction. The SWPPP shall be placed at a location agreed upon by the Contractor and Engineer.

The Contractor shall understand the terms and conditions of the general NPDES permit that authorizes the storm water discharges associated with industrial activity from the construction site. Additionally, the Contractor, as evidenced by their signature on this project proposal, agrees and understands that, if awarded the contract on this project, he/she:

1. Becomes a co-permittee, along with the owner(s), to the Nebraska Department of Environmental Quality NPDES General Permit for Storm Water Discharges from construction sites on the project;

2. Is legally bound to comply with the Clean Water Act to ensure compliance with the terms and conditions of the storm water pollution prevention plan developed under the NPDES permit and the terms of the NPDES permit; and

3. Will hold the owners harmless for damages or fines arising as a result of noncompliance with the terms of the storm water permits and authorizations associated with the work on this project.

Unless otherwise indicated, all vegetative and structural erosion and sediment control practices and stormwater management practices will be constructed and maintained according to the minimum standards and specifications of Chapter 2 of the Nebraska Department of

Transportation Drainage Design and Erosion Control Manual.

Following soil disturbance, permanent or temporary stabilization shall be completed within seven (7) calendar days to the surface of all perimeter sediment controls, topsoil stockpiles, and any other disturbed or graded areas on the project site which are not being used for material storage, or on which actual earth moving activities are being performed.

If existing BMPs need to be modified or additional BMPs are necessary for any reason, implementation must be completed before the next storm event whenever practicable. If implementation before the next storm is impracticable, the situation must be documented and the alternative BMPs must be implemented as soon as possible.

Permanent Stabilization: Disturbed areas that will not be hard surfaced will be sodded with grasses.

Stormwater Runoff and Management: Runoff from the roadway will be routed through the proposed underground enclosed storm sewer system. The storm sewer system will be designed to accommodate the runoff and discharge the peak flows without creating increased erosion.

Spill and Mitigation Plan: Spills of hazardous materials shall be contained and cleaned up immediately. Any contaminated soils or materials shall be removed and treated or disposed of (as appropriate) in accordance with NDEQ and EPA guidelines. Spills large enough to reach the storm sewer system will be reported to the National Response Center at 1-800-424-8802.

Northern Long-eared Bat

This project is within the range of the state and federally listed threatened northern long-eared bat (Myotis septentrionalis). The following conservation measures must be implemented in order to avoid adverse impacts on northern long-eared bat. No removal of suitable trees or removal of roosting structures between May 15 and July 31.

Western Prairie Fringed Orchid

This project is within the range of the state and federally listed threatened western prairie fringed orchid (Platanthera praeclara). The following conservation measures must be implemented in order to avoid adverse impacts. Survey according to protocol required during flowering period (June 15 – July 15) prior to ground disturbing activities or herbicide application. If species not found during the survey, work may proceed. Knife in outside of April 15 – October 1 growing season or have a blooming presence survey completed.

Migratory Bird Treaty Act

Clearing and grubbing of any identified trees will be allowed prior to the primary nesting season and prior to the issuance of the project Notice to Proceed when requested in writing by the Contractor. The primary nesting season in Nebraska has been determined to generally occur between April 1 and September 1. These nesting dates are a guide only, nesting can occur outside of those dates. Work outside of those dates is not exempt from compliance with the Migratory Bird Treaty Act.

The Contractor shall, to the extent possible, schedule clearing and grubbing activities to occur outside the primary nesting season in Nebraska if possible. However, if circumstances dictate that project construction or demolition must be done when nesting migratory birds may be present, a survey of the number of active nests and species of birds shall be conducted by a qualified bird surveyor provided by the Owner and a representative of the Contractor. If the survey finds that nests will be impacted by the proposed construction, delays may occur requiring adjustment of the phasing, project schedule, or daily production to comply with the Migratory Bird Treaty Act and meet the desired completion date.

If an active nest is found during the survey, the Contractor should do everything possible to restructure his activities and leave the nest undisturbed until the young fledge. Fledging could occur within a week, or up to a month, after the survey depending on the species of bird and whether the nest contained eggs or young. Also depending on the species of bird and their sensitivity to disturbance, a buffer of up to 30 feet surrounding the tree with the active nest could be required. If construction operations result in unavoidable conflict with nesting migratory bird's eggs or young, which will result in "taking" nests and their contents, the Contractor should notify the Engineer as soon as practicable. If construction cannot be rescheduled to allow the birds to fledge, and it is determined as an unavoidable "take" circumstance, the Contractor shall stop all work within 30 feet of the active nest and coordinate with the Engineer to determine how to proceed. The Engineer will facilitate coordination with the US Fish and Wildlife Service to determine the appropriate way to address the active nest. No work shall occur within 30 feet of the active nest until US Fish and Wildlife Service coordination is complete and the requirements of the Migratory Bird Treaty Act are satisfied.

Once a bird survey is conducted, it is the Contractor’s responsibility to use any legal and practical method to prevent the nesting of birds in order to prevent the need for additional surveys. The Contractor shall schedule his/her work to accommodate the process of conducting a survey(s) and remove cleared trees as soon as practicable. It is understood and agreed that the Contractor has considered in the bid all of the pertinent requirements concerning migratory birds (including endangered species) and that no additional compensation, other than time extensions if warranted, will be allowed for any delays or inconvenience resulting in these requirements.

TRAFFIC CONTROL

Prior to construction, the Contractor shall submit a traffic control plan and construction schedule for road closure to the City Engineer for approval. The Contractor shall provide any project status changes or updated information to the Engineer on a daily basis.

Total road closures to through traffic will be allowed on Worthman Boulevard or Pine Street during the period of construction. The Contractor will need to provide access to local traffic during construction. The Contractor will also need to identify a location to store materials and equipment during construction hours.

All temporary traffic control items required for the project shall be supplied, installed and removed per NDOT Standard Specifications for Highway Construction. "TRAFFIC CONTROL" shall be paid for at the contract unit price bid per lump sum. The Contractor shall be responsible for determining the Traffic Control needs for the project, including all devices and personnel, and to develop the bid amount accordingly. This payment includes the set-up, maintenance, removal, and any traffic control devices required.

STATUS OF EASEMENT

No additional land rights have been acquired for this project.

STATUS OF UTILITIES

Utility facilities, aerial and/or underground exist within this project. The Contractor shall avoid damaging any utility(s). Any such damage caused by Contractor, Contractor's employees, sub-contractors, suppliers or agents will be the responsibility of Contractor to repair at Contractor's expense. No additional compensation will be allowed for protecting utility(s) or for repair of any damage caused by Contractor, Contractor's employees, subcontractors, suppliers or agents. Contractor shall coordinate utility relocation or reconstruction with the appropriate utility company. Any relocation work necessary will be concurrent with construction.

CITY OF SEWARD UTILITIES

The City of Seward has existing power, water mains, sanitary sewers, and storm sewers within the limits of the project. Impacts to these utilities are not anticipated outside of improvements outlined within the plans. All work within this area which may impact public water, sewer, or power facilities will require coordination with the City of Seward Engineer and the City's Representative to minimize impact to daily activities.

The Contractor shall notify the City of any unforeseen conflicts with power lines. The City of Seward shall be responsible for any relocation and/or structural support of power lines.

The point of contact for the City of Seward is:
City of Seward Engineer
Contact: Michael Oneby, P.E.
Phone: (402) 643-4000

PRIVATE UTILITIES

There are no known private utilities located within the project limits based upon a February 2024 One Call utility locate. The Contractor shall notify the City of any unforeseen conflicts with private utilities. The Contractor shall complete their own One Call utility locate to verify.

SEPARATION OF WATER MAIN AND SEWERS

See attached Water Main and Sanitary/Storm Separations (2023) guidance from NDEE.

GENERAL CLEARING AND GRUBBING

The work area consists of grasses, shrubs and pavement. With this in mind, clearing and grubbing of vegetation within the project area may be required. The Contractor will not be allowed to dispose of trees, stumps, logs, down timber, shrubs, brush, weeds, or other herbaceous material resulting from clearing and grubbing operations on the Project Right-of-Way.

SALVAGING AND PLACING TOPSOIL

Subsection 207.01 in the Standard Specifications is amended to provide that the topsoil shall be salvaged from all existing grassed areas to be covered by new pavement and embankment. Salvaged topsoil shall be placed 4 inches thick over all areas to be seeded.

CONTAMINATED SOIL REMOVAL

During the execution of the work on this project the Contractor may encounter contaminated soils, debris or groundwater (media). If contaminated media is encountered the Contractor shall immediately cease excavation operations and contact the City's Representative. If it is determined by the City's Representative that the contaminated soils cannot be used on-site (e.g. as backfill for the utility trenches), the Contractor shall be required to dispose of any contaminated media in accordance with all federal, state and local laws.

In the event the Contractor or on-site construction management personnel suspect that contaminated media is encountered or will be during the performance of the work, they shall immediately notify the City's Representative and follow their direction for resolution on how to manage the contaminated media. Typical indications of potentially contaminated media include discoloration and/or odors associated with the media removed as part of boring, trenching or other excavation work.

During the course of the project the Contractor shall not haul any excavated material that is suspected to be contaminated off-site without the prior approval of the City's Representative. As such, the Contractor shall provide locations on-site to temporarily stockpile all excavated material that may be suspected to contain contaminated soils. All temporary stockpiles of contaminated soils shall be kept separate from clean soils and shall comply with the requirements set forth in the Construction Storm Water Pollution Prevention Plan (SWPPP) (if required). The City's Representative will determine the appropriate method for disposal of the excavated material if it is determined to be contaminated and make a recommendation to the Contractor. Work associated with removal and disposal of contaminated material will be considered on an 'Extra Work' basis.

SWPPP SIGN

"SWPPP SIGN" shall be paid at the contract unit price per each and shall be full payment for the contractor to furnish and install project signs as stated in the storm water pollution plan for the project. The contract price shall be full compensation for furnishing all labor, materials, equipment, tools, and all incidentals necessary to complete the work.

REMOVE BRICK SURFACE

This work will consist of removing the existing brick pavers. The brick pavers that are removed shall become property of the Contractor and removed from the site.

Payment will be made at the contract price per square yard for "REMOVE BRICK SURFACE" that are properly removed.

ROADWAY LIGHTING REQUIREMENTS

INSTALL LIGHT POLE

This work shall include the installation of Standard Street Lighting Poles. Street poles, fixtures, mast arms, and screw in bases shall be provided by the City of Seward.

All work associated with the installation of street light pole shall comply with all applicable provisions. Light pole complete, in place, and accepted by the ENGINEER, shall be measured for payment as single units and shall be paid for at the contract unit price bid per each. This price and payment shall be full compensation for all excavation, for installing the pole, luminaire arms, fixture, wiring, and power installed foundations.

DETECTABLE WARNING PANELS

Section 607 of the Standard Specifications shall be amended to include the following:

Detectable warning panels shall be cast-in-place replaceable glass and carbon reinforced polyester based composite material manufactured by ADA Solutions.

Color: Black, Federal Standard Color No. 37038

Contractor shall install detectable warning panels per the manufacturer's specifications.

NDOT STANDARD CURB INLET, PLAN 443

Section 916 of the Standard Specifications shall be amended to include the following:

Payment for Inlets and Junction Boxes shall be measured by the each and paid for at the contract price.

EROSION CONTROL, CLASS 1D

Section 810 of the Standard Specifications shall be amended to include the following:

A. The work included in this item shall consist of providing an accepted uniform stand of perennial turf grasses by fine grading and furnishing and placing fertilizer, seed, and mulch on all areas to be treated as shown on the plans. This shall include, but not be limited to: disking, harrowing, leveling/fine grading, planting, fertilizing, mulching, establishment, and maintenance till acceptance.

PART 1 SUBMITTALS:

A. The Contractor shall submit the following samples, certifications, or test results prior to use on the project:

a) Fertilizer - Form for Affidavit (on official stationery of supplier) certifying compliance with State and Federal regulations and standards of the Association of Official Agricultural Chemists.

b) Seed - Form for Affidavit (on official stationery of supplier) certifying compliance with State and Federal regulations and testing provisions of the Association of Official Seed Analysts for each shipment of seed for this project.

c) Sample and product information on erosion control blankets and hold down pins.

d) Sample and product information on hydromulch.

e) All original seed tags for all bags (and partial bags) of seeds used on the project shall be submitted to the Engineer.

f) Soil test identifying the lawn and garden package values before the seed bed preparation process has been started. Soil report is to include the cation exchange capacity (CEC), levels of phosphorus, potassium, calcium, magnesium and other nutrients, soil PH and soil buffer PH and suggested pounds per Acre recommendations to achieve a prepared soil for seeding on bare ground.

g) Typical desired nutrient levels for the area are; Organic matter 3%, PH 6-7.2, Phosphorus 25-30ppm, Potassium 150-200 ppm.

PART 2 - PRODUCTS

2.01 GENERAL:

All materials furnished in accordance with the requirements of this specification shall be delivered, where applicable, in sealed, unbroken packages bearing the brand and maker's name, and shall be stored on platforms and be properly covered to protect them from the weather and damage.

2.02 FERTILIZER/NUTRIENTS:

Commercial composite fertilizer or nutrients, uniform in composition, dry and free flowing. It shall bear the manufacturer's guaranteed statement of analysis which shall be as designated in the soils report for original fertilization/nutrient modification to the insitu soils. Any fertilizer/nutrients which becomes caked or otherwise damaged, rendering it unsuitable for use, will not be accepted.

2.03 SEED:

A. Acceptable Seed Mixtures (Nebraska Central and Eastern Region)

CENTRAL AND EASTERN – Type "B"

Type "B" – Central & Eastern	Minimum Purity (%)	Broadcast Application Rate in lb. of Pure Live Seed/Acre	Approved Mech. Drill Application Rate in lb. of Pure Live Seed/Acre
Perennial ryegrass – Linn, Norlea, Amazon	85		15
Western wheatgrass – Barton	85		3.5
Slender wheatgrass	85		12
Tall fescue	85		15
Red fescue (Festuca rubra)	85		6
Buffalograss – Bison, Cody, Sundancer, Texoka	80		3.5
Fults alkali grass (Puccinellia distans)	85		2
Sideoats grama – Butte, El Reno, Trailway, Pierre	75		4
Sand dropseed (Sporobolus cryptandrus)	90		0.5
Oats/wheat (wheat in the fall)	90		16

All seeds shall be origin Nebraska, adjoining states, or as specified. A contractor proposing to use a substitute variety or origin shall submit for the Engineer's consideration a seed tag representing the seed, which shows the variety, origin and analysis of the seed.

Or Approved Equivalent.

2.04 WATER: Potable.

Verify that prepared soil base is ready to receive work of this Section. Fill all depressions and rivulets with topsoil to establish a smooth grade. Beginning of installation means acceptance of existing site conditions.

2.05 PREPARATION OF TOPSOIL:

A. Conditioned soil:

1. The Contractor shall be responsible for determining the availability of organic soil additive material prior to bidding the project. If there is not sufficient supply of organic soil additive material, the Contractor shall condition the soil by nutrients and fertilizer per the requirements of this specification

2. 2 inches of organic soil additive shall be incorporated into the topsoil as described above.
3. The Contractor shall notify the Engineer five (5) days prior to the start of amended soil activities.
4. Once the Contractor is allowed to use manufactured organic soil, the Contractor shall notify the Engineer five (5) days in advance to schedule pick up of the manufactured organic soil material.

5. The Contractor shall place the conditioned soil in accordance with the Contract Documents.
6. Conditioned soil may be accomplished by mixing the organic soil additive with a stockpile of topsoil material then placing, or by spreading the organic soil additive over replaced topsoil and mixing together in place.
7. Organic soil additive may be spread over undisturbed native soil to a depth of two (2) inches and incorporated into the native soil to a total depth of six (6) inches.
8. Fertilizer shall not be added when using manufactured organic soil.

B. Soil conditioning by nutrients/fertilizer, only if compost is not available.
   1. Apply if needed according to recommendations from a soil test
   2. Apply 19-19-19 or equivalent nutrients fertilizer at the rate of 450 lbs/AC as a minimum.
   3. Incorporate recommended nutrients/fertilizer into the top 4-6 inches of the soil by discing or other means.

C. Seedbed preparation
   1. Harrow, disk or rake the topsoil to a depth of three (3") on slopes flatter than 3:1 and one to three (1-3") inches for slopes steeper than 3:1 in a minimum of two directions.
   2. When an area is compacted, crusted or hardened, the soil surface shall be loosened by discing, raking, or harrowing.
   3. Seed bed preparation should not be undertaken when excessively wet conditions exist.
   4. Remove all debris and stones having any dimension greater than one inch.
   5. Rake finish surface smooth

2.06 RATE OF APPLICATION:

A. Initial Fertilizing: Application rate shall be obtained from the required soils report.
B. General Lawn Seed: 12 pounds per 1,000 SF.
C. Refertilizing: As required by the engineer if the establishment is not as required to complete the seeding.

2.07 SEEDING:

A. Drill seed or sow (broadcast) grass seed, applying half the quantity in one direction, and the remaining quantity at right angles to it.
B. Do not sow seed on a windy day, or when the ground is frozen, wet or otherwise non-tillable.
C. Cover seed with a thin layer of topsoil by raking or dragging.

D. Cover newly seeded area with hydromulch or erosion control blankets. Hydromulch or erosion control blankets shall be applied within twenty four (24) hours after planting seed.

E. Install erosion control blankets where shown on the Drawing(s) and as per manufacturer's instructions. Hold down pins shall be installed two (2) pins per square yard.

2.08 SEEDING SEASON:

A. The suggested calendar dates for seeding are:

Spring:	March 15 to June 1.
Fall:	August 15 to October 1.

B. All disturbed soil areas shall be treated during the seeding season.

C. Areas at final grade: Permanent seeding will be accomplished

2.09 MAINTENANCE:

A. To achieve better germination of seed, the Contractor may water the seeded areas in order to maintain a moist seed bed at all times. If the Contractor chooses to water the seeded areas, water should be applied so that the topsoil is wet to a depth of two inches. Apply one complete coverage to the seeded area in an eight-hour period.

B. Protect the seed bed with barricades, if necessary, to keep all traffic off the area.

C. After the seed mixture has germinated, reseed all areas which have failed to show a uniform stand of germinated seed.

D. Maintain all seeded areas until acceptance. Suggested maintenance items shall include, but not be limited to any or all of the following, whichever are necessary:

1. Regrading.
2. Refertilizing.
3. Reseeding.
4. Re-Hydromulching or repositioning or replacing erosion control blankets.
5. Watering.
6. Weeding.
7. Rolling.
8. Filling in eroded areas.

2.10 INSPECTION AND ACCEPTANCE OF SEEDED AREAS:

A. Submit written notice requesting inspection by the Engineer at least ten days prior to the anticipated date.

B. No seeded areas will be inspected for acceptance prior to sixty (60) days from date of seeding.

D. A satisfactory stand of grass which is acceptable is defined as consisting of a uniform stand of at least eighty-five percent (85%) established permanent grass species. An acceptable stand of grass will be determined by the Engineer.

E. Appropriate materials to be furnished and installed by the contractor for Erosion Control Class 1D can be obtained from the NDOT approved products list.

F. Other items required to be furnished and installed before payment are; testing, soil conditioning with fertilization/nutrients, conditioned soil, seed bed preparation, and seeding will all be incidental to the direct pay items for erosion control

1. Soil Test required by this special provision are subsidiary.
2. Conditioned soil added to the area to be seeded shall not be paid for directly but will have to be completed in accordance with this special provision. The cost for the Contractor to provide, haul, and mix the organic soil additive shall be considered incidental to items for which the Contract provides direct payment
3. Fertilizer/ Nutrients added to the area to be seeded shall not be paid for directly but will have to be completed in accordance with the soils report.

EROSION CONTROL, CLASS 1E

Section 810 of the Standard Specifications shall be amended to include the following:

B. The work included in this item shall consist of providing an accepted uniform stand of buffer area grasses by fine grading and furnishing and placing fertilizer, seed, and mulch on all areas to be treated as shown on the plans. This shall include, but not be limited to: disking, harrowing, leveling/fine grading, planting, fertilizing, mulching, establishment, and maintenance till acceptance.

PART 1 SUBMITTALS:

A. The Contractor shall submit the following samples, certifications, or test results prior to use on the project:

a) Fertilizer - Form for Affidavit (on official stationery of supplier) certifying compliance with State and Federal regulations and standards of the Association of Official Agricultural Chemists.

b) Seed - Form for Affidavit (on official stationery of supplier) certifying compliance with State and Federal regulations and testing provisions of the Association of Official Seed Analysts for each shipment of seed for this project.

c) Sample and product information on erosion control blankets and hold down pins.

d) Sample and product information on hydromulch.

e) All original seed tags for all bags (and partial bags) of seeds used on the project shall be submitted to the Engineer.

f) Soil test identifying the lawn and garden package values before the seed bed preparation process has been started. Soil report is to include the cation exchange capacity (CEC), levels of phosphorus, potassium, calcium, magnesium and other nutrients, soil PH and soil buffer PH and suggested pounds per Acre recommendations to achieve a prepared soil for seeding on bare ground.

g) Typical desired nutrient levels for the area are; Organic matter 3%, PH 6-7.2, Phosphorus 25-30ppm, Potassium 150-200 ppm.

PART 2 - PRODUCTS

2.01 GENERAL:

All materials furnished in accordance with the requirements of this specification shall be delivered, where applicable, in sealed, unbroken packages bearing the brand and maker's name, and shall be stored on platforms and be properly covered to protect them from the weather and damage.

2.02 FERTILIZER/NUTRIENTS:

Commercial composite fertilizer or nutrients, uniform in composition, dry and free flowing. It shall bear the manufacturer's guaranteed statement of analysis which shall be as designated in the soils report for original fertilization/nutrient modification to the insitu soils. Any fertilizer/nutrients which becomes caked or otherwise damaged, rendering it unsuitable for use, will not be accepted.

2.03 SEED:

A. Acceptable Seed Mixtures: Type “C*” (Buffer Areas)

Buffer Areas – adjacent to wetlands, streambanks, and similar areas

Species	Minimum Purity (percent)	Lbs. of PLS/acre
Canada wildrye – Mandan (see note below)	85	4
Slender wheatgrass	85	5
Thickspike wheatgrass (see note below)	85	4
Western wheatgrass – Barton	85	5
Sand lovegrass – Nebraska-27, native	90	0.5
Big bluestem – Bonanza, Champ, Pawnee, Roundtree	60	3
Prairie cordgrass (Spartina pectinata)	85	0.75
Switchgrass – Nebraska-28, Trailblazer	90	1.25
Indiangrass – Holt, Chief, native	75	2.5
Sideoats grama – Butte (Trailway is suitable in all except Region F and western Region D)	75	3.5
Little bluestem – (Regions A, B, C use Blaze or Camper, Regions D, E, F use Cimarron or Pastura)	60	2.5
Oats or wheat (wheat in the fall)	90	Oats 12 Wheat 19

*(**Canada wildrye** should not be included in Perkins, Chase, Dundy, Hayes, Frontier, Hitchcock, or Red Willow Counties)*

*(**Thickspike wheatgrass** is appropriate in Region D (western portion) and Region F)*

Or Approved Equivalent.

2.05 WATER: Potable.

Verify that prepared soil base is ready to receive work of this Section. Fill all depressions and rivulets with topsoil to establish a smooth grade. Beginning of installation means acceptance of existing site conditions.

2.05 PREPARATION OF TOPSOIL:

D. Conditioned soil:

9. The Contractor shall be responsible for determining the availability of organic soil additive material prior to bidding the project. If there is not sufficient supply of organic soil additive material, the Contractor shall condition the soil by nutrients and fertilizer per the requirements of this specification

10. 2 inches of organic soil additive shall be incorporated into the topsoil as described above.

11. The Contractor shall notify the Engineer five (5) days prior to the start of amended soil activities.

12. Once the Contractor is allowed to use manufactured organic soil, the Contractor shall notify the Engineer five (5) days in advance to schedule pick up of the manufactured organic soil material.
13. The Contractor shall place the conditioned soil in accordance with the Contract Documents.
14. Conditioned soil may be accomplished by mixing the organic soil additive with a stockpile of topsoil material then placing, or by spreading the organic soil additive over replaced topsoil and mixing together in place.
15. Organic soil additive may be spread over undisturbed native soil to a depth of two (2) inches and incorporated into the native soil to a total depth of six (6) inches.
16. Fertilizer shall not be added when using manufactured organic soil.

E. Soil conditioning by nutrients/fertilizer, only if compost is not available.
4. Apply if needed according to recommendations from a soil test
5. Apply 19-19-19 or equivalent nutrients fertilizer at the rate of 450 lbs/AC as a minimum.
6. Incorporate recommended nutrients/fertilizer into the top 4-6 inches of the soil by discing or other means.

F. Seedbed preparation
6. Harrow, disk or rake the topsoil to a depth of three (3") on slopes flatter than 3:1 and one to three (1-3") inches for slopes steeper than 3:1 in a minimum of two directions.
7. When an area is compacted, crusted or hardened, the soil surface shall be loosened by discing, raking, or harrowing.
8. Seed bed preparation should not be undertaken when excessively wet conditions exist.
9. Remove all debris and stones having any dimension greater than one inch.
10. Rake finish surface smooth

2.06 RATE OF APPLICATION:

A. Initial Fertilizing: Application rate shall be obtained from the required soils report.
B. 15-20 pounds per Acre.
C. Refertilizing: As required by the engineer if the establishment is not as required to complete the seeding.

2.07 SEEDING:

E. Drill seed or sow (broadcast) grass seed, applying half the quantity in one direction, and the remaining quantity at right angles to it.
F. Do not sow seed on a windy day, or when the ground is frozen, wet or otherwise non-tillable.
G. Cover seed with a thin layer of topsoil by raking or dragging.

H. Cover newly seeded area with hydromulch or erosion control blankets. Hydromulch or erosion control blankets shall be applied within twenty four (24) hours after planting seed.

E. Install erosion control blankets where shown on the Drawing(s) and as per manufacturer's instructions. Hold down pins shall be installed two (2) pins per square yard.

2.08 SEEDING SEASON:

A. The suggested calendar dates for seeding are:

Spring:	March 15 to June 1.
Fall:	August 15 to October 1.

G. All disturbed soil areas shall be treated during the seeding season.

H. Areas at final grade: Permanent seeding will be accomplished

2.09 MAINTENANCE:

A. To achieve better germination of seed, the Contractor may water the seeded areas in order to maintain a moist seed bed at all times. If the Contractor chooses to water the seeded areas, water should be applied so that the topsoil is wet to a depth of two inches. Apply one complete coverage to the seeded area in an eight-hour period.

B. Protect the seed bed with barricades, if necessary, to keep all traffic off the area.

C. After the seed mixture has germinated, reseed all areas which have failed to show a uniform stand of germinated seed.

D. Maintain all seeded areas until acceptance. Suggested maintenance items shall include, but not be limited to any or all of the following, whichever are necessary:

1. Regrading.
2. Refertilizing.
3. Reseeding.
4. Re-Hydromulching or repositioning or replacing erosion control blankets.
5. Watering.
6. Weeding.
7. Rolling.
8. Filling in eroded areas.

2.10 INSPECTION AND ACCEPTANCE OF SEEDED AREAS:

A. Submit written notice requesting inspection by the Engineer at least ten days prior to the anticipated date.

B. No seeded areas will be inspected for acceptance prior to sixty (60) days from date of

seeding.

I. A satisfactory stand of grass which is acceptable is defined as consisting of a uniform stand of at least eighty-five percent (85%) established permanent grass species. An acceptable stand of grass will be determined by the Engineer.

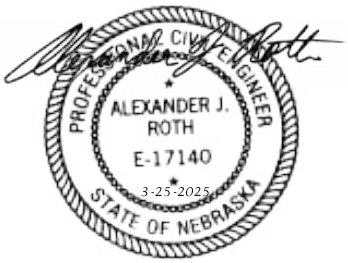
J. Appropriate materials to be furnished and installed by the contractor for Erosion Control Class 1E can be obtained from the NDOT approved products list.

K. Other items required to be furnished and installed before payment are; testing, soil conditioning with fertilization/nutrients, conditioned soil, seed bed preparation, and seeding will all be incidental to the direct pay items for erosion control

1. Soil Test required by this special provision are subsidiary.
2. Conditioned soil added to the area to be seeded shall not be paid for directly but will have to be completed in accordance with this special provision. The cost for the Contractor to provide, haul, and mix the organic soil additive shall be considered incidental to items for which the Contract provides direct payment
3. Fertilizer/ Nutrients added to the area to be seeded shall not be paid for directly but will have to be completed in accordance with the soils report.

APPENDIX A – CITY OF LINCOLN, NEBRASKA STANDARD SPECIFICATIONS

CHAPTER 20 – CONSTRUCTION FOR UTILITIES AND STRUCTURES
CHAPTER 22 – SANITARY SEWERS
WATER MAIN AND SANITARY/STORM SEPARATIONS (2023) GUIDANCE FROM NDEE.



NEBRASKA
Good Life. Great Resources.
DEPT. OF ENVIRONMENT AND ENERGY

Jim Pillen. Governor

3/20/2025

Michael Oneby
City of Seward, Nebraska
142 N. 7th Street
Seward, NE 68434

RE: PERMIT TRACKING NUMBER: CSW-202509446
Issuance of storm water discharge authorization for the Seward - Worthman Boulevard Extension construction project located at Seward Rail Campus in Seward, NE.

Dear Michael Oneby:

This is to acknowledge receipt of the CSW-NOI form on 3/18/2025, for the project referenced above. This project has authorization to discharge storm water under the terms and conditions of NPDES General Permit NER210000. Please review the entire permit to ensure compliance.

When final stabilization (Part I.C.5.d of the permit) has been completed, login and access the storm water portal to submit Notice of Termination form.

Local jurisdiction requirements may apply.

For Lincoln, contact the City of Lincoln Watershed Management Division via email at NPDES@lincoln.ne.gov; by phone at (402) 309-5936, or go to lincoln.ne.gov and reference keyword "NOI".
For Omaha, contact James Kee at (402) 444-3915 for grading permit requirements.

Portal can be located at: NDEE Website

If you have any questions concerning this NPDES storm water discharge authorization, please contact our office at (402) 471-8330.

Sincerely,

Emma Lichtenfeld, Environmental Specialist
NPDES and State Permits Section
Nebraska Department of Environment and Energy

Department of Environment and Energy
P.O. Box 98922
Lincoln, Nebraska 68509-8922

OFFICE 402-471-2186 FAX 402-471-2909
ndee.moreinfo@nebraska.gov

CITY OF LINCOLN, NEBRASKA, STANDARD SPECIFICATIONS

CHAPTER 20

CONSTRUCTION FOR UTILITIES AND STRUCTURES

CITY OF LINCOLN, NEBRASKA, STANDARD SPECIFICATIONS

CHAPTER 20

CONSTRUCTION FOR UTILITIES AND STRUCTURES

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CONSTRUCTION FOR UTILITIES AND STRUCTURES

20.00 GENERAL

Construction for utilities and structures shall include the excavation and backfill of all materials necessary to complete the Work in conformance with the plans and these Standard Specifications; all necessary sheeting, shoring and bracing; and any pumping that may be necessary to keep the trench free from water. Construction for utilities and structures shall also include the removal and replacement of pavement, driveways and sidewalks; disposal of surplus materials, borrow, maintenance and protection of excavation, and the restoration of all surfaces to a satisfactory condition.

These Standard Specifications shall apply to all utility and structure work regardless of the type of Work being performed.

20.01 MATERIALS

The following materials are approved for use in the City of Lincoln pursuant to the Standard Specifications described herein. Alternate materials maybe requested in writing to the Director of Public Works and Utilities.

A. SMOOTH STEEL PIPE CASING

Smooth steel pipe used for encasement shall be of the diameter, length, and wall thickness shown on the Plans. The encasement shall be new welded steel pipe conforming to ASTM Designation A 139, Grade B. All joints shall be welded.

B. CORRUGATED METAL PIPE

Corrugated metal pipe used for encasement shall be copper steel galvanized and shall conform to the requirements of AASHTO “Standard Specifications for Corrugated Metal Culvert Pipe”, Designation M-36, and shall be of the diameter, length and gauge as shown on the Plans.

C. FOUNDATION

Foundation material shall conform to the requirements of ASTM “Standard Specifications for Concrete Aggregates”, Designation C-33. The gradation for foundation material shall be size Number 357 (2" to #4).

D. BEDDING

For Lincoln Water System and Lincoln Wastewater System projects, bedding material shall be a well graded “crusher run” crushed rock with a percent passing gradation range of 1" - 100, #4 - 20 to 60, #10 - 0 to 30 and #200 - 0 to 10, unless otherwise designated on the plans or Special Provisions or approved by the City’s Project Manager.

For Lincoln Watershed Management projects, limestone rock and crushed concrete will also be permitted, provided that the gradation range requirements listed above are satisfied.

20.01 MATERIALS (Continued)

E. GROUT

The grout shall be mixed in the volumetric proportions of 2 parts Portland cement, 1 part fly ash, and not to exceed 6 parts sand. Enough water shall be used to produce a pumpable grout.

F. FLOWABLE FILL

Flowable fill material shall meet the requirements of Chapter 3 of these Standard Specifications.

20.02 EARTHWORK

A. CLEARING AND GRUBBING

Clearing and grubbing shall be accomplished as provided in Chapter 2 of these Standard Specifications.

B. TREE REMOVAL

The removal of trees and stumps shall be accomplished as provided in Chapter 2 of these Standard Specifications.

C. EXCAVATION

In general, all excavation shall be made by open cut from the surface of the ground and at the width and to the depth necessary for the proper construction of the utility and its appurtenances, according to the plans and these Standard Specifications. The Work shall be performed in conformance with Occupational Safety and Health requirements. Nothing contained in these Standard Specifications or Contract Documents shall relieve the Contractor from complying with any Local, State, or Federal safety requirements. The Work shall be performed within the limits of construction as shown on the plans. All necessary precautions must be made to prevent slides and cave-ins. Bracing or sheeting, shall be provided to maintain the sides and bottom of the trench in unstable material.

The excavated material shall be handled in such a manner as to cause a minimum of inconvenience to public travel and to permit safe and convenient access to public and private property along the line of Work. If a utility excavation is to remain open overnight in the built environment, all material (spoil) excavated, shall be properly covered and protected. If the excavation is to remain open for more than five (5) business days, all excavated material shall be removed from the job site. If excavating and backfilling on the same day, all unsuitable material (spoil) shall not be used for backfill. It shall be the Contractor's responsibility to secure the necessary permission and make all necessary arrangements for all required storage, borrow, and disposal sites.

Access shall be provided at all times to fire hydrants and water valves in the vicinity of the Work and firefighting equipment shall have access to any structure at all times. Trenches shall not be opened more than 100' in advance of the installed utility or as directed by the City's Project Manager. All trenches shall be backfilled as soon as practical after the pipe is in place, or as ordered by the City's Project Manager. Unless otherwise specified or authorized by the City's Project Manager, all excavated material shall be placed on the street side of the trench.

C. EXCAVATION (Continued)

Holes for pipe bells shall be provided at each joint, but shall be no larger than necessary for joint assembly and assurance that the pipe barrel will lie flat on the trench bottom. Other than the bell holes, the trench bottom shall be true and even in order to provide support for the full length of the pipe barrel.

Excavation below subgrade with subsequent refilling with loose earth will not be permitted. Should the Contractor inadvertently excavate below subgrade, such over excavation shall be filled and brought up to grade with compacted soil, crushed rock, or sand or gravel as approved by the City's Project Manager.

The width of the utility trench at the top of the pipe shall be no greater than the width specified in the standard bedding details. Excessive trench width may be cause for providing a higher class bedding at no cost to the City. The width of excavation for utility lines 6" or greater in diameter shall be a minimum of 3'. In no case shall the excavation be less than 2' greater than the outside diameter of the pipe or the outside dimensions of the structure to be built. The bottom of all excavations shall be finished to the true profile grade, of full width, and cleared of any rocks, clods, roots, or other material that may interfere with properly placing the pipe or structure.

No measurement or direct payment will be made for any excavation required as part of the Work. The costs of excavation will be considered subsidiary to other items for which direct payment is made.

D. BACKFILL

Backfilling and compaction of excavations shall follow as closely after the construction as possible. All excavations shall be backfilled with approved material up to the original surface of the ground unless otherwise indicated on the plan. No backfill shall be made with material containing stone, large clods, frozen earth or debris of any kind. The backfill shall be placed in loose lifts not to exceed the thickness required to attain 12" thick compacted layers or as noted in a geotechnical report signed and sealed by an Engineer registered in the State of Nebraska.

Backfilling shall not be done in freezing weather, except by permission of the City's Project Manager, nor shall any fill be made where the material already in the trench is frozen. If construction proceeds at any time when frozen material is encountered and frozen material is placed in the trench line, all such trenches shall be re-compacted in the spring after frost conditions are no longer present in the ground. This re-compaction of the trench shall include the removal of all material to a depth of 12" below the depth of the frozen material and the replacement and re-compaction of the trench to the proper grade with suitable material.

Care shall be exercised in backfilling so as not to damage any finished Work. The backfill shall be brought up evenly on both sides of the utility or structure.

Backfilling against any concrete structure shall not be started until test specimens of the concrete develop a compressive strength of at least 2000psi.

Unless otherwise directed by the City's Project Manager, compaction of backfill within 3' of all structures and utility appurtenances, including but not limited to, valves, hydrants, manholes, and inlets, shall be accomplished by mechanical compaction using hand operated tampers, rammers, or other approved devices for the soil type(s) encountered.

D. BACKFILL (Continued)

Jetting or hydro-flushing of the backfill shall not be permitted. Care shall be taken to ensure that the utility is properly bedded with material of an approved density or in conformance with these Standard Specifications. The initial 12" of backfill above the top of the pipe shall be carefully placed to protect the pipe bedding from further backfilling operations.

Backfill shall be mechanically compacted to a minimum density of 96% of the maximum dry density of the material as determined by AASHTO Method T-99. The moisture content of the soils shall be between 2% below and 4% above the optimum moisture content as determined by the above test.

When the moisture content of the material is too low to obtain specified density, sufficient water shall be added to the material and/or lift thickness shall be decreased before compaction.

After backfilling, the Work area shall be kept maintained in a smooth and well drained condition.

E. BASIS OF PAYMENT

No measurement or direct payment will be made for any backfilling or compaction required as a part of this Work. The costs of backfilling and compaction will be considered subsidiary to other items for which direct payment is made. When directed by the City's Project Manager, additional water shall be mixed in with backfill materials to allow compaction to be completed. Such water quantities shall be paid as an "EXTRA WORK" item. Lincoln Water System hydrant meter readings immediately before/after the addition of water shall establish the volume of water used.

F. MAINTENANCE AND PROTECTION OF EXCAVATIONS

Temporary support, adequate protection and maintenance of all underground and surface utilities, structures, drains, sewers, and other obstructions encountered in the progress of the Work shall be furnished by the Contractor at Contractor's own expense. Contractor shall take all reasonable precautions to prevent movement of the sides of such excavations. The Contractor shall protect all excavations from surface water by the construction of adequate dikes. The Contractor shall furnish and put in place such sheeting and bracing as may be required to support the sides of the excavations and the Contractor shall remove such sheeting and bracing as the trenches or excavations are filled. The City's Project Manager may order the sheeting be left in place if, in the City's Project Manager's opinion, the utility or structure might be damaged by its being removed.

In lieu of sheeting and bracing, the Contractor may use a trench box of adequate design during the construction of the utility to protect the utility and all personnel.

The Contractor shall satisfy the City's Project Manager that the proposed methods of bedding and foundation material placement is in compliance with the requirements of the Standard Drawings for pipe bedding details when the trench box is moved. The Contractor shall protect the integrity of the pipe embedment zone when utilizing or moving the trench box.

F. MAINTENANCE AND PROTECTION OF EXCAVATIONS (Continued)

No measurement or direct payment shall be made for maintenance and protection of excavations, except for sheeting left in place as required above. Payment for sheeting left in place shall be made as an "EXTRA WORK" item. Such payment shall be the value of the sheeting minus the cost of removal. The cost of maintaining and protecting excavations shall be considered subsidiary to the other items for which direct payment is made.

G. DISPOSAL OF SURPLUS MATERIAL

The Contractor shall dispose of all surplus excavated material not needed for fills or other designated purposes. All material deemed unsuitable by the City's Project Manager shall be disposed of properly and replaced with approved material.

No measurement or direct payment shall be made for disposal or stock piling surplus materials. The costs of disposal or stock piling surplus materials shall be considered subsidiary to the other items for which direct payment is made.

All material deemed unsuitable by the City's Project Manager and required to be removed from the job site, as well as approved replacement material not readily available at the job site, shall be measured and paid for as an "EXTRA WORK" item.

H. SOIL EROSION CONTROL

Soil Erosion Control shall be accomplished as provided in Chapter 32 of these Standard Specifications.

20.03 UTILITY ALIGNMENT AND GRADE

Prior to excavation, investigation shall be made to the extent necessary to determine the location of underground structures and utilities. Care shall be exercised by the Contractor during excavation to avoid damage to existing structures or utilities. Where shown on the plans, or as requested by the City's Project Manager, the Contractor shall make such excavation as may be necessary to ascertain the vertical and horizontal location of existing utilities.

The utilities and structures shall be constructed and maintained to the lines and grades established by the plans and Standard Specifications. When crossing existing utilities or other structures, alignment and grade may be adjusted by the City's Project Manager to provide clearance as required or deemed necessary to maintain minimum clearance, or to prevent future damage or contamination of either utilities or structures.

20.04 GROUND WATER

The Contractor is required to follow proper dewatering (e.g. includes sediment bags or use of sediment basins) to avoid eroding the soil on the construction site. Best management practices must be followed when water is being pumped to lakes, wetlands or directly to storm sewer inlets. When selecting discharge areas from a dewatering process, the Contractor shall not permit the water to be pumped directly into slopes, if available, dewatering activities should be directed to a vegetated area such as a well-established grassed area.

The Contractor shall discontinue dewatering if the area being discharged to shows signs of instability or erosion. If utilizing channels, the Contractor must ensure they are stable and protected with grass or vegetation. The Contractor shall avoid dewatering during heavy rain conditions. The Contractor shall never discharge water that has been contaminated with oil, grease, or chemical products, as these would need to be collected and disposed of properly and legally.

The Contractor shall provide and maintain adequate equipment to remove and dispose of ground water entering the excavations, trenches, or other parts of the Work. Each excavation shall be kept dry during subgrade preparation and continually thereafter until the structure to be built, or the pipe to be installed therein, is completed to the extent that no damage from hydrostatic pressure, flotation or other cause will result.

All excavations for concrete structures or trenches which extend down to or below ground water shall be dewatered by lowering and keeping the ground water below the bottom of the pipe or as required to maintain a stable foundation.

The Contractor will be held responsible for the condition of any existing storm sewer system which may be used for drainage purposes on this contract, and all storm sewers shall be left clean and free of sediment. The Contractor shall not pump or drain any ground water or surface runoff into any part of the sanitary sewer system.

No measurement or direct payment shall be made for removal and disposal of ground water unless otherwise provided in the proposal or Special Provisions. The costs of removal and disposal of ground water shall be considered subsidiary to the other items of Work for which direct payment is made.

20.05 FOUNDATION AND BEDDING

A. GENERAL

Foundation and bedding materials shall meet the requirements of these Standard Specifications.

Foundation materials generally will be required where unstable soil conditions exist at the bottom of the trench. Foundation material shall be placed to the satisfaction of the City's Project Manager.

Bedding material shall be placed and compacted as called for on the plans. After the pipe has been properly placed to grade and line on the initial bedding course, additional bedding material shall be placed in 6" lifts and thoroughly settled by mechanical compaction in order to fill all voids below, around and above the top of the pipe as shown on the Standard Plans details for pipe bedding.

B. BASIS OF PAYMENT

Foundation material when placed in conformance with these Standard Specifications as directed by the City's Project Manager shall be paid as an "EXTRA WORK" item. Weight tickets for material installed shall be submitted prior to any payment for this "EXTRA WORK" item. This "EXTRA WORK" payment shall be full compensation for furnishing all materials, installation, labor, equipment, tools and incidentals necessary to create a stable foundation.

No measurement or direct payment shall be made for bedding material, except that all weight tickets for bedding material shall be submitted prior to any payment for pipe being installed. The cost of bedding materials, in the appropriate classes for the type of pipe material utilized, as shown on the drawings or for the structures constructed, shall be considered subsidiary to the other items of Work for which direct payment is made.

20.06 HORIZONTAL DIRECTIONAL DRILLING

A. GENERAL

Horizontal directional drilling (HDD) is a trenchless excavation method which is accomplished in three phases. The first phase consists of drilling a small diameter pilot hole along a designed directional path. The second phase consists of enlarging the pilot hole to a diameter suitable for installation of the pipe. The third phase consists of pulling the pipe into the enlarged hole. The Contractor shall furnish all labor, materials, tools, equipment, drilling fluids, and other items as necessary for a complete and functional installation as required, to the lines and grades shown on the Plans and as specified.

B. SUBMITTALS

1. Shop drawings, catalog data, and manufacturer's technical data showing complete information on material composition, physical properties, and dimensions of new pipe, fittings and drilling fluids. Include manufacturer's recommendation for handling, storage, and repair of pipe and fittings damaged.

2. The proposed phasing and schedule of the Work including location of launching and receiving pits, services affected, length of pipe effected during each phase, and proposed traffic disruptions. The phasing and schedule of the Work must be approved by the City's Project Manager prior to Work starting.

3. The proposed methods for monitoring, prevention, containment, and clean-up of drilling fluid surface returns at unauthorized locations.

4. The tabulation of pilot hole survey coordinates.

5. Written record of the installation pullback loads on the utility during the installation process.

6. Plan and profile drawings of the documented as-built location of the installed utility.

C. MATERIALS

1. Water main installed by HDD shall use Certa-Lok C900 RJ, Class 200 DR 14 pipe as manufactured by Certainteed, or approved equal. Pipe material other than Certa-Lok must be approved prior to ordering. Restrained joint pipe shall also meet all performance requirements of AWWA C900.

2. The Contractor shall at all times provide and maintain instrumentation which will accurately locate the pilot hole, measure drill string axial and torsional loads, and measure drilling fluid discharge rate and pressure. The City's Project Manager shall have access to these instruments and their readings at all times. A log of all recorded readings shall be maintained by the Contractor and will become a part of the Project Record Documents supplied by Contractor. Instrumentation systems shall be calibrated immediately prior to beginning the work.

3. The Drilling Fluid System shall be capable of mixing and delivering the drilling fluid to the drill head or the reamer in the volumes and pressures required. Contractor shall maximize recirculation of drilling fluid surface returns. Contractor shall provide solids control and fluid cleaning equipment of a configuration and capacity that can process surface returns and produce drilling fluid suitable for reuse.

4. The Drilling Fluid shall be used as required during the installation of the pilot hole, enlarging of the pilot hole, and installation of the water pipe. No drilling fluid will be accepted or utilized that does not comply with permit requirements and environmental regulations.

5. Drill Pipe (drill stem) shall be of sufficient size and strength to resist all installation loadings including tensile, compressive, bending, and torsional loads. An appropriate safety factor shall be used by the Contractor in sizing the drill pipe.

6. Drill Head configuration shall be as selected by Contractor and compatible with requirements for location system.

7. Reamer and Swivels shall be as selected by Contractor. Reamer and swivel assembly shall be capable of enlarging borehole while preventing damage due to rotation of the pipe during its pullback into its final position.

D. INSTALLATION

1. BORING OF THE PILOT HOLE

Install pilot hole using steerable drilling head. Pilot hole shall be drilled along the path shown on the Drawings to the tolerances listed herein. Listing of tolerances shall not relieve Contractor from responsibility for safe operations or damage to adjacent utilities and structures.

Monitor location of drill head as required to install pilot hole to indicated lines and grades, but in no instance shall the interval between locating the drilling head exceed 15' in length along the alignment.

Use drilling fluids as required to lubricate and support the pilot hole excavation.

Pilot hole shall be free from abrupt changes in line or grade that could result in unacceptably high loadings on the drill pipe or the water pipe during installation.

After completion of pilot hole drilling, Contractor shall provide a tabulation of coordinates, referenced to the drilled entry point, which accurately describe the location of the pilot hole. This tabulation shall be in addition to the log of recorded readings required.

2. PRE-REAMING OF THE PILOT HOLE

Subsequent to the City's Project Manager's acceptance of pilot hole, Contractor may, at his option, pre-ream the pilot hole as necessary for installation of the water pipe.

Pre-reaming operations shall be conducted at the discretion of the Contractor. Contractor shall insure that a hole sufficient to accommodate the pull section of water pipe has been produced. Any damage to the water pipe resulting from inadequate pre-reaming shall be the responsibility of the Contractor. All provisions of this Specification relating to simultaneous reaming and pulling back operations shall also pertain to pre-reaming operations.

Use drilling fluids as required to lubricate and to support the reamed pilot hole.

Use of pre-reaming shall be at the option of the Contractor; however, lack of pre-reaming shall not result in excessive installation loads on the water pipe.

3. REAMING AND PULLBACK OF THE MAIN

Contractor shall utilize a reamer to enlarge the pilot hole to sufficient size for installation of the main without imposing excessive installation loadings on the water pipe.

Grippers used on the water pipe shall not damage adjacent sections of the pipe. Sections of the pipe utilized by the grippers shall be removed from the pipe after installation.

Contractor shall handle and support the pull section of water pipe so as to prevent damage and minimize pullback forces. Pull section of water pipe shall be supported as it proceeds during pull back so that it moves freely and the pipe is not damaged.

D. INSTALLATION (Continued)

Contractor shall use drilling fluids as required to lubricate and support the reamed pilot hole, lubricate installation of the water pipe, and completely fill all overcut of the reamed pilot hole.

The pull section of water pipe shall be installed in the reamed hole in such a manner that external pressures are minimized and an appropriate counter-balancing internal pressure is maintained. Any damage to the pipe resulting from external pressure during installation shall be the responsibility of Contractor. The pipe shall be filled with water as it enters the ground to ensure that adequate internal pressure is maintained at all points to counter balance external collapse pressures. Contractor shall submit pipe filling procedure proposed for use to the City's Project Manager for review and acceptance.

Contractor shall continuously monitor the pulling loads imposed upon the water pipe. The maximum allowable tensile load imposed on the water pipe shall not exceed the recommendations of the pipe manufacturer. Contractor shall take all required measures necessary to prevent installation loads on the water pipe from exceeding those recommended by the pipe manufacturer. If necessary, Contractor shall at his own expense, stop the pullback of the water pipe, remove the section of pipe installed within the enlarged pilot hole, and pre-ream the pilot hole as required to allow installation of the water pipe without exceeding the allowable pullback forces.

After the installation, Contractor shall determine and log the installed location and depth of the water pipe. Contractor shall submit to the City's Project Manager a drawing detailing the installed location of the water pipe in both plan and profile view.

E. REJECTION

1. If the pilot hole is rejected by the City's Project Manager, the Contractor shall, at his own expense, backfill the rejected pilot hole with bentonite, and install a pilot hole acceptable to the City's Project Manager.

2. Monitoring records indicate that pullback loads exerted on pipe exceeded the loadings recommended by pipe manufacturer.

3. Installation outside of the allowable tolerances.

F. TOLERANCES

Tolerances for the pilot hole and the installed water pipe shall be as listed below.

1. For vertical tolerance, the water pipe shall be installed at the grade indicated on the plans. Minor deviations from the grade indicated on the plans may be allowed, provided that:

   a. The soil cover above the top of the water pipe shall not be less than shown on the drawings.

   b. Except at crossings under water courses, the water pipe shall maintain downward slope towards all blowoff points to provide for positive drainage of the water pipe.

   c. The water pipe shall maintain upward slope towards all venting points to provide for positive venting and air release from the water pipe.

F. TOLERANCES (Continued)

2. For horizontal tolerance, the water pipe shall be installed at the locations indicated on the plans. Minor deviations from the locations indicated on the plans may be allowed, provided that:

   a. The horizontal deviation of the water pipe from the location required on the drawings shall not exceed one (1) foot at any location along the water pipe without prior authorization of the City's Project Manager.

   b. The horizontal deviation shall not cause the water pipe to interfere with existing structures, utilities, or result in any part of the finished work being installed outside of the permanent easements.

G. CLEAN UP AND DISPOSAL OF MATERIALS

1. Contractor shall remove all construction debris and spoil material and dispose of it at an acceptable location.

2. Drilling fluid shall be removed from pits and then the pits backfilled as required.

3. Disposal of excess drilling fluids shall be the responsibility of the Contractor and shall be conducted in compliance with all environmental regulations, right-of-way and workspace agreements, and permit requirements. Disposal of drilling fluids shall not be allowed on the project site.

4. Contractor shall employ his best efforts to maintain full annular circulation of drilling fluids. Drilling fluid returns at location other than the entry and exit points shall be minimized. In the event that annular circulation is lost, Contractor shall take steps to restore circulation. If inadvertent surface returns of drilling fluids occur, they shall be immediately contained as required and collected. If the amount of the surface return is not great enough to allow practical collection, the affected area shall be diluted with fresh water and the fluid will be allowed to dry and dissipate naturally. If the amount of the surface return exceeds that which can be contained and collected using practical methods, drilling operations shall be suspended until surface return volumes can be brought under control.

H. BASIS OF PAYMENT

Directional Drilling for carrier pipes completed in conformance with these Specifications and accepted by the City's Project Manager shall be measured and paid for at the contract unit price bid per linear foot for DIRECTIONAL DRILLING FOR __" WATER MAIN, for each size and type called for in the Contract Documents. Such payment shall be full compensation for all materials, equipment, tools, labor and incidentals necessary to produce the directional drill and install the carrier pipe as required in the Contract Documents.

20.07 CONCRETE AND REINFORCING STEEL FOR STORM DRAINAGE

A. GENERAL

When called for on the plans, the Contractor shall construct reinforced concrete collars, elbows, plugs and headwalls for storm drainage at the locations indicated. The collars, elbows, plugs and headwalls shall conform to the details shown in the Lincoln Standard Plans.

B. BASIS OF PAYMENT

When called for in the proposal, concrete for storm water collars, elbows, plugs and headwalls placed in conformance to these Standard Specifications and accepted by the City's Project Manager shall be paid for at the contract unit price bid per cubic yard for CONCRETE FOR COLLARS, ELBOWS, PLUGS AND HEADWALLS, IN PLACE. The concrete shall not be measured separately for payment, but the quantities shall be established based upon the volume of concrete required for the Design Section, unless otherwise specified. Such payment shall be full compensation for all mixing, hauling, forming, placing, jointing, curing, finishing, excavation, backfill, materials, equipment, tools, labor, and incidentals necessary to complete the structure.

When called for in the proposal, payment for reinforcing steel for collars, elbows, plugs and headwalls placed in conformance with these Standard Specifications and accepted by the City's Project Manager shall be made at the contract unit price bid per pound for REINFORCING STEEL FOR COLLARS, ELBOWS, PLUGS AND HEADWALLS, IN PLACE. The reinforcing steel shall not be measured separately for payment, but the quantities shall be established based upon weight of steel required for the Design Section, unless otherwise specified. Such payment shall be full compensation for all placing, tying, chairs, materials, equipment, tools, labor, and incidentals necessary to place the steel in the proper locations in conformance with the plans.

20.08 CONCRETE AND REINFORCING STEEL FOR SANITARY SEWER

A. GENERAL

When called for on the plans, the Contractor shall construct reinforced concrete plugs and collars for sanitary sewer at the locations indicated. The plugs and collars shall conform to the details shown in the Lincoln Standard Plans.

B. BASIS OF PAYMENT

When called for in the proposal, concrete for sanitary sewer plugs and collars placed in conformance to these Standard Specifications and accepted by the City's Project Manager shall be paid for at the contract unit price bid per cubic yard for CONCRETE FOR PLUGS AND COLLARS, IN PLACE. The concrete shall not be measured separately for payment, but the quantities shall be established based upon the volume of concrete required for the Design Section, unless otherwise specified. Such payment shall be full compensation for all mixing, hauling, forming, placing, jointing, curing, finishing, excavation, backfill, materials, equipment, tools, labor, and incidentals necessary to complete the structure.

20.08 CONCRETE AND REINFORCING STEEL FOR SANITARY SEWER (Continued)

B. BASIS OF PAYMENT (Continued)

When called for in the proposal, payment for reinforcing steel for sanitary sewer plugs and collars placed in conformance with these Standard Specifications and accepted by the City's Project Manager shall be made at the contract unit price bid per pound for REINFORCING STEEL FOR PLUGS AND COLLARS, IN PLACE. The reinforcing steel shall not be measured separately for payment, but the quantities shall be established based upon weight of steel required for the Design Section, unless otherwise specified. Such payment shall be full compensation for all placing, tying, chairs, materials, equipment, tools, labor, and incidentals necessary to place the steel in the proper locations in conformance with the plans.

20.09 CONCRETE AND REINFORCING STEEL FOR WATER MAIN

A. GENERAL

When called for on the plans, the Contractor shall construct reinforced concrete thrust collars, thrust blocks, anchorages, gravity blocks, tee blocks and plug blocks for water main at the locations indicated. The thrust blocks, anchorages, tee blocks and plug blocks shall conform to the details shown in the Lincoln Standard Plans.

Concrete shall be L3500 conforming to Chapter 3 of these Standard Specifications. Reinforcing steel shall conform to "Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement" ASTM Designation A615, Grade 40 or 60, or "Standard Specification Axle-Steel Deformed and Plain Bars for Concrete Reinforcement" ASTM Designation A617, Grade 60.

B. BASIS OF PAYMENT

When called for in the proposal, concrete for water main thrust collars, thrust blocks, anchorages, gravity blocks, tee blocks and plug blocks placed in conformance to these Standard Specifications and accepted by the City's Project Manager shall be paid for at the contract unit price bid per cubic yard for CONCRETE FOR COLLARS, BLOCKS AND ANCHORAGES, IN PLACE. The concrete shall not be measured separately for payment, but the quantities shall be established based upon the volume of concrete required for the Design Section, unless otherwise specified. Such payment shall be full compensation for all mixing, hauling, forming, placing, jointing, curing, finishing, excavation, backfill, materials, equipment, tools, labor, and incidentals necessary to complete the structure.

When called for in the proposal, payment for reinforcing steel for water main thrust collars, thrust blocks, anchorages, gravity blocks, tee blocks and plug blocks placed in conformance with these Standard Specifications and accepted by the City's Project Manager shall be made at the contract unit price bid per pound for REINFORCING STEEL FOR COLLARS, BLOCKS AND ANCHORAGES, IN PLACE. The reinforcing steel shall not be measured separately for payment, but the quantities shall be established based upon weight of steel required for the Design Section, unless otherwise specified. Such payment shall be full compensation for all placing, tying, chairs, materials, equipment, tools, labor, and incidentals necessary to place the steel in the proper locations in conformance with the plans.

20.10 PAVEMENT CONSTRUCTION AND RECONSTRUCTION

Pavement reconstruction and miscellaneous masonry reconstruction shall be accomplished in conformance as described in these Standard Specifications.

20.11 FINAL CLEANUP

A. GRAVEL OR ROCK ROADWAY SURFACE

Where the Work of the Contract crosses or is parallel to any unpaved roadway and where the roadway surface is affected in any way by operations under the contract, the Contractor shall repair and restore the same to at least its original condition. Such restoration shall include, but not be limited to, regrading ditches and roadway surface, restoration of culverts and drives, and placement of rock or gravel surfacing as directed by the City's Project Manager.

The cost of regrading ditches, roadway surfaces, and drives shall not be paid for directly but shall be considered subsidiary to other items of Work for which direct payment is made.

Culverts required to be removed and re-laid shall be measured and paid for as provided in Chapter 21 of these Standard Specifications. Crushed rock or gravel surfacing shall be measured and paid for as provided in Chapter 9 of these Standard Specifications.

B. FINAL CLEANUP AND PARKING SPACE FINISH

When all other Work has been completed, the Contractor shall thoroughly clean all pavement, parking spaces, sidewalks, rights-of-way, storage areas, access roads, and private property of all earth and other debris by use of approved equipment. All pavement, parking spaces, sod, sidewalks, storage areas, access roads and private property shall be restored to a condition at least equal to that existing prior to any operations under this Contract.

No measure or direct payment shall be made for cleanup or parking space finish. The costs of cleanup and parking space finish shall be considered subsidiary to other items for which direct payment is made.

C. SODDING AND SEEDING

Sodding and seeding shall be accomplished as provided in Chapter 30 of these Standard Specifications.

20.12 COLD WEATHER CONSTRUCTION

A. LIMITS OF CONSTRUCTION

Work to be performed in developed areas, or Work affecting the operation, capacity, and safety of arterial and collector streets, between December 1 and March 15, shall be limited by the following provisions:

1. A maximum of 650 linear feet within the limits of the project may be under construction at one time.

2. A maximum of 2 intersections may be closed at one time within project limits, even though the third intersection may not violate the 650' limit described in Paragraph 1 above.

3. "Under Construction" shall include all operations which disrupt or limit the use of public facilities, such as pavement removal, sidewalk removal, excavation, backfilling, pipe laying, material storage, equipment storage, and/or any other operation deemed by the City's Project Manager as a disruption of normal ingress and egress to the public right- of-way within project limits.

20.12 COLD WEATHER CONSTRUCTION (Continued)

A. LIMITS OF CONSTRUCTION (Continued)

4. Temporary restoration will be required to reduce long-term disruptions and inconvenience during construction. 2 weeks after beginning Work in an area, the City's Project Manager shall require temporary restoration of facilities by the Contractor. The entire cost of installation, maintenance, and removal of such temporary installations shall be the Contractor's responsibility.

B. SUSPENSION OF WORK

Suspension of Work during the winter construction period, December 1 to March 15, may be requested by the Contractor under the following conditions:

1. The request must be made in writing to the City's Project Manager and shall include the beginning date and duration. If Work is to be resumed prior to expiration of time requested, 48 hours written notice of such intent will be required.

2. The Contractor shall be required to restore all vehicular and pedestrian facilities to full use by either permanent or temporary restoration before the suspension period will become effective.

3. Calendar days included in the period that Work is actually suspended shall be counted from the effective suspension date, and the governing completion date shall be adjusted accordingly.

In no case shall a granted suspension of Work be cause for requesting or granting additional calendar days for completion of this Contract.

The City's Project Manager shall state to the Contractor, in writing, the effective suspension date and the date on which the suspension expires.

In addition, following the suspension period, the City's Project Manager shall notify the Contractor, in writing, of the new completion date of the Contract as provided above.

20.13 SUBSTANTIAL COMPLETION

Refer to Chapters 21 through 23 for a specific definition of Substantial Completion for each type of utility Work.

20.14 FINAL ACCEPTANCE

Refer to Chapters 21 through 23 for a specific definition of Final Acceptance for each type of utility Work.

20.15 GUARANTEE

Refer to Chapters 21 through 23 for a specific definition of guarantee for each type of utility Work.

CITY OF LINCOLN, NEBRASKA, STANDARD SPECIFICATIONS

CHAPTER 22

SANITARY SEWERS

CITY OF LINCOLN, NEBRASKA, STANDARD SPECIFICATIONS

CHAPTER 22

SANITARY SEWERS

CHAPTER 22

SANITARY SEWERS

22.00 GENERAL

The Work covered in this chapter shall include the installation of sanitary sewers and their appurtenances.

A. REFERENCED STANDARDS

1. ASTM A48/48M – Standard Specification for Gray Iron Castings
2. ASTM C76 – Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe
3. ASTM C361 – Standard Specification for Reinforced Concrete Low-Head Pressure Pipe
4. ASTM C425 – Standard Specification for Compression Joints for Vitrified Clay Pipe and Fittings
5. ASTM C443 – Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets
6. ASTM C478 – Standard Specification for Circular Precast Reinforced Concrete Manhole Sections
7. ASTM C655 – Standard Specification for Reinforced Concrete D-Load Culvert, Storm Drain, and Sewer Pipe
8. ASTM C700 – Standard Specification for Vitrified Clay Pipe, Extra Strength, Standard Strength, and Perforated
9. ASTM C877 – Standard Specification for External Sealing Bands for Concrete Pipe, Manholes, and Precast Box Sections
10. ASTM C828 – Standard Test Method for Low-Pressure Air Test of Vitrified Clay Pipe Lines
11. ASTM C900 – Standard Test Method for Pullout Strength of Hardened Concrete
12. ASTM C920 – Standard Specification for Elastomeric Joint Sealants
13. ASTM C923 – Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals
14. ASTM C969 – Standard Practice for Infiltration and Exfiltration Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines
15. ASTM C990 – Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants
16. ASTM C1103 – Standard Practice for Joint Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines

A. REFERENCED STANDARDS (Continued)

17. ASTM C1173 – Standard Specification for Flexible Transition Couplings for Underground Piping Systems

18. ASTM C1244 – Standard Test Method for Concrete Sewer Manholes by the Negative Air Pressure (Vacuum) Test Prior to Backfill

19. ASTM C1619 – Standard Specification for Elastomeric Seals for Joining Concrete Structures

20. ASTM D1784 – Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds

21. ASTM D2321 – Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications

22. ASTM D2412 – Standard Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading

23. ASTM D3034 – Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings

24. ASTM D3139 – Standard Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals

25. ASTM D3212 – Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals

26. ASTM D3262 – Standard Specification for "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Sewer Pipe

27. ASTM D3575 – Standard Text methods for Flexible Cellular Materials Made From Olefin Polymers

28. ASTM D3681 – Standard Test Method for Chemical Resistance of "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe in a Deflected Condition

29. ASTM D3753 – Glass-Fiber Reinforced Polyester Manholes and Wetwells

30. ASTM D4161 – Standard Specification for "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe Joints Using Flexible Elastomeric Seals

31. ASTM D4819-13 – Standard Specification for Flexible Cellular Materials Made From Polyolefin Plastics

32. ASTM F1417 – Standard Practice for Installation Acceptance of Plastic Non-pressure Sewer Lines Using Low-Pressure Air

33. ASTM F2764 – Standard Specification for 6 to 60 in. [150 to 1500 mm] Polypropylene (PP) Corrugated Double and Triple Wall Pipe and Fittings for Non-Pressure Sanitary Sewer Applications

22.00 GENERAL (Continued)

A. REFERENCED STANDARDS (Continued)

34. ASTM F477 – Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe

35. ASTM F593 – Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs

36. ASTM F594 – Standard Specification for Stainless Steel Nuts

37. ASTM F679 – Standard Specification for Poly (Vinyl Chloride) (PVC) Large-Diameter Plastic Gravity Sewer Pipe and Fittings

38. AWWA C900 – Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 4 In. Through 60 In. (100 mm Through 1,500 mm)

22.01 MATERIALS

The materials listed in this article are approved for use in the City of Lincoln pursuant to the Standard Specifications described herein. Developers, consultants, and Contractors may request consideration of alternate materials to the Director of the Transportation and Utilities Department. Only one type of pipe shall be used between manholes on each project unless specifically called for on the plans or authorized by the City's Project Manager.

A. VITRIFIED CLAY PIPE (VCP) - 8" to 48" Gravity Pipe

1. Pipe and Fittings (Extra Strength): ASTM C700.

2. Compression Joints: ASTM C425, polyester or polyurethane material factory applied to both the bell and spigot or plain end of every pipe.

B. CENTRIFUGALLY CAST FIBERGLASS REINFORCED POLYMER MORTAR PIPE (CCFRPM) - 18" to 104" Gravity Pipe

1. Pipe and Fittings: ASTM D2412, ASTM D3262, and ASTM D3681.

2. Pipe Joints: ASTM D4161, field connected with fiberglass sleeve couplings that utilize elastomeric sealing gaskets as the sole means to maintain joint water tightness.

3. Elastomeric Gaskets: ASTM F477, supplied by qualified gasket manufacturers and be suitable for the service intended.

C. SOLID WALL POLYVINYL CHLORIDE (PVC) - 8" to 60" Gravity Pipe

1. Pipe and Fittings 15 IN and smaller: ASTM D3034, DR 35 minimum.

2. Pipe and Fittings 18 IN through 60 IN: ASTM F679.

3. Pipe Joints: Integral bell and spigot joints with elastomeric seals complying with ASTM D3212 and ASTM F477.

4. Laying Lengths: All pipe shall be furnished in standard laying lengths.

D. REINFORCED CONCRETE PIPE (RCP) - 48" to 144" Gravity Pipe

1. Certification:

   Manufactured by a plant certified under the American Concrete Pipe Association's (ACPA) "Quality Cast" Plant Certification Program. All RCP delivered to the jobsite shall be stamped with the "Q-Cast" certification stamp.

2. Pipe:

   a. ASTM Designation C76 or C-655 as specified on the plans or Special Provisions, except as herein provided.

   b. Circular in cross-section.

   c. The coarse aggregate used in the manufacture of the RCP shall conform to the requirements of Article 11.01.

   d. All RCP shall have an antimicrobial admixture: 1 gallon per cubic yard of concrete of Con^{mic}Shield® by Conshield Technologies Inc. Additive shall be included in the concrete mix design as part of the total water content. The additive shall be added to the concrete mix water to ensure even distribution throughout the concrete mixture.

3. Pipe Joints: ASTM C361 and ASTM C1619. Elastomeric seal shall be Class B.

   a. Joints shall be water tight with no visible water leaking or weeping from the joint.

4. Laying Lengths: All pipe shall be furnished in standard laying lengths.

5. Lifting holes will not be allowed.

E. POLYPROPYLENE (PP) - 12" to 42" Gravity Pipe

1. Pipe and Fittings 12 IN through 30 IN: dual wall, ASTM F2764, ASTM D2412 minimum PS of 46 pounds/inch/inch.

2. Pipe and Fittings 30 IN through 42 IN: triple wall, ASTM F2764, ASTM D2412 minimum PS of 46 pounds/inch/inch.

3. Pipe Joints: Integral bell and spigot joints complying with ASTM F2764. Watertight seals complying with ASTM D3212, with the addition of a 15-psi pressure requirement.

4. Laying Lengths: All pipe shall be furnished in standard laying lengths of 13 feet and 20 feet.

F. POLYVINYL CHLORIDE (PVC) - 4" to 60" Pressure Pipe

1. Pipe and Fittings: AWWA C900, ASTM D1784. Pressure class of pipe shall be as indicated in the Contract Documents.

2. Joints: ASTM D3139 with a push-on joint and ASTM F477.

3. Laying Lengths: All pipe shall be furnished in standard laying lengths of 14 feet.

G. OTHER SEWER PIPE

1. Other sewer pipe material may be authorized only by special permission from Lincoln Wastewater.

H. PRECAST CONCRETE MANHOLE

1. As per the Lincoln Standard Plans.

2. Circular precast: ASTM C478.

3. Base:

   a. Integral base with riser wall and base slab cast monolithically as a single unit with benching.

   b. Base consisting of a riser section with a secondary poured integral base slab with benching.

4. Minimum inside dimension of 48 IN.

5. Flexible watertight connector: ASTM C923.

6. Joint sealants:

   a. Rubber O-ring or profile gasket complying with ASTM C443.

   b. Exterior cold-applied mastic compound recommended by the manufacturer and complying with ASTM C990 or Butyl Sealant Wrap complying with ASTM C877.

7. Manholes on sanitary sewer trunk lines (15 inch or larger pipe) shall have an antimicrobial admixture.

   a. Antimicrobial Admixture: 1 gallon per cubic yard of concrete of Con^{mic}Shield® by Conshield Technologies Inc. Additive shall be included in the concrete mix design as part of the total water content. The additive shall be added to the concrete mix water to ensure even distribution throughout the concrete mixture.

I. FIBERGLASS MANHOLE

1. As per the Lincoln Standard Plans.

2. Fiberglass: ASTM D3753. Use resin only from a single manufacturer.

3. Minimum inside dimension of 48 IN.

4. Flexible watertight connector: ASTM C923.

5. Manhole top: Shall have a fiberglass neck that extends inside grade rings to extend 1 IN past the flat surface of the manhole cone.

J. ADJUSTING RISERS

1. Reinforced concrete: ASTM C478, risers shall be free from cracks, voids, and other defects.

    a. Use manufacturer's recommended adhesive.

    b. Use antimicrobial admixture as outlined in 22.01 H7a. if manhole contains the admixture.

2. Polypropylene: ASTM D3575 and ASTM D4819-13.

    a. Use manufacturer's recommended adhesive.

3. Adjusting riser shall be approved by City's Project manager prior to installation.

K. ADJUSTING RINGS

1. Polypropylene: ASTM D3575 and ASTM D4819-13.

    a. Use manufacturer's recommended adhesive.

2. Adjusting ring shall be approved by City's Project Manager prior to installation.

L. EXTERNAL FRAME SEAL

1. Flexible external rubber sleeve: ASTM C 923.

2. Stainless steel compression bands: ASTM F593 and F594, Type 304.

3. External frame seal shall be approved by City's Project Manager prior to installation.

M. FRAME AND COVER

1. Frame and Cover: ASTM A48/48M, Class 35B.

2. Rated: Suitable for H-20 Traffic Loading.

3. As per the Lincoln Standard Plans.

N. WATERTIGHT FRAME AND COVER

1. To be used in areas prone to flooding, areas adjacent to creeks, and other areas as specified by the City's Project Manager.

2. Frame and Cover: Heavy Duty, R-1755-F2LM Frost/Watertight LiftMate Frame, Solid Gasketed Lid and Inner Lid, with hinge as manufactured by Neenah Foundry.

3. Furnish unit with manufacturer recommended anchoring system.

22.01 MATERIALS (Continued)

O. WASTEWATER SERVICE PIPE/PRIVATE SEWERS

1. Wastewater service pipe for new or reconstructed sanitary sewer services not owned by the City shall conform to the material requirements as provided in Title 24 of the Lincoln Municipal Code.

P. PIPE CONNECTIONS

1. Flexible watertight connector for pipes to manholes: ASTM C923.

2. Concrete collar for RCP pipe to RCP pipe connections: As per the Lincoln Standard Plans.

3. Connecting dissimilar pipe: ASTM C1173. Stainless steel clamped elastomeric couplings with stainless steel shielding band factory fabricated specifically for the use intended. The following manufacturers are acceptable:

   a. Fernco Strong Back series or equal.

22.02 EXCAVATION, FOUNDATION, BEDDING AND BACKFILL

A. GENERAL

1. Trench excavation methods, pipe foundation materials, pipe bedding materials, pipe backfill materials and methods shall conform to Chapter 20 of these Standard Specifications, except as hereinafter modified for sanitary sewer construction.

22.03 CONNECTING NEW SANITARY TO EXISTING SANITARY

A. TAP EXISTING MANHOLE AND REPLACE INVERT

1. Maintain sewer service at all times.

2. Remove existing manhole channel/invert and bench.

3. Tap shall be core drilled through existing manhole wall. Exceptions to core drilling shall require approval by the City's Project Manager prior to construction.

4. Install flexible watertight connector into new opening.

5. Insert pipe through flexible connector. Pipe is allowed to penetrate inside wall of structure a maximum of two inches.

6. Reconstruct invert flow channel and bench in existing manhole.

B. CONVERT EXISTING MANHOLE TO DROP MANHOLE

1. Obtain approval from the City's Project Manager.

2. Construct drop as per the Lincoln Standard Plans.

3. Maintain sewer service at all times.

4. Remove existing manhole channel/invert and bench.

5. Taps shall be core drilled through existing manhole wall. Exceptions to core drilling shall require approval by the City's Project Manager prior to construction.

6. Install flexible watertight connector into new openings.

7. Insert pipes through flexible connector. Pipe is allowed to penetrate inside wall of structure a maximum of two inches.

8. Install other pipes and fittings for outside drop structure.

9. Place concrete encasement on crushed rock.

10. Reconstruct invert flow channel and bench in existing manhole.

C. CONNECTING DISSIMILAR PIPE

1. Contractor shall connect dissimilar pipe as per 22.01 and per City's Project Manager approval.

2. Unless specifically designated in the contact documents, connecting dissimilar pipe shall not be paid for separately. The cost of these items shall be considered subsidiary to the other items for which direct payment is made.

D. TEMPORARY SEWER PLUGGING REQUIREMENTS

1. Install plugs in the appropriate locations of all new sanitary sewers prior to, or during construction, and remove the plugs after construction using approved plugging methods and types to prevent any and all storm runoff, ground water and other foreign material from entering wastewater collection lines.

2. Check each plug daily and, if required, immediately take corrective action by repairing or replacing the plugs, as applicable to the situation.

3. Unless specifically designated in the contact documents, temporary sewer plugging shall not be paid for separately. The cost of these items shall be considered subsidiary to the other items for which direct payment is made.

E. MANHOLE REMOVAL

1. Verify with City's Project Manager the manhole is not in use.

2. Excavate as necessary to accomplish the required removal.

3. Saw cut a true line to separate the pipes from the manhole.

4. Completely remove and dispose of existing manhole.

5. Construct concrete sewer plugs by filling the end of the pipes with concrete as per the Lincoln Standard Plans.

6. Backfill and compact the resulting voids in conformance with Chapter 20 of these Standard Specifications.

F. MANHOLE ABANDONMENT

1. Verify with City's Project Manager the manhole is not in use.

2. Excavate as necessary to accomplish the required removal.

3. Remove the upper portion of the structure to a minimum of three feet below the proposed finished elevation of the surrounding ground.

4. Remove all rubble and debris from the remaining portion of the structure.

5. Fill manhole with approved backfill material, compacted in the abandoned manhole to the densities in conformance with Chapter 20 of these Standard Specifications.

6. Construct concrete sewer plugs by filling the end of the pipes with concrete as per the Lincoln Standard Plans.

7. Backfill and compact the resulting voids in conformance with Chapter 20 of these Standard Specifications.

22.03 CONNECTING NEW SANITARY TO EXISTING SANITARY (Continued)

G. BASIS OF PAYMENT

1. Reconstructed manholes built in conformance with these Standard Specifications and accepted by the City's Project Manager shall be counted and paid for at the contract unit price bid per each for TAP EXISTING MANHOLE AND REPLACE INVERT, or for CONVERT EXISTING MANHOLE TO DROP MANHOLE. Such payment shall be full compensation for all excavation, backfill, materials, equipment, tools, labor and incidentals necessary to complete the Work in accordance with the Contract Documents.

2. Plugging of existing sewer pipes shall be considered subsidiary to other items of Work for which direct payment is made. REMOVE EXISTING SANITARY SEWER MANHOLE shall be counted and paid for at the contract unit price bid per each. FILL AND ABANDON EXISTING MANHOLE shall be counted and paid for at the contract unit price bid per each. Such payments shall be full compensation for all excavation, backfill, materials, equipment, tools, labor and incidentals necessary to complete the Work in accordance with the Contract Documents.

22.04 ABANDONMENT OF SANITARY SEWER MAIN

A. GENERAL

1. Verify with City's Project Manager the sanitary sewer main is not in use.

2. Excavate as necessary to accomplish the required abandonment.

3. Construct concrete sewer plugs by filling the end of the pipes with concrete as per the Lincoln Standard Plans.

4. All sewer pipes beneath pavement shall be filled with flowable fill as specified in Chapter 3 of these Standard Specifications unless specifically designated otherwise in the contact documents.

B. BASIS OF PAYMENT

1. ABANDONMENT OF SANITARY SEWER MAIN shall be measured and paid for at the contract unit price per cubic yard. Such payment shall be full compensation for all labor, tools, materials, and incidentals necessary to complete the work in accordance with the Contract Documents.

22.05 PIPE INSTALLATION

A. DELIVERY, STORAGE, AND HANDLING OF PRODUCTS

1. Deliver, handle and store products in accordance with the manufacturer's instructions.

    a. Protect PVC pipe from UV degradation if stored outside for more than the manufacturer's recommended number of days.

2. Protect pipeline sections stored at the site from damage.

3. Repair or replace any new pipe, fittings, and system appurtenances damaged before or during installation at Contractor's expense, before proceeding further.

    a. Utilize repair methods as recommended by the manufacturer.

    b. Replace damaged materials as directed by City's Project Manager.

B. LAYING THE PIPE

1. Excavate trench and provide pipe foundation materials, pipe bedding materials and pipe backfill materials as specified in Chapter 20 of these Standard Specifications.

2. Do not lay pipe in water or on saturated soil or bedding, or allow water to rise in trench around pipe prior to placing backfill material. Provide ground water management as specified in Chapter 20 of these Standard Specifications.

3. Install temporary watertight sewer plugs to prevent trench water, mud, dirt, or other foreign substances from entering the sanitary sewer system.

4. Clean pipe interior and joints prior to installation. Keep pipe clean during construction.

5. Begin at the lowest point in the line with the bell end pointing upstream.

6. Assemble joints.

    a. Clean joint surfaces to remove soil or foreign material prior to joining pipe.

    b. Assemble joints according to pipe manufacturer's recommendations.

7. Provide manholes as specified in the Contract Documents. Use a saw to cut ends of pipe flush with inside wall of manholes and structures. Do not use hammer or other means to break pipe.

8. Remove material at the bottom of the trench if determined to be unsuitable by the City's Project Manager.

9. Grade bottoms of trenches such that when bedding is placed between the trench bottom and the pipe, each section of pipe is installed to the specified depth or elevation with uniform support.
10. Determine and fix alignment and grade or elevation of each pipeline from offset stakes or calibrated laser instruments.

11. Calculate required elevation of each pipe joint and survey installed elevation at each joint prior to connecting the next joint to verify grade.

B. LAYING THE PIPE (Continued)

12. Install pipelines on the line and grade shown on the drawings. Relay pipe to proper grade if any joint elevation deviates from the following tolerances:

    a. Horizontal and vertical alignment shall not vary from design line and grade at any structure by more than 1% of the inside diameter of the pipe or ¼ inch, whichever is larger.

    b. Horizontal alignment of the pipe shall not vary from design line at any point along the pipe by more than 1% of the inside diameter of the pipe.

    c. Low spots holding water shall not exceed the following depths for each pipe size:

TABLE 22.05 A - PIPELINE TOLERANCES

Pipe Diameter	Maximum Low Spot Depth
8 IN	½ IN
10 IN	½ IN
12 IN	¾ IN
15 IN	¾ IN
18 IN and larger	5% of Pipe Diameter*

13. Do not disturb installed pipe and bedding when using movable trench boxes or supports. Block or anchor pipe as necessary to prevent joint displacement. Voids created by movement of trench boxes or supports shall be properly filled and compacted as described in Chapter 20 of these Standard Specifications.

14. Backfill trench with approved material as described in Chapter 20 of these Standard Specifications, provided all inspection and testing requirements are met.

15. Install wastewater service wyes at each location specified in the Contract Documents and detailed in the Lincoln Standard Plans.

16. Flexible piping construction shall be installed in conformance with ASTM D2321 and manufacturer recommended installation guidelines.

C. CURVILINEAR ALIGNMENT

1. Bending of the pipe barrel to achieve curvilinear alignment shall not be permitted.

2. Follow the allowable joint deflection:

   a. PVC: 1° of deflection at the joint. Standard 14 feet laying length has a minimum radius of 785 feet.

   b. PP: 3° of deflection at the joint. Standard 13 feet laying length has a minimum radius of 248 feet and standard 20 feet laying length has a minimum radius of 382 feet.

   c. RCP: As per manufacturer's recommendations.

   d. VCP: As per manufacturer's recommendations.

   e. Additional joint deflection using factory-made 3° couplings is allowed. The quantity and location shall be included in the Contract Documents and will not be determined in the field.

D. BASIS OF PAYMENT

1. All pipe of the various types shall be measured and paid for at the contract unit price bid for each size per linear foot for SANITARY SEWER PIPE, ___". All pipe shall be measured, center to center, through manholes. Said payment shall be full compensation for all excavations, backfill, testing, materials, equipment, tools, labor and incidentals necessary to install the pipe in accordance with the Contract Documents. Special measurement and payment for all fittings and pipe materials necessary to achieve desired radius, including beveled or radius pipe, will not be considered. The extra costs, if any, shall be merged with and considered subsidiary to the cost of the various sizes of pipe called for in the Contract Documents.

2. SANITARY SEWER PLUG, ___" shall be measured and paid for at the contract unit price bid per each for each type and size of sanitary sewer plug. This price shall be full compensation for all excavations, backfill, testing, labor, materials, tools, equipment and incidentals necessary to complete each type and size of sanitary sewer plug in accordance with the Contract Documents.

3. 3 DEGREE COUPLING, ___" shall be measured and paid for at the contract unit price bid per each for each type and size of 3-degree coupling. This price shall be full compensation for all excavations, backfill, testing, labor, materials, tools, equipment and incidentals necessary to complete each type and size of 3 degree coupling in accordance with the Contract Documents.

22.06 HIGHWAY, STREET, RAILROAD AND UTILITY CROSSINGS

A. GENERAL

1. Highway, street, railroad and utility crossings shall be constructed in accordance with the approved permit.

2. The City will obtain the necessary permits.

3. Encasements shall conform to Chapter 20 of these Standard Specifications.

4. In laying pressure type sewer pipe over/under a water main, the center of a standard length of pipe shall be centered with the centerline water main. See Chapter 23 of these Standard Specifications.

22.07 SANITARY MANHOLE CONSTRUCTION

A. DELIVERY, STORAGE, AND HANDLING OF PRODUCTS

1. Deliver, handle and store products in accordance with the manufacturer's instructions.

2. Store all products on level ground and not in mud or water.

3. Keep products free from dirt and other foreign matter.

4. Use approved lifting devices that will safely lift the weight of the manhole unit with applicable OSHA requirements safety factor.

B. GENERAL REQUIREMENTS FOR INSTALLATION

1. Excavate and provide foundation materials, bedding materials, and backfill materials as specified in Chapter 20 of these Standard Specifications.

2. Manhole construction shall conform to the Lincoln Standard Plans.

3. Install rubber plug or an approved non-shrink grout in lift holes.

4. Prepare subgrade to accurate elevation required to place manhole bedding material.

C. MANHOLE BASE, RISERS, AND CONE

1. Set the manhole base on a graded bedding making sure the flexible watertight connectors or pipe openings match design elevations. If necessary, pour anti-flotation concrete base.

2. Level the top of the manhole base in both directions.

3. Install each additional manhole component, ensuring each is plumb as installed before installing the next component.

4. Install manhole eccentric cone.

D. PIPE CONNECTIONS

1. Place flexible watertight connectors according to manufacturers' recommendation.

2. Install and bed pipes and connect to manhole. Install pipe flush with inside wall of structure. Place bedding and pipe embedment material as specified in Chapter 20 of these Standard Specifications.

E. MANHOLE JOINTS

1. Ensure joints are free of debris.

2. Install rubber O-ring or profile gasket.

3. Apply cold-applied mastic compound or butyl sealant wrap to exterior of all sanitary sewer manhole joints.

F. MANHOLE FLOW CHANNEL AND BENCH

1. Flow channel construction shall conform to the Lincoln Standard Plans.

2. Construct minimum manhole flow channel of one-half the pipe inner diameter to produce a smooth half-pipe shape between pipe inverts.

3. Slope the manhole bench no less than ½ IN per foot perpendicular to flow line.

G. MANHOLE ADJUSTING RISERS AND RINGS

1. On new and existing manholes, construct:

   a. Maximum 21 inch adjusting riser.

   b. Adjusting rings for the top 4 inches.

2. On manholes in paved areas, match the slope of the finished surface with sloped adjusting rings.

3. Bed each concrete adjusting riser with manufacturer's approved product.

4. Bed each polypropylene riser or ring with manufacturer's approved product and according to manufacturer's recommended installation procedure.

H. FRAME AND COVER

1. Install the frame and cover to place the cover at the elevation specified in the Contract Documents.

22.07 SANITARY MANHOLE CONSTRUCTION (Continued)

I. MANHOLE EXTERNAL FRAME SEAL

1. Install in accordance with the manufacturer's instructions.

2. All sealing surfaces shall be smooth, clean and free of any form offsets.

3. Extend seal a minimum of 3 inches below the lowest adjustment riser.

4. Extend seal above the flange of the manhole frame.

J. COLD WEATHER CONSTRUCTION

1. Take all reasonable precautions to protect all parts of the Work from damage due to freezing or as a result of winter weather conditions.

K. BASIS OF PAYMENT

1. Standard manholes and standard drop manholes shall be measured and paid for at the contract unit price bid per each for STANDARD MANHOLE, TYPE __ and STANDARD DROP MANHOLE, TYPE __. This price shall be full compensation for the manhole base, risers, and cone; pipe connections; manhole joints; manhole flow channel and bench; manhole adjusting risers and rings; frame and cover; external frame seal; drop pipes; fittings and all labor, tools, equipment and incidentals necessary to install these items. Standard manholes and standard drop manholes shall also be measured from the lowest flow line to the top of cover and paid for at the contract unit price bid per vertical foot for STANDARD MANHOLE, TYPE V.F. and STANDARD DROP MANHOLE, TYPE V.F. This payment shall be full compensation for all manhole base, risers, and cone; pipe connections; manhole joints; manhole flow channel and bench; manhole adjusting risers and rings; frame and cover; external frame seal; drop pipes; fittings and all labor, materials, tools, equipment and incidentals necessary to complete each type of manhole in accordance with the Contract Documents.

22.08 WASTEWATER SERVICES/PRIVATE SEWERS

A. NEW CONSTRUCTION

1. Construction of new wastewater services not owned by the City shall conform to the construction requirements as provided in Title 24 of the Lincoln Municipal Code and the Lincoln Standard Plates.

B. RECONSTRUCTION

1. Reconstruction of wastewater services not owned by the City shall conform to the construction requirements as provided in Title 24 of the Lincoln Municipal Code and the Lincoln Standard Plates.

C. BASIS OF PAYMENT

1. WYE, __" x__", shall be measured and paid for at the contract unit price bid per each for each size. This price shall be full compensation for all excavations, backfill, testing, labor, materials, tools, equipment and incidentals necessary to complete the Work in accordance with the Contract Documents.

2. Measurement and payment will be made at the contract unit price bid per each for CONSTRUCT or RECONSTRUCT SEWER SERVICE. Such payment shall be full compensation for all labor, tapping permits, plumbing permit, fittings, and materials, except as otherwise provided, excavation for taps and abandonments, backfill for taps and abandonments, sod, equipment, tools and incidentals necessary to complete the reconstruction in a workmanlike manner in accordance with the Contract Documents. Tapping saddles, taps, and plugs for abandonment will be supplied at no additional cost to the Contractor.

3. Measurement and payment will be made at the contract unit price bid per linear foot for SEWER SERVICE PIPE, __". Such payment shall be full compensation for furnishing and installing all pipe materials, all labor, excavation, backfill, equipment, tools, collars or connecting devices, and incidentals necessary to place the pipe in service in accordance with the Contract Documents.

22.09 TESTING

A. GENERAL

1. Line acceptance testing is required for each section of sanitary sewer constructed between manholes or junction structures.

2. Manhole performance testing is required.

3. The tests specified herein shall not be initiated until the related backfill is compacted in place; the line, manholes, and structures have been cleaned of all interfering debris; and suitable access for necessary testing equipment is provided.

4. The Contractor shall furnish all labor, tools, and equipment to perform all the tests specified hereinafter and only in the presence of the City's Project Manager or observer, except where such tests are specifically designated as being the responsibility of the City.

5. The methods and the equipment used for the tests shall be in conformance with the ASTM standards.

6. The costs associated with the testing are to be considered subsidiary to the costs of the sewer lines and manholes.

7. Except for pipe replacement projects where existing services must be reconnected as the new replacement pipe is being laid, or as otherwise directed by the City's Project Manager, live wastewater flow shall not be permitted in the sanitary sewer line until all of the following tests are completed and found acceptable.

B. LINE ACCEPTANCE TESTING

1. Alignment Test:

   a. For straight section of sewer, an alignment test using either a lamp or a laser beam shall be performed. The light or laser beam shall be visible through the sewer between adjacent manholes.

   b. Repair or replace defective pipe or joints, or remove and relay pipe not meeting alignment tolerances.

2. Leakage Testing:

   a. Joint Testing for RCP in accordance with ASTM C1103 and C969.

   b. Low Pressure Air Testing for VCP in accordance with ASTM C828.

   c. Low Pressure Air Testing for CCFRPM, PVC and PP shall meet the minimum time allowance per ASTM F1417.

3. Television Inspection

   a. Contractor shall prepare the project site for safe entry and access.

   b. Internal television inspection of new sanitary sewers will be performed by the City at no cost to the Contractor.

   c. Television inspection will be scheduled no earlier than 30 days after the installation of the pipe and shall be done at the same time and in conjunction with final deflection testing and after all line leakage and manhole testing has been completed and found acceptable.

   d. Televised lines shall be termed ‘acceptable’ if no defects are found, such as open joints, breaks, cracks, excessive pipe deformation, intrusions, ground water infiltration, depositions and debris left in the line, sag in the line, or excessive vertical or horizontal misalignment.

   e. Follow-up TV inspection activities that may be required as a result of repairs to defective new sanitary sewers will be billed as an additional cost at the prevailing TV inspection rate.

   f. The prevailing TV inspection cost can be obtained from the Lincoln Transportation and Utilities Department Business Office.

4. Deflection Testing

   a. Perform deflection testing on all flexible pipe installed on the project.

      (i) On any pipe size 8" to 15" the City will perform the deflection test, at no cost to the Contractor.

      (ii) On any pipe size greater than 15", it will be the responsibility of the Contractor to perform the deflection test with City staff in observance.

C. LINE ACCEPTANCE TESTING

4. Deflection Testing (Continued)

b. Final deflection testing shall be performed after the backfill has been in place at least 30 days.

c. Pull deflection mandrel sized at 95% of the inside diameter of the pipe through the test segment using a pulling force equivalent to hand power.

d. Ensure pipe deflection does not exceed 5% of average inside diameter as established by ASTM standards.

e. The line shall be termed "acceptable" if, during final deflection testing, the mandrel passes completely through the line without restriction.

f. In no case shall excessive force be applied in pulling the mandrel that may damage the pipe or that may erroneously indicate that deflection was within acceptable limits by temporarily expanding the pipe.

g. Remove and replace pipe exceeding deflection limits at no additional cost to the City. No additional time waiting period shall apply for retesting following repair of the line and proper compaction of the backfill, unless otherwise directed by the City's Project Manager.

h. Retest the line until found acceptable.

D. MANHOLE PERFORMANCE TESTING

1. General

a. All manholes shall be constructed to be free from infiltration. The manhole shall also remain free from visible infiltration during the two-year period of guarantee.

b. If any infiltration is observed during that period, the Contractor shall be required to make any necessary repairs.

2. Vacuum Testing

a. Vacuum test manholes in accordance with ASTM C1244.

22.10 SUBSTANTIAL COMPLETION

Sanitary sewer work shall be considered substantially complete when all pipe is laid and backfilled; all manholes are complete and backfilled; all testing for all pipe and manholes is complete and accepted.

22.11 FINAL ACCEPTANCE

The project shall be considered eligible for final acceptance by the City when all required Work is complete and accepted by the City's Project Manager, including internal television inspection, mandrel testing of all plastic pipe, all items on plan completed, and correction of all deficiencies found as a result of testing and/or final inspection by the City's Project Manager. Eligibility for final acceptance shall not be delayed for more than 60 calendar days past the date of substantial completion on account of the City's failure to complete internal television inspection and mandrel testing of plastic pipe because of equipment problems, scheduling conflicts, or other unforeseen circumstances attributable to the City's own responsibilities and actions.

22.12 GUARANTEE

At any time during the two-year guarantee period, and within the time period allowed, the Contractor shall correct any defect in material or workmanship which has been brought to his attention. Such items shall include but not be limited to trench settlement including subsequent pavement damage, pipe leaks, and failures.

22.13 ENVIRONMENTAL PROTECTION

Refer to Chapter 32 of these Standard Specifications for environmental protection during construction.

NEBRASKA

DEPT. OF ENVIRONMENT AND ENERGY

23-006 August 2023

Water Main and Sanitary/Storm Sewer Separations

The Department recognizes the challenges and difficulties in designing and installing distribution mains, especially in areas fraught with existing utilities. This guide is developed to assist design engineers with sewers and water main separation design and installation. In the design and installation of water mains, design engineers must strive to achieve the separation distances required for water mains and fire hydrants from sanitary sewer, storm sewer and other potential sources of contamination as per the Recommended Standards for Water Works, 2007 Edition (RSFWW). In cases where it is ***impractical*** to achieve those separations required in the RSFWW, the protocols provided in this document should be followed to be considered substantial conformance by the Department.

I. Sanitary Sewer and Water Main Separations

A. Sanitary sewer and water main <u>horizontal separations</u> for parallel installations.

1. Scenario 1
    - **a.** A 10-foot radial separation is considered equivalent to the 10-foot horizontal separation requirement if the water main is above the sanitary sewer and not within 5 feet horizontally.

2. Scenario 2
    - **a.** If the horizontal separation is **greater than 8 feet but less than 10 feet**, the installation would be acceptable if the following is provided:
        - **i.** Engineer's professional opinion that the water quality in the water main will not be impacted based on an evaluation of the proposed installation and soil conditions; **<u>and</u>**
        - **ii.** Reasons are provided as to why it is not practical to provide the 10 feet of separation.

3. Scenario 3
    - **a.** If the horizontal separation is **greater than 4 feet but less than 8 feet**, the installation would be acceptable if the following is provided:
        - **i.** Engineer's professional opinion that the water quality in the water main will not be impacted based on an evaluation of the proposed installation and soil conditions;
        - **ii.** Reasons are provided as to why at least 8 feet of separation cannot be provided; **<u>and</u>**
        - **iii.** The water main is laid in a separate trench or on an undisturbed earth shelf located on one side of the sewer at such an elevation that the bottom of the water main is at least 18 inches above the top of the sewer **<u>or</u>**
        - **iv.** The engineer may encase either the water or sewer pipe for protection (rigid welded piping or cement/concrete-at least 4 to 6 inches thick etc.) at locations where the separation cannot be met **<u>or</u>**
        - **v.** The sewer pipe needs to be water works grade 150 psi pressure rated pipe meeting AWWA Standards and pressure tested to ensure water tightness **<u>or</u>**
        - **vi.** An alternate method of protection with approval from the Department prior to construction.

4. Scenario 4
    a. If the horizontal separation **is less than 4 feet, written approval from the Department is required prior to installation.**

B. Sanitary sewer and water main vertical separations at crossings.

1. Scenario 1
    a. If the water main **is above** the sanitary sewer pipe and the vertical separation is **greater than 12 inches but less than 18 inches**, the installation would be acceptable if the following is provided:
        i. Engineer's professional opinion that the water quality in the water main will not be impacted based on an evaluation of the proposed installation and soil conditions;
        ii. Reasons are provided as to why the 18-inch separation cannot be met; **and**
        iii. One full length of water pipe needs to be located so that both joints will be as far from the sanitary sewer crossing as possible.

2. Scenario 2
    a. If the water main **is above** the sanitary sewer pipe and the vertical separation is **greater than 6 inches but less than 12 inches**, the installation would be acceptable if the following is provided:
        i. Engineer's professional opinion that the water quality in the water main will not be impacted based on an evaluation of the proposed installation and soil conditions;
        ii. Reasons are provided as to why at least 12 inches separation cannot be met;
        iii. One full length of water pipe needs to be located so that both joints will be as far from the sanitary sewer crossing as possible;
        iv. Proper support is provided to prevent settlement and breaking pipe; **and**
        v. The engineer may encase either the water or sewer pipe for protection (rigid welded piping or cement/concrete-at least 4 to 6 inches thick etc.) for at least 12 feet on each side of the crossing with the ends sealed **or**
        vi. The sewer pipe needs to be water works grade 150 psi pressure rated pipe meeting AWWA Standards and be pressure tested to ensure water tightness **or**
        vii. An alternate method of protection with approval from the Department prior to construction.

3. Scenario 3
    a. If the water main **is below** the sanitary sewer, and the vertical separation is **greater than 6 inches but less than 18 inches**, the installation would be acceptable if the following is provided:
        i. Engineer's professional opinion that the water quality in the water main will not be impacted based on an evaluation of the proposed installation and soil conditions;
        ii. Reasons are provided as to why at least 18 inches separation cannot be met;
        iii. One full length of water pipe needs to be located so that both joints will be as far from the sanitary sewer crossing as possible;
        iv. Proper support is provided to prevent settlement and breaking pipe; **and**
        v. The engineer may encase either the water or sewer pipe for protection (rigid welded piping or cement/concrete-at least 4 to 6 inches thick etc.) for at least 12 feet on each side of the crossing with the ends sealed **or**
        vi. The sewer pipe needs to be water works grade 150 psi pressure rated pipe meeting AWWA Standards and be pressure tested to ensure water tightness **or** An alternate method of protection with approval from the Department prior to construction.

4. Scenario 4
    a. If the vertical separation between the sewer line and the water main **will be less than 6 inches, written approval from the Department is required prior to installation.**

II. Storm Sewer and Water Main Separations

In general, the pollution hazards from a storm sewer are not as significant as a sanitary sewer since the storm sewer does not have flow in it year-round. However, during rainstorm events, it may carry surface runoff which contains chemical pollutants, but the pathogenic microbial impact is likely to be less than that of a sanitary sewer. For storm sewer and water main separation, the protocols provided in Sections II.A and II.B must be followed.

A. Storm sewer and water main horizontal separations for parallel installations.

1. Scenario 1
    - **a.** If the horizontal separation is **greater than 4 feet but less than 10 feet**, the installation would be acceptable if the following is provided:
        - **i.** Engineer's professional opinion that the water quality in the water main will not be impacted based on an evaluation of the proposed installation and soil conditions;
        - **ii.** Reasons are provided as to why the 10 feet of separation cannot be met; **and if necessary,**
        - **iii.** Additional protection deemed necessary by the design engineer.

2. Scenario 2
    - **a.** If the horizontal separation **will be less than 4 feet, written approval from the Department is required prior to installation.**

B. Storm sewer and water main vertical separations at crossings.

1. Scenario 1
    - **a.** If the water main **is above** the storm sewer pipe and the vertical separation is **greater than 6 inches but less than 18 inches**, the installation would be acceptable if the following is provided:
        - **i.** Engineer's professional opinion that the water quality in the water main will not be impacted based on an evaluation of the proposed installation and soil conditions;
        - **ii.** Reasons are provided as to why the 18-inch separation cannot be met; **and**
        - **iii.** One full length of water pipe needs to be located so that both joints will be as far from the storm sewer crossing as possible - preference shall be given to keep joints further from any sanitary sewer than a storm sewer.

2. Scenario 2
    - **a.** If the water main **is below** the storm sewer pipe and the vertical separation is **greater than 6 inches but less than 18 inches**, the installation would be acceptable if the following is provided:
        - **i.** Engineer's professional opinion that the water quality in the water main will not be impacted based on an evaluation of the proposed installation and soil conditions;
        - **ii.** Reasons are provided as to why the 18-inch separation cannot be met;
        - **iii.** One full length of water pipe needs to be located so that both joints will be as far from the storm sewer crossing as possible - preference shall be given to keep joints further from any sanitary sewer than a storm sewer;
        - **iv.** Proper support is provided to prevent settlement and breaking pipe; **and**
        - **v.** The engineer may encase either the water or sewer pipe for protection (rigid welded piping or cement/concrete-at least 4 to 6 inches thick etc.) for at least 12 feet on each side of the crossing with the ends sealed **or**
        - **vi.** The sewer pipe needs to be water works grade 150 psi pressure rated pipe meeting AWWA Standards and be pressure tested to ensure water tightness (the storm sewer pipe needs be watertight when pressure tested to at least 10 psi test pressure) **or**
        - **vii.** An alternate method of protection with approval from the Department prior to construction.

3. Scenario 3
    a. If the vertical separation between the storm sewer and the water main **will be less than 6 inches, written approval from the Department is required prior to installation.**

III. Force Main Separations

At least **10 feet of horizontal separation** between water mains and sanitary sewer force mains must be provided. There must be at least **18 inches of vertical separation** at crossings between water mains and force mains and one full length of water pipe shall be located so both joints will be as far from the sewer as possible at the crossing. **Where it is impossible to meet these separation requirements for force mains, the installation must not proceed prior to consulting and obtaining written approval from the Department.**

IV. Fire Hydrants Separations

A. Fire Hydrants and Sanitary Sewer Separations
1. Hydrant drains must not be connected to or located within **10 feet of sanitary sewers. Where it is impossible to provide 10 feet of horizontal separation between sanitary sewer and fire hydrant drains, written approval from the Department is required prior to installation.**

B. Fire Hydrants and Storm Sewer Separations
1. Where it is impractical to meet the 10-foot horizontal separation requirement for storm sewer and hydrant drains, less than 10 feet of horizontal separation would be acceptable if the following is provided:
    a. Engineer's professional opinion that the water quality in the water main will not be impacted based on an evaluation of the proposed installation and soil conditions;
    b. Reasons are provided as to why the 10 feet of horizontal separation cannot be met; **and**
    c. At least 5 feet of horizontal separation is provided.

2. **Where it is impossible to provide at least 5 feet of horizontal separation between storm sewers and hydrant drains, written approval from the Department is required prior to installation.**

Notice of Award

Date: _____

Project: WORTHMAN BOULEVARD EXTENSION	
Owner: City of Seward, Nebraska	Owner's Contract No.: N/A
Contract: Construction	Engineer's Project No.: 09336.001-C
Bidder:	
Bidder's Address:	

You are notified that your Bid dated _____for the above Contract has been considered. You are the Successful Bidder and are awarded a Contract for furnishing all labor, materials and equipment for the improvements to WORTHMAN BOULEVARD EXTENSION in Seward, NE. Work, per the plans and specifications, shall include clearing and grubbing, excavation, storm sewer construction, sanitary sewer construction, concrete paving, sidewalk construction, street lighting, signing, seeding, and all incidental work necessary to complete the Project as required by the plans and specifications.

The Contract Price of your Contract is: _____ *Dollars and 00/100* ($_____).

Two (2) copies of the proposed Contract Documents (excluding Drawings and addendums) are provided with this Notice of Award.

Two (2) sets of the Drawings will be delivered separately or otherwise made available to you immediately following execution of the contract.

You must comply with the following conditions precedent within [15] days of the date you receive this Notice of Award.

1. Deliver to the Owner [One] fully executed counterparts of the Contract Documents.
2. Deliver with the executed Contract Documents the Contract security [Bonds] as specified in the Instructions to Bidders (Article 20), General Conditions (Paragraph 5.01), and Supplementary Conditions (Paragraph SC-5.01).
3. Other conditions precedent:

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within ten days after you comply with the above conditions or after receipt of the approved permits, whichever occurs later, Owner will return to you one fully executed counterpart of the Contract Documents.

City of Seward
Owner

By:_____
Authorized Signature

Mayor
Title

Copy to Engineer

Notice to Proceed

Date: _____

Project: WORTHMAN BOULEVARD EXTENSION	
Owner: City of Seward, Nebraska	Owner's Contract No.: N/A
Contract:	Engineer's Project No.: 09336.001-C
Contractor:	
Contractor's Address: *[send Certified Mail, Return Receipt Requested]*	

You are notified that the Contract Times under the above Contract will commence to run on_____. On or before that date, you are to start performing your obligations under the Contract Documents. In accordance with Article 4 of the Agreement, the date of Substantial Completion is_____, and the date of readiness for final payment is _____ [(or) the number of days to achieve Substantial Completion is _____, and the number of days to achieve readiness for final payment is _____].

Before you may start any Work at the Site, Paragraph 2.01.B of the General Conditions provides that you and Owner must each deliver to the other (with copies to Engineer and other identified additional insureds and loss payees) certificates of insurance which each is required to purchase and maintain in accordance with the Contract Documents.

Also, before you may start any Work at the Site, you must:

_____ *[add other requirements].*

_____ _____
Owner

Given by:

_____ _____
Authorized Signature

_____ _____
Title

_____ _____
Date

Copy to Engineer

3. Items Related to the Worthman Blvd Water Main Phase II Project - City Engineer Oneby
   A. Consideration of an Agreement in the Amount of $97,160 for Construction Engineering Services Provided by The Schemmer Associates During the Construction of the Project

AGREEMENT BETWEEN
THE CITY OF SEWARD
AND
THE SCHEMMER ASSOCIATES
FOR PROFESSIONAL SERVICES

Worthman Blvd Water Main Phase I & Phase II
CONSTRUCTION ENGINEERING

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AGREEMENT
BETWEEN OWNER AND ENGINEER
FOR
PROFESSIONAL SERVICES

THIS IS AN AGREEMENT effective as of _____ , _____ ("Effective Date") between

The City of Seward ("Owner") and

The Schemmer Associates Inc. ("Engineer").

Owner intends to Contract with Engineer to receive construction engineering services for observation, material sampling, material testing, and management of the paving improvements and associated plan work detailed in the plans entitled "Worthman Blvd Water Main Phase I" and "Worthman Blvd Water Main Phase II ("Project").

Owner and Engineer agree as follows:

ARTICLE 1 – SERVICES OF ENGINEER

1.01 *Scope*

A. Engineer shall provide, or cause to be provided, the services set forth herein and in Exhibit A.

ARTICLE 2 – OWNER'S RESPONSIBILITIES

2.01 *General*

A. Owner shall have the responsibilities set forth herein and in Exhibit A.

B. Owner shall pay Engineer as set forth in Exhibit B.

C. Owner shall be responsible for, and Engineer may rely upon, the accuracy and completeness of all requirements, programs, instructions, reports, data, and other information furnished by Owner to Engineer pursuant to this Agreement. Engineer may use such requirements, programs, instructions, reports, data, and information in performing or furnishing services under this Agreement.

ARTICLE 3 – SCHEDULE FOR RENDERING SERVICES

3.01 *Commencement*

A. Engineer shall begin rendering services as of the Effective Date of the Agreement.

3.02 *Time for Completion*

A. Engineer shall complete its obligations within a reasonable time. Specific periods of time for rendering services are set forth or specific dates by which services are to be completed are provided in Exhibit A, and are hereby agreed to be reasonable.

B. If, through no fault of Engineer, such periods of time or dates are changed, or the orderly and continuous progress of Engineer's services is impaired, or Engineer's services are delayed or suspended, then the time for completion of Engineer's services, and the rates and amounts of Engineer's compensation, shall be adjusted equitably.

C. If Owner authorizes changes in the scope, extent, or character of the Project, then the time for completion of Engineer's services, and the rates and amounts of Engineer's compensation, shall be adjusted equitably.

D. Owner shall make decisions and carry out its other responsibilities in a timely manner so as not to delay the Engineer's performance of its services.

E. If Engineer fails, through its own fault, to complete the performance required in this Agreement within the time set forth, as duly adjusted, then Owner shall be entitled to the recovery of direct damages resulting from such failure.

ARTICLE 4 – INVOICES AND PAYMENTS

4.01 *Invoices*

A. *Preparation and Submittal of Invoices.* Engineer shall prepare invoices in accordance with its standard invoicing practices and the terms of Exhibit C. Engineer shall submit its invoices to Owner on a monthly basis. Invoices are due and payable within 30 days of receipt.

4.02 *Payments*

A. *Application to Interest and Principal.* Payment will be credited first to any interest owed to Engineer and then to principal.

B. *Failure to Pay.* If Owner fails to make any payment due Engineer for services and expenses within 30 days after receipt of Engineer's invoice, then:

1. amounts due Engineer will be increased at the rate of 1.0% per month (or the maximum rate of interest permitted by law, if less) from said thirtieth day; and

2. Engineer may, after giving seven days written notice to Owner, suspend services under this Agreement until Owner has paid in full all amounts due for services,

expenses, and other related charges. Owner waives any and all claims against Engineer for any such suspension.

C. *Disputed Invoices.* If Owner contests an invoice, Owner may withhold only that portion so contested, and must pay the undisputed portion.

D. *Legislative Actions.* If after the Effective Date of the Agreement any governmental entity takes a legislative action that imposes taxes, fees, or charges on Engineer's services or compensation under this Agreement, then the Engineer may invoice such new taxes, fees, or charges as a Reimbursable Expense to which a factor of 1.0 shall be applied. Owner shall pay such invoiced new taxes, fees, and charges; such payment shall be in addition to the compensation to which Engineer is entitled under the terms of Exhibit C.

ARTICLE 5 – OPINIONS OF COST

5.01 *Opinions of Probable Construction Cost*

A. Engineer's opinions of probable Construction Cost are to be made on the basis of Engineer's experience and qualifications and represent Engineer's best judgment as an experienced and qualified professional generally familiar with the construction industry. However, since Engineer has no control over the cost of labor, materials, equipment, or services furnished by others, or over contractors' methods of determining prices, or over competitive bidding or market conditions, Engineer cannot and does not guarantee that proposals, bids, or actual Construction Cost will not vary from opinions of probable Construction Cost prepared by Engineer.

5.02 *Opinions of Total Project Costs*

A. The services, if any, of Engineer with respect to Total Project Costs shall be limited to assisting the Owner in collating the various cost categories which comprise Total Project Costs. Engineer assumes no responsibility for the accuracy of any opinions of Total Project Costs.

ARTICLE 6 – GENERAL CONSIDERATIONS

6.01 *Standards of Performance*

A. The standard of care for all professional engineering and related services performed or furnished by Engineer under this Agreement will be the care and skill ordinarily used by members of the subject profession practicing under similar circumstances at the same time and in the same locality. Engineer makes no warranties, express or implied, under this Agreement or otherwise, in connection with Engineer's services.

B. Owner shall not be responsible for discovering deficiencies in the technical accuracy of Engineer's services. Engineer shall correct any such deficiencies in technical accuracy without additional compensation except to the extent such corrective action is directly attributable to deficiencies in Owner-furnished information.

C. Engineer may employ such Consultants as Engineer deems necessary to assist in the performance or furnishing of the services, subject to reasonable, timely, and substantive objections by Owner.

D. Subject to the standard of care set forth in Paragraph 6.01.A, Engineer and its Consultants may use or rely upon design elements and information ordinarily or customarily furnished by others, including, but not limited to, specialty contractors, manufacturers, suppliers, and the publishers of technical standards.

E. Engineer and Owner shall comply with applicable Laws and Regulations and Owner-mandated standards that Owner has provided to Engineer in writing. This Agreement is based on these requirements as of its Effective Date. Changes to these requirements after the Effective Date of this Agreement may be the basis for modifications to Owner's responsibilities or to Engineer's scope of services, times of performance, and compensation.

F. Engineer shall not be required to sign any documents, no matter by whom requested, that would result in the Engineer having to certify, guarantee, or warrant the existence of conditions whose existence the Engineer cannot ascertain. Owner agrees not to make resolution of any dispute with the Engineer or payment of any amount due to the Engineer in any way contingent upon the Engineer signing any such documents.

G. The General Conditions for any construction contract documents prepared hereunder are to be the "Standard General Conditions of the Construction Contract" as prepared by the Engineers Joint Contract Documents Committee (No. C-700, 2002 Edition or newer) unless both parties mutually agree to use other General Conditions by specific reference.

H. Engineer shall not at any time supervise, direct, or have control over Contractor's work, nor shall Engineer have authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected or used by Contractor, for security or safety at the Site, for safety precautions and programs incident to the Contractor's work in progress, nor for any failure of Contractor to comply with Laws and Regulations applicable to Contractor's furnishing and performing the Work.

I. Engineer neither guarantees the performance of any contractor nor assumes responsibility for any contractor's failure to furnish and perform the Work in accordance with the Contract Documents.

J. Engineer shall not be responsible for the acts or omissions of any contractor, subcontractor, or supplier, or of any of their agents or employees or of any other persons (except Engineer's own employees and its Consultants) at the Site or otherwise furnishing or performing any Work; or for any decision made on interpretations or clarifications of the Contract Documents given by Owner without consultation and advice of Engineer.

6.02 *Use of Documents*

A. All Documents are instruments of service in respect to this Project, and Engineer shall retain an ownership and property interest therein (including the copyright and the right of reuse at the discretion of the Engineer) whether or not the Project is completed. Owner shall not rely in any way on any Document unless it is in printed form, signed or sealed by the Engineer or one of its Consultants.

B. A party may rely that data or information set forth on paper (also known as hard copies) that the party receives from the other party by mail, hand delivery, or facsimile, are the items that the other party intended to send. Files in electronic media format of text, data, graphics, or other types that are furnished by one party to the other are furnished only for convenience, not reliance by the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

C. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any transmittal errors detected within the 60-day acceptance period will be corrected by the party delivering the electronic files.

D. When transferring documents in electronic media format, the transferring party makes no representations as to long-term compatibility, usability, or readability of such documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the documents' creator.

E. Owner may make and retain copies of Documents for information and reference in connection with use on the Project by Owner. Engineer grants Owner a license to use the Documents on the Project, extensions of the Project, and other projects of Owner, subject to the following limitations: (1) Owner acknowledges that such Documents are not intended or represented to be suitable for use on the Project unless completed by Engineer, or for use or reuse by Owner or others on extensions of the Project or on any other project without written verification or adaptation by Engineer; (2) any such use or reuse, or any modification of the Documents, without written verification, completion, or adaptation by Engineer, as appropriate for the specific purpose intended, will be at Owner's sole risk and without liability or legal exposure to Engineer or to Engineer's Consultants; (3) Owner shall indemnify and hold harmless Engineer and Engineer's Consultants from all claims, damages, losses, and expenses, including attorneys' fees, arising out of or resulting from any use, reuse, or modification without written verification, completion, or adaptation by Engineer; (4) such limited license to Owner shall not create any rights in third parties.

F. If Engineer at Owner's request verifies or adapts the Documents for extensions of the Project or for any other project, then Owner shall compensate Engineer at rates or in an amount to be agreed upon by Owner and Engineer.

6.03 *Insurance*

A. Engineer shall procure and maintain insurance as set forth in Exhibit D, "Insurance." Engineer shall cause Owner to be listed as an additional insured on any applicable general liability insurance policy carried by Engineer.

B. Owner shall procure and maintain insurance as set forth in Exhibit D, "Insurance." Owner shall cause Engineer and Engineer's Consultants to be listed as additional insureds on any general liability or property insurance policies carried by Owner which are applicable to the Project.

C. Owner shall require Contractor to purchase and maintain general liability and other insurance in accordance with the requirements of Paragraph 5.04 of the "Standard General Conditions of the Construction Contract," (No. C-700, 2002 Edition or newer) as prepared by the Engineers Joint Contract Documents Committee and to cause Engineer and Engineer's Consultants to be listed as additional insureds with respect to such liability and other insurance purchased and maintained by Contractor for the Project.

D. Owner and Engineer shall each deliver to the other certificates of insurance evidencing the coverages indicated in Exhibit D. Such certificates shall be furnished prior to commencement of Engineer's services and at renewals thereafter during the life of the Agreement.

E. All policies of property insurance relating to the Project shall contain provisions to the effect that Engineer's and Engineer's Consultants' interests are covered and that in the event of payment of any loss or damage the insurers will have no rights of recovery against Engineer or its Consultants, or any insureds or additional insureds thereunder.

F. At any time, Owner may request that Engineer or its Consultants, at Owner's sole expense, provide additional insurance coverage, increased limits, or revised deductibles that are more protective than those specified in Exhibit D. If so requested by Owner, and if commercially available, Engineer shall obtain and shall require its Consultants to obtain such additional insurance coverage, different limits, or revised deductibles for such periods of time as requested by Owner, and Exhibit D will be supplemented to incorporate these requirements.

6.04 *Suspension and Termination*

A. Suspension.

By Owner: Owner may suspend the Project upon seven days written notice to Engineer.

By Engineer: If Engineer's services are substantially delayed through no fault of Engineer, Engineer may, after giving seven days written notice to Owner, suspend services under this Agreement.

B. Termination. The obligation to provide further services under this Agreement may be terminated:

1. For cause,

a. By either party upon 30 days written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof through no fault of the terminating party.

b. By Engineer:

1) upon seven days written notice if Owner demands that Engineer furnish or perform services contrary to Engineer's responsibilities as a licensed professional; or

2) upon seven days written notice if the Engineer's services for the Project are delayed or suspended for more than 90 days for reasons beyond Engineer's control.

3) Engineer shall have no liability to Owner on account of such termination.

c. Notwithstanding the foregoing, this Agreement will not terminate under Paragraph 6.05.B.1.a if the party receiving such notice begins, within seven days of receipt of such notice, to correct its substantial failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt thereof; provided, however, that if and to the extent such substantial failure cannot be reasonably cured within such 30 day period, and if such party has diligently attempted to cure the same and thereafter continues diligently to cure the same, then the cure period provided for herein shall extend up to, but in no case more than, 60 days after the date of receipt of the notice.

2. For convenience,

a. By Owner effective upon Engineer's receipt of notice from Owner.

C. *Effective Date of Termination*. The terminating party under Paragraph 6.05.B may set the effective date of termination at a time up to 30 days later than otherwise provided to allow Engineer to demobilize personnel and equipment from the Site, to complete tasks whose value would otherwise be lost, to prepare notes as to the status of completed and uncompleted tasks, and to assemble Project materials in orderly files.

D. Payments Upon Termination.

1. In the event of any termination under Paragraph 6.05, Engineer will be entitled to invoice Owner and to receive full payment for all services performed or furnished and all Reimbursable Expenses incurred through the effective date of termination. Upon making such payment, Owner shall have the limited right to the use of Documents, at Owner's sole risk, subject to the provisions of Paragraph 6.03.E.

2. In the event of termination by Owner for convenience or by Engineer for cause, Engineer shall be entitled, in addition to invoicing for those items identified in Paragraph 6.05.D.1, to invoice Owner and to payment of a reasonable amount for

services and expenses directly attributable to termination, both before and after the effective date of termination, such as reassignment of personnel, costs of terminating contracts with Engineer's Consultants, and other related close-out costs, using methods and rates for Additional Services as set forth in Exhibit C.

6.05 *Controlling Law*

A. This Agreement is to be governed by the law of the state in which the Project is located.

6.06 *Successors, Assigns, and Beneficiaries*

A. Owner and Engineer are hereby bound and the partners, successors, executors, administrators and legal representatives of Owner and Engineer (and to the extent permitted by Paragraph 6.07.B the assigns of Owner and Engineer) are hereby bound to the other party to this Agreement and to the partners, successors, executors, administrators and legal representatives (and said assigns) of such other party, in respect of all covenants, agreements, and obligations of this Agreement.

B. Neither Owner nor Engineer may assign, sublet, or transfer any rights under or interest (including, but without limitation, moneys that are due or may become due) in this Agreement without the written consent of the other, except to the extent that any assignment, subletting, or transfer is mandated or restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement.

C. Unless expressly provided otherwise in this Agreement:

1. Nothing in this Agreement shall be construed to create, impose, or give rise to any duty owed by Owner or Engineer to any Contractor, Contractor's subcontractor, supplier, other individual or entity, or to any surety for or employee of any of them.

2. All duties and responsibilities undertaken pursuant to this Agreement will be for the sole and exclusive benefit of Owner and Engineer and not for the benefit of any other party.

3. Owner agrees that the substance of the provisions of this Paragraph 6.07.C shall appear in the Contract Documents.

6.07 *Dispute Resolution*

A. Owner and Engineer agree to negotiate all disputes between them in good faith for a period of 30 days from the date of notice prior to invoking the procedures of Exhibit E or other provisions of this Agreement, or exercising their rights under law.

B. If the parties fail to resolve a dispute through negotiation under Paragraph 6.08.A, then either or both may invoke the procedures of Exhibit E. If Exhibit E is not included, or if no dispute resolution method is specified in Exhibit E, then the parties may exercise their rights under law.

6.08 *Environmental Condition of Site*

A. Owner has disclosed to Engineer in writing the existence of all known and suspected Asbestos, PCBs, Petroleum, Hazardous Waste, Radioactive Material, hazardous substances, and other Constituents of Concern located at or near the Site, including type, quantity, and location.

B. Owner represents to Engineer that to the best of its knowledge no Constituents of Concern, other than those disclosed in writing to Engineer, exist at the Site.

C. If Engineer encounters an undisclosed Constituent of Concern, then Engineer shall notify (1) Owner and (2) appropriate governmental officials if Engineer reasonably concludes that doing so is required by applicable Laws or Regulations.

D. It is acknowledged by both parties that Engineer's scope of services does not include any services related to Constituents of Concern. If Engineer or any other party encounters an undisclosed Constituent of Concern, or if investigative or remedial action, or other professional services, are necessary with respect to disclosed or undisclosed Constituents of Concern, then Engineer may, at its option and without liability for consequential or any other damages, suspend performance of services on the portion of the Project affected thereby until Owner: (1) retains appropriate specialist consultant(s) or contractor(s) to identify and, as appropriate, abate, remediate, or remove the Constituents of Concern; and (2) warrants that the Site is in full compliance with applicable Laws and Regulations.

E. If the presence at the Site of undisclosed Constituents of Concern adversely affects the performance of Engineer's services under this Agreement, then the Engineer shall have the option of (1) accepting an equitable adjustment in its compensation or in the time of completion, or both; or (2) terminating this Agreement for cause on 30 days notice.

F. Owner acknowledges that Engineer is performing professional services for Owner and that Engineer is not and shall not be required to become an "arranger," "operator," "generator," or "transporter" of hazardous substances, as defined in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended, which are or may be encountered at or near the Site in connection with Engineer's activities under this Agreement.

6.09 *Indemnification and Mutual Waiver*

A. *Indemnification by Engineer*. To the fullest extent permitted by law, Engineer shall indemnify and hold harmless Owner, and Owner's officers, directors, partners, agents, consultants, and employees from and against any and all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to the Project, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Engineer or Engineer's officers, directors, partners, employees, or Consultants. The indemnification provision of the preceding sentence is subject to and limited by the provisions agreed to by Owner and Engineer in Exhibit F, "Allocation of Risks," if any.

B. *Indemnification by Owner*. To the fullest extent permitted by law, Owner shall indemnify and hold harmless Engineer, Engineer's officers, directors, partners, agents, employees, and Consultants from and against any and all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to the Project, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Owner or Owner's officers, directors, partners, agents, consultants, or employees, or others retained by or under contract to the Owner with respect to this Agreement or to the Project.

C. *Environmental Indemnification.* In addition to the indemnity provided under Paragraph 6.10.B of this Agreement, and to the fullest extent permitted by law, Owner shall indemnify and hold harmless Engineer and its officers, directors, partners, agents, employees, and Consultants from and against any and all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals, and all court, arbitration, or other dispute resolution costs) caused by, arising out of, relating to, or resulting from a Constituent of Concern at, on, or under the Site, provided that (i) any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, and (ii) nothing in this paragraph shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence or willful misconduct.

D. *Percentage Share of Negligence*. To the fullest extent permitted by law, a party's total liability to the other party and anyone claiming by, through, or under the other party for any cost, loss, or damages caused in part by the negligence of the party and in part by the negligence of the other party or any other negligent entity or individual, shall not exceed the percentage share that the party's negligence bears to the total negligence of Owner, Engineer, and all other negligent entities and individuals.

E. *Mutual Waiver*. To the fullest extent permitted by law, Owner and Engineer waive against each other, and the other's employees, officers, directors, agents, insurers, partners, and consultants, any and all claims for or entitlement to special, incidental, indirect, or consequential damages arising out of, resulting from, or in any way related to the Project.

6.10 *Miscellaneous Provisions*

A. *Notices.* Any notice required under this Agreement will be in writing, addressed to the appropriate party at its address on the signature page and given personally, by facsimile, by registered or certified mail postage prepaid, or by a commercial courier service. All notices shall be effective upon the date of receipt.

B. *Survival.* All express representations, waivers, indemnifications, and limitations of liability included in this Agreement will survive its completion or termination for any reason.

C. *Severability.* Any provision or part of the Agreement held to be void or unenforceable under any Laws or Regulations shall be deemed stricken, and all remaining provisions shall

continue to be valid and binding upon Owner and Engineer, who agree that the Agreement shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

D. *Waiver.* A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Agreement.

E. *Accrual of Claims.* To the fullest extent permitted by law, all causes of action arising under this Agreement shall be deemed to have accrued, and all statutory periods of limitation shall commence, no later than the date of Substantial Completion.

ARTICLE 7 – DEFINITIONS

7.01 *Defined Terms*

A. Wherever used in this Agreement (including the Exhibits hereto) terms (including the singular and plural forms) printed with initial capital letters have the meanings indicated in the text above or in the exhibits; in the following provisions; or in the "Standard General Conditions of the Construction Contract," prepared by the Engineers Joint Contract Documents Committee (No. C-700, 2002 Edition):

1. *Additional Services* – The services to be performed for or furnished to Owner by Engineer in accordance with Exhibit A, Part 2, of this Agreement.

2. *Basic Services* – The services to be performed for or furnished to Owner by Engineer in accordance with Exhibit A of this Agreement.

3. *Construction Cost* – The cost to Owner of those portions of the entire Project designed or specified by Engineer. Construction Cost does not include costs of services of Engineer or other design professionals and consultants, cost of land or rights-of-way, or compensation for damages to properties, or Owner's costs for legal, accounting, insurance counseling or auditing services, or interest and financing charges incurred in connection with the Project, or the cost of other services to be provided by others to Owner pursuant to Exhibit B of this Agreement. Construction Cost is one of the items comprising Total Project Costs.

4. *Constituent of Concern* – Any substance, product, waste, or other material of any nature whatsoever (including, but not limited to, Asbestos, Petroleum, Radioactive Material, and PCBs) which is or becomes listed, regulated, or addressed pursuant to [a] the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. ("CERCLA"); [b] the Hazardous Materials Transportation Act, 49 U.S.C. §§1801 et seq.; [c] the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. ("RCRA"); [d] the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; [e] the Clean Water Act, 33 U.S.C. §§1251 et seq.; [f] the Clean Air Act, 42 U.S.C. §§7401 et seq.; and [g] any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

5. *Consultants* – Individuals or entities having a contract with Engineer to furnish services with respect to this Project as Engineer's independent professional associates, consultants, subcontractors, or vendors.

6. *Documents* – Data, reports, Drawings, Specifications, Record Drawings, and other deliverables, whether in printed or electronic media format, provided or furnished in appropriate phases by Engineer to Owner pursuant to this Agreement.

7. *Drawings* – That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings are not Drawings as so defined.

8. *Laws and Regulations; Laws or Regulations* – Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

9. *Reimbursable Expenses* – The expenses incurred directly by Engineer in connection with the performing or furnishing of Basic and Additional Services for the Project.

10. *Resident Project Representative* – The authorized representative of Engineer, if any, assigned to assist Engineer at the Site during the Construction Phase. The Resident Project Representative will be Engineer's agent or employee and under Engineer's supervision. As used herein, the term Resident Project Representative includes any assistants of Resident Project Representative agreed to by Owner. The duties and responsibilities of the Resident Project Representative, if any.

11. *Specifications* – That part of the Contract Documents consisting of written technical descriptions of materials, equipment, systems, standards, and workmanship as applied to the Work and certain administrative details applicable thereto.

12. *Total Project Costs* – The sum of the Construction Cost, allowances for contingencies, and the total costs of services of Engineer or other design professionals and consultants, together with such other Project-related costs that Owner furnishes for inclusion, including but not limited to cost of land, rights-of-way, compensation for damages to properties, Owner's costs for legal, accounting, insurance counseling and auditing services, interest and financing charges incurred in connection with the Project, and the cost of other services to be provided by others to Owner pursuant to Exhibit B of this Agreement.

ARTICLE 8 – EXHIBITS AND SPECIAL PROVISIONS

8.01 *Exhibits Included*

A. Exhibit A, "Engineer's Services," consisting of 3 pages.

B. Exhibit B, "Consultant Estimate of Hours and Expenses," consisting of 3 pages.

C. Exhibit C, "Payments to Engineer for Services and Reimbursable Expenses," consisting of 2 pages.

D. Exhibit D, "Insurance," consisting of 2 pages.

E. Exhibit E, "Dispute Resolution," consisting of 1 pages.

F. Exhibit F, "Allocation of Risks," consisting of 1 pages.

8.02 *Total Agreement*

A. This Agreement (consisting of pages 1 to 14 inclusive, together with the exhibits identified above) constitutes the entire agreement between Owner and Engineer and supersedes all prior written or oral understandings. This Agreement may only be amended, supplemented, modified, or canceled by a duly executed written instrument.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement, the Effective Date of which is indicated on page 1.

Owner:	Engineer:
City of Seward	The Schemmer Associates
By:	By: Doug Holle, PE
Title:	Title: Executive Vice President, Engineering
Date:	Date: March 13, 2025
Signed:	Signed: 
Address for giving notices:	Address for giving notices:
	333 S. 21st Street
	Suite 102
	Lincoln, NE 68510

PART 2 – ADDITIONAL SERVICES

A2.01 *Additional Services Requiring Owner's Written Authorization*

A. If authorized in writing by Owner, Engineer shall furnish or obtain from others Additional Services of the types listed below.

1. Preparation of applications and supporting documents (in addition to those furnished under Basic Services) for private or governmental grants, loans, or advances in connection with the Project; preparation or review of environmental assessments and impact statements; review and evaluation of the effects on the design requirements for the Project of any such statements and documents prepared by others; and assistance in obtaining approvals of authorities having jurisdiction over the anticipated environmental impact of the Project.

2. Services to make measured drawings of or to investigate existing conditions or facilities, or to verify the accuracy of drawings or other information furnished by Owner or others.

3. Services resulting from significant changes in the scope, extent, or character of the portions of the Project designed or specified by Engineer or its design requirements including, but not limited to, changes in size, complexity, Owner's schedule, character of construction, or method of financing; and revising previously accepted studies, reports, Drawings, Specifications, or Contract Documents when such revisions are required by changes in Laws and Regulations enacted subsequent to the Effective Date of this Agreement or are due to any other causes beyond Engineer's control.

4. Services required as a result of Owner's providing incomplete or incorrect Project information to Engineer.

5. Furnishing services of Engineer's Consultants for other than Basic Services.

6. Providing construction surveys and staking to enable Contractor to perform its work.

7. Providing Construction Phase services beyond the original date for final completion of the Work.

8. Other services performed or furnished by Engineer not otherwise provided for in this Agreement.

This is **EXHIBIT A,** consisting of 3 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services**

Engineer's Services

Article 1 of the Agreement is amended and supplemented to include the following agreement of the parties. Engineer shall provide Additional Services as set forth below.

PART 1 – SCOPE OF SERVICES

WORTHMAN BLVD WATER MAIN PHASE I & PHASE II

1. INTRODUCTION

The following Scope of Services for Construction Engineering Services shall include Project Management, Construction Observation, Administration, Staking and Materials Testing. The work shall include but are not limited to; the preconstruction phase, construction phase, construction closeout, coordination with the general contractor, construction observation, as-built plans, final documents, staking, and materials testing.

2. ASSUMPTIONS

- Construction duration is estimated at 6 weeks with an anticipated start date of 04/01/2025 (Phase I) and 5/20/25 (Phase II). Phase I is anticipated to have substantial completion by 04/30/25. Phase II is anticipated to have substantial completion by 7/3/25.
- Construction inspection (including mobilization) is anticipated to average 10 hours per working day with 30 working days anticipated.

3. PROJECT DESCRIPTION

- Water main improvements are planned along Worthman Blvd. and to the North to Walker Road in Seward, NE.

4. PRE-CONSTRUCTION PHASE

The following pre-construction phase tasks will include but are not limited to:

A. Conduct the pre-construction meeting with the contractor and all stake holders.
B. Preconstruction photos
C. Draft and hand out flyers to residents

5. CONSTRUCTION PHASE

The following construction phase tasks will include, but are not limited to:

A. Establish a procedure for managing, tracking, and storing all relevant documents between the contractor, City, and CE firm.

B. Mobilize a construction inspection team on site for the duration of the construction activities per paragraph 2. ASSUMPTIONS.

C. Maintain project field diaries, accurate quantities, files and records.

D. Construction progress photos

E. Complete daily report for each day.

F. Monitor the contractors' activities for compliance with the plans and specifications.

G. Review work zone traffic control devices each day CE firm is on site.

H. Review and respond to contractor submittals and RFI's.

I. Conduct weekly meetings (Construction Progress Meetings) with the contractor. Six (6) meetings are included in this scope.

J. Draft change orders as needed. Two (2) change orders are included in this scope.

K. Review and recommend contractor's pay applications on a monthly basis. Two (2) pay application reviews are included in this scope.

L. Perform materials testing in accordance with NDOT Materials Sampling Guide. The anticipated tests include:
   - 1 Standard Proctor Test
   - 20 Nuclear Gauge Compaction Tests
   - 2 Concrete Tests (Slump, Air Content, Compressive Strength Cylinders)

M. Perform construction staking as listed below. It is assumed any stakes set and impacted by construction activity requiring re-staking will be viewed as additional effort and may result in added effort invoiced.
   1. Water Main – Layout on desired offsets, the water main with corresponding stationing at 100-foot intervals (4,000 LF)
   2. Limits of Construction – Layout angle points and straight aways at 100-foot intervals and 50-foot intervals in curves along the Limits of Construction lines (6,000 LF)
   3. Permanent Easement – Layout angle points and straight aways at 100-foot intervals along the Permanent Easement lines (1,650 LF)
   4. Temporary Easement – Layout angle points and straight aways at 100-foot intervals along the Temporary Easement lines (150 LF)
   5. Existing Railroad Easement – Layout angle points and straight aways at 100-foot intervals along the existing Railroad Easement lines (1,200 LF)
   6. Right of Way / Property Lines – Layout angle points and straight aways along the ROW and Property Lines at 100-foot intervals (7,000 LF)
   7. Berm Grading – Layout perimeter toe of slope and top of slope at 50-foot intervals round the two proposed berms

8. Paving at Walker Rd. – Layout on desired offsets the four corners of paving at Walker Rd. (Plan Sheet J.1)
9. Trips to Site – We estimate 13 trips to site for staking the above

6. CONSTRUCTION CLOSEOUT

The following construction phase tasks will include but are not limited to:

A. Conduct a final project walkthrough/inspection.
B. Prepare and provide to the contractor a punch list of repair items that need to be addressed before project acceptance.
C. Verify all project work has been completed, inspected and approved.
D. Prepare as-built plans. As-built plans will be created and submitted in electronic format.

7. PROJECT MANAGEMENT

The following project management tasks will include, but are not limited to:

A. Review work, communication with contractor / client, and invoicing

SCHEMMER

Design with Purpose. Build with Confidence.

Exhibit B

Hour Estimate Form
Construction Engineering Services
Worthman Blvd Water Main Phase I & Phase II

City of Seward
Project Nos. 09336.001-A & 09336.001-B

March 12, 2025

ITEM NO.	TASK DESCRIPTION	PRIN	SEN ENG	PROJ REP	FIELD TECH II	SEN RLS	CADD TECH	2 MAN SURV CREW	ADMIN SUPP	TOTAL PER TASK		Task Cost
I.	**Preconstruction Phase**											$ 4,000.00
I.a	Preconstruction Meeting	4	6	4						10		
I.b	Preconstruction photos			4						4		
I.c	Hand out flyers		2	4						6		
II.	**Construction Phase**											$ 80,755.00
II.a	Establish procedure for tracking relavent documents		2	1						3		
II.b	Mobilize construction inspection team on site		18	90						108		
II.c	Maintain project diaries, quantities, and records		3	15						18		
II.d	Construction photos			15						15		
II.e	Complete daily reports		3	15						18		
II.f	Monitor contractors' activities for compliance with plans and specs		4	135						139		
II.g	Review traffic control devices each day			4						4		
II.h	Review submittals / RFI's	6	30	4						34		
II.i	Conduct weekly meetings		12	6						18		
II.j	Change orders		6	2						8		
II.k	Pay app reviews		4	2						6		
II.l	Materials testing			12	8					20		
II.m	Construction staking					22	31	113		166		
III.	**Construction Closeout**											$ 4,695.00
III.a	Final project walkthrough / inspection		6	6						12		
III.b	Prepare and distribute punch list		2	3						5		
III.c	Verify project work completion and acceptance		2	6								
III.d	As Built Plans		2	6						8		
IV.a	**Project Management**											$ 1,690.00
IV.a	Review work, communication, invoicing	2	6							6		
	Labor Fee											$ 91,140.00
	Direct Expenses											$ 6,020.00
	TOTALS											$ 97,160.00

Construction Engineering Services
Worthman Blvd Water Main Phase I & Phase II

City of Seward
Project Nos. 09336.001-A & 09336.001-B

BREAKDOWN OF COSTS

PROJECT TASK & PERSONNEL CLASSIFI	ESTIMATED HOURS	2025 STANDARD RATE	ESTIMATED TOTAL
I. Preconstruction Phase			
PRINCIPAL	4	$275.00	$1,100
SENIOR ENGINEER	8	$190.00	$1,520
PROJECT REPRESENTATIVE	12	$115.00	$1,380
FIELD TECHNICIAN II	0	$90.00	$0
RLS	0	$160.00	$0
CADD TECHNICIAN	0	$85.00	$0
2 MAN SURVEY CREW	0	$195.00	$0
ADMINISTRATIVE SUPPORT	0	$85.00	$0
		TASK TOTAL	$4,000
II. Construction Phase			
PRINCIPAL	6	$275.00	$1,650
SENIOR ENGINEER	82	$190.00	$15,580
PROJECT REPRESENTATIVE	301	$115.00	$34,615
FIELD TECHNICIAN II	8	$90.00	$720
RLS	22	$160.00	$3,520
CADD TECHNICIAN	31	$85.00	$2,635
2 MAN SURVEY CREW	113	$195.00	$22,035
ADMINISTRATIVE SUPPORT	0	$85.00	$0
		TASK TOTAL	$80,755
III. Construction Closeout			
PRINCIPAL	0	$275.00	$0
SENIOR ENGINEER	12	$190.00	$2,280
PROJECT REPRESENTATIVE	21	$115.00	$2,415
FIELD TECHNICIAN II	0	$90.00	$0
RLS	0	$160.00	$0
CADD TECHNICIAN	0	$85.00	$0
2 MAN SURVEY CREW	0	$195.00	$0
ADMINISTRATIVE SUPPORT	0	$85.00	$0
		TASK TOTAL	$4,695

Continued Next Page

IV. Project Management

PRINCIPAL	2	$275.00	$550
SENIOR ENGINEER	6	$190.00	$1,140
PROJECT REPRESENTATIVE	0	$115.00	$0
FIELD TECHNICIAN II	0	$90.00	$0
RLS	0	$160.00	$0
CADD TECHNICIAN	0	$85.00	$0
2 MAN SURVEY CREW	0	$195.00	$0
ADMINISTRATIVE SUPPORT	0	$85.00	$0
		TASK TOTAL	$1,690

Sub-Total $91,140

REIMBURSABLES	No.		Rate ($)		
Plan Sets	4		$20.00	$	80.00
Mileage	8600	$	0.700	$	6,020.00
Other				$	-
Other				$	-
Sub-Total				**$**	**6,020.00**

TOTAL ESTIMATED FEE **$ 97,160.00**

This is **EXHIBIT C**, consisting of 2 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services**.

Payments to Engineer for Services and Reimbursable Expenses

Article 2 of the Agreement is amended and supplemented to include the following agreement of the parties:

ARTICLE 2 – OWNER'S RESPONSIBILITIES

C2.01 *Compensation For Basic Services (other than Resident Project Representative and Post-Construction) – Standard Hourly Rates Method of Payment*

A. Owner shall pay Engineer for Basic Services set forth in Exhibit A, except for services of Engineer's Resident Project Representative and Post-Construction Phase services, if any, as follows:

1. An amount equal to the cumulative hours charged to the Project by each class of Engineer's employees times Standard Hourly Rates for each applicable billing class for all services performed on the Project, plus Reimbursable Expenses and Engineer's Consultant's charges, if any.

2. Engineer's Reimbursable Expenses Schedule and Standard Hourly Rates included in Exhibit B.

3. The total compensation for services under Paragraph C2.01 is estimated to be $97,160.00

4. Engineer may alter the distribution of compensation between individual phases of the work noted herein to be consistent with services actually rendered, but shall not exceed the total estimated compensation amount unless approved in writing by Owner.

5. The total estimated compensation for Engineer's services included Paragraph C2.01.B.3 incorporates all labor, overhead, profit, Reimbursable Expenses and Engineer's Consultant's charges.

6. The amounts billed for Engineer's services under Paragraph C2.01 will be based on the cumulative hours charged to the Project during the billing period by each class of Engineer's employees times Standard Hourly Rates for each applicable billing class, plus Reimbursable Expenses and Engineer's Consultant's charges.

7. The Standard Hourly Rates and Reimbursable Expenses Schedule will be adjusted annually (as of January 1) to reflect equitable changes in the compensation payable to Engineer.

C2.02 *Compensation For Reimbursable Expenses*

A. Owner shall pay Engineer for all Reimbursable Expenses at the rates set forth in Exhibit B.

B. Reimbursable Expenses include the following categories: transportation and subsistence incidental thereto; obtaining bids or proposals from Contractor(s); providing and maintaining field office facilities including furnishings and utilities; toll telephone calls and mobile phone charges; reproduction of reports, Drawings, Specifications, Bidding Documents, and similar Project-related items in addition to those required under Exhibit A, and, if authorized in advance by Owner, overtime work requiring higher than regular rates. In addition, if authorized in advance by Owner, Reimbursable Expenses will also include expenses incurred for computer time and the use of other highly specialized equipment.

C. The amounts payable to Engineer for Reimbursable Expenses will be the Project-related internal expenses actually incurred or allocated by Engineer, plus all invoiced external Reimbursable Expenses allocable to the Project, the latter multiplied by a factor of 1.0.

C2.03 *Other Provisions Concerning Payment*

A. Whenever Engineer is entitled to compensation for the charges of Engineer's Consultants, those charges shall be the amounts billed by Engineer's Consultants to Engineer times a factor of 1.0.

B. Factors. The external Reimbursable Expenses and Engineer's Consultant's factors include Engineer's overhead and profit associated with Engineer's responsibility for the administration of such services and costs.

C. Estimated Compensation Amounts

1. Engineer's estimate of the amounts that will become payable for specified services are only estimates for planning purposes, are not binding on the parties, and are not the minimum or maximum amounts payable to Engineer under the Agreement.

2. When estimated compensation amounts have been stated herein and it subsequently becomes apparent to Engineer that a compensation amount thus estimated will be exceeded, Engineer shall give Owner written notice thereof. Promptly thereafter Owner and Engineer shall review the matter of services remaining to be performed and compensation for such services. Owner shall either agree to such compensation exceeding said estimated amount or Owner and Engineer shall agree to a reduction in the remaining services to be rendered by Engineer, so that total compensation for such services will not exceed said estimated amount when such services are completed. If Engineer exceeds the estimated amount before Owner and Engineer have agreed to an increase in the compensation due Engineer or a reduction in the remaining services, the Engineer shall be paid for all services rendered hereunder.

D. To the extent necessary to verify Engineer's charges and upon Owner's timely request, Engineer shall make copies of such records available to Owner at cost.

This is **EXHIBIT D**, consisting of 2 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services**.

Insurance

Paragraph 6.04 of the Agreement is amended and supplemented to include the following agreement of the parties.

Engineers Certificate of Liability insurance is attached to this Exhibit D.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 12/30/2024

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
FNIC
P.O. Box 45279
Omaha NE 68145-0279

CONTACT NAME: Deanne Beltz-Sund
PHONE (A/C, No, Ext): 402-861-7000 **FAX (A/C, No):**
E-MAIL ADDRESS: deanne.beltz@fnicgroup.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Continental Casualty Co.	20443
INSURER B : Continental Insurance Company	35289
INSURER C : Valley Forge Insurance Co.	20508
INSURER D :	
INSURER E :	
INSURER F :	

INSURED THESCHE-01
The Schemmer Associates Inc.
1044 North 115th Street
Omaha NE 68154

COVERAGES **CERTIFICATE NUMBER:** 550758686 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X **COMMERCIAL GENERAL LIABILITY** CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT X LOC OTHER:			6023928716	12/31/2024	12/31/2025	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG 	$ 1,000,000 $ 100,000 $ 15,000 $ 1,000,000 $ 2,000,000 $ 2,000,000 $
C	**AUTOMOBILE LIABILITY** X ANY AUTO OWNED AUTOS ONLY HIRED AUTOS ONLY SCHEDULED AUTOS NON-OWNED AUTOS ONLY			6023928747	12/31/2024	12/31/2025	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident) 	$ 1,000,000 $ $ $ $
B	X **UMBRELLA LIAB** X OCCUR **EXCESS LIAB** CLAIMS-MADE DED X RETENTION $ 10,000			6023928702	12/31/2024	12/31/2025	EACH OCCURRENCE AGGREGATE 	$ 6,000,000 $ 6,000,000 $
B	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N: N **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		6023928733	12/31/2024	12/31/2025	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	 $ 1,000,000 $ 1,000,000 $ 1,000,000
A	Professional Liability Claims-Made Basis Pollution Legal Liability			AEH288365469	12/31/2024	12/31/2025	Each Claim Aggregate	$5,000,000 $5,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

City of Seward Nebraska
142 N. 7th St.
Seward NE 68434

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

This is **EXHIBIT E**, consisting of 1 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services**.

Dispute Resolution

Paragraph 6.08 of the Agreement is amended and supplemented to include the following agreement of the parties:

H6.09 *Dispute Resolution*

A. Mediation. Owner and Engineer agree that they shall first submit any and all unsettled claims, counterclaims, disputes, and other matters in question between them arising out of or relating to this Agreement or the breach thereof ("Disputes") to mediation in accordance with Construction Industry Mediation Rules of the American Arbitration Association currently in effect. If such mediation is unsuccessful in resolving a Dispute, then (a) the parties may mutually agree to a dispute resolution of their choice, or (b) either party may seek to have the Dispute resolved by a court of competent jurisdiction.

This is **EXHIBIT F**, consisting of 1 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services**.

Allocation of Risks

Paragraph 6.10 of the Agreement is amended and supplemented to include the following agreement of the parties:

I6.10.B *Limitation of Engineer's Liability*

1. *Engineer's Liability Limited to Amount of Engineer's Compensation.* To the fullest extent permitted by law, and notwithstanding any other provision of this Agreement, the total liability, in the aggregate, of Engineer and Engineer's officers, directors, partners, employees, agents, and Engineer's Consultants, and any of them, to Owner and anyone claiming by, through, or under Owner for any and all claims, losses, costs, or damages whatsoever arising out of, resulting from or in any way related to the Project or the Agreement from any cause or causes, including but not limited to the negligence, professional errors or omissions, strict liability or breach of contract, or warranty express or implied of Engineer or Engineer's officers, directors, partners, employees, agents, or Engineer's Consultants, or any of them, shall not exceed the total compensation received by Engineer under this Agreement.

B. Consideration to Accept the Bid Documents and Authorization to Advertise for Public Bid

SCHEMMER
Design with Purpose. Build with Confidence.
333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
SCHEMMER NO. 09336001-B	A1

PLANS FOR CONSTRUCTION

WORTHMAN BOULEVARD WATER MAIN
PHASE II
CITY OF SEWARD

ALL NON-WATER MAIN CONSTRUCTION SHALL ADHERE TO THE 2017 ENGLISH EDITION OF THE NEBRASKA STANDARD SPECIFICATIONS.

ALL WATER MAIN CONSTRUCTION SHALL ADHERE TO THE SPECIAL PROVISIONS.

THE WORK ON THIS PROJECT CONSISTS OF GROUPS
1-GRADING, 3-SURFACING, L-EROSION CONTROL, W-WATER

◣ GROUPS 1, 3, L, W ARE INCLUDED IN THE LETTING OF _____

▲ GROUPS _____ ARE INCLUDED IN THE LETTING OF _____

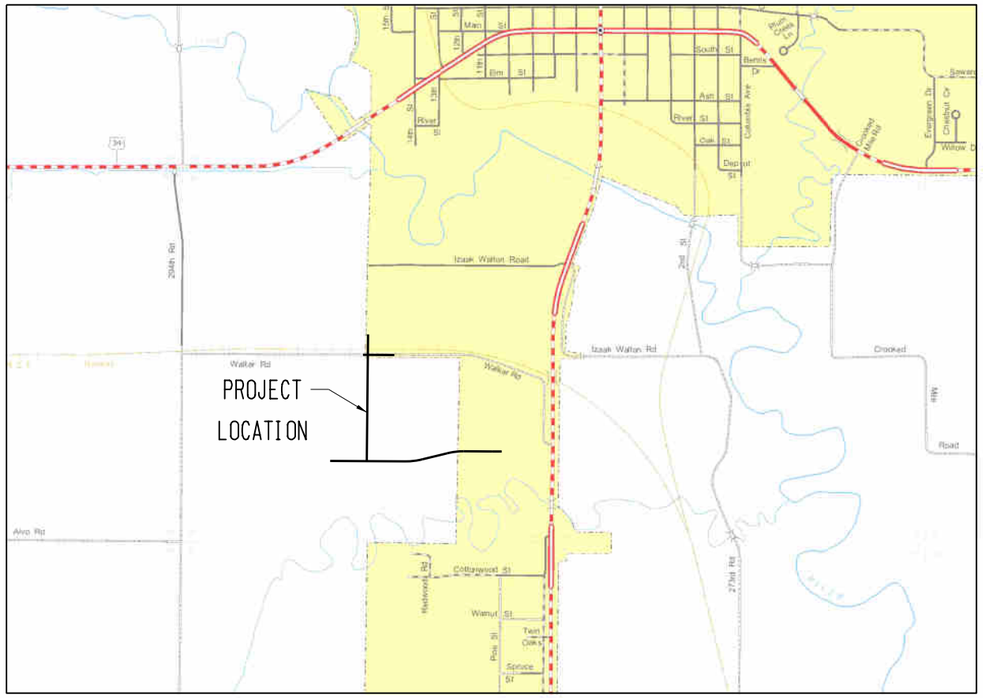
■ GROUPS _____ ARE INCLUDED IN THE LETTING OF _____

INDEX OF SHEETS

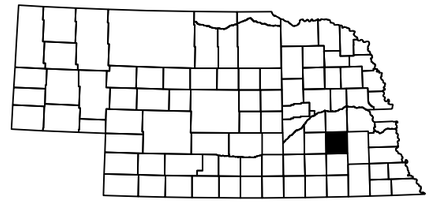
SHEET NO.	DESCRIPTION
A1	TITLE SHEET
C1	SUMMARY OF QUANTITIES
F1 - F2	HORIZONTAL ALIGNMENT AND CONTROL POINTS
G1	GENERAL INFORMATION
G2	BERM GRADING
J1	CONSTRUCTION SHEET
J2 - J3	SWPPP PLAN
K1 - K7	WATER MAIN
W1	RIGHT-OF-WAY

STD. PLAN NO.	DESCRIPTION
329	8 TO 16 INCH CONCRETE PAVEMENT
501	EROSION CONTROL
920	TRAFFIC CONTROL, CONSTRUCTION & MAINTENANCE
923	TRAFFIC CONTROL ROAD CLOSURE
924	URBAN TRAFFIC CONTROL PLAN

LINCOLN STD. PLAN NO.	DESCRIPTION
185	PIPE BEDDING
301	WATER MAIN RECONSTRUCTION
310	WATER MAIN VALVE MANHOLES, AIR RELIEFS AND BLOW OFFS
320	R.C. COLLARS, THRUST BLOCKS, ANCHORAGES, TEE BLOCKS AND PLUG BLOCKS
325	TRACER WIRE INSTALLATION
330	HYDRANT INSTALLATIONS
340	WATER TAPPING EXCAVATION PIT, BUTTERFLY VALVE AND CUT IN DETAIL



PLANS PREPARED BY:
THE SCHEMMER ASSOCIATES, INC.
333 S. 21ST STREET, SUITE 102
LINCOLN, NE 68510



CONVENTIONAL SIGNS

- FENCE R.O.W. OR WIRE
- GUARDRAIL
- TRAVELED WAY
- DIKE
- CULVERT
- POWER POLE
- TELEPHONE POLE
- MAILBOX
- RAILROAD TRACKS
- MARSH
- TREE - CONIFEROUS
- TREE - DECIDUOUS

R.O.W. LEGEND

- NEW CONTROLLED ACCESS
- PREVIOUS CONTROLLED ACCESS
- LIMITS OF CONSTRUCTION
- PREVIOUS R.O.W.
- NEW R.O.W.
- EXISTING PERMANENT EASEMENT
- TEMPORARY EASEMENT
- EXCESS TAKING
- PERMANENT EASEMENT
- EXISTING RAILROAD EASEMENT
- NEW RAILROAD PERMANENT EASEMENT
- NEW RAILROAD TEMPORARY EASEMENT

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

SEWARD CITY
APPROVED:
DATE

ROADWAY DESIGN DIVISION.

SUMMARY OF QUANTITIES

SCHEMMER
Design with Purpose. Build with Confidence.
333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-B	C1

GRADING
GROUP I

ITEM	QUANTITY	UNITS
TRAFFIC CONTROL	1	LUMP SUM
MOBILIZATION	1	LUMP SUM
GENERAL CLEARING AND GRUBBING	1	LUMP SUM
EARTHWORK MEASURED IN EMBANKMENT	602	CUBIC YARDS
STABLIZED CONSTRUCTION EXIT	1	EACH

EROSION CONTROL
GROUP L

ITEM	QUANTITY	UNITS
SEEDING, TYPE B	2.42	ACRES
EROSION CONTROL, CLASS 1A	1,121	SQUARE YARDS

SURFACING
GROUP 3

ITEM	QUANTITY	UNITS
8" CONCRETE PAVEMENT CLASS 47B-3500	106	SQUARE YARDS

WATER MAIN
GROUP W

ITEM	QUANTITY	UNITS
REMOVE 12" PLUG	1	EACH
16" WATER MAIN PIPE	1,607	LINEAL FEET
12" WATER MAIN PIPE	1,788	LINEAL FEET
6" GATE VALVE AND BOX	7	EACH
12" GATE VALVE AND BOX	6	EACH
16" BUTTERFLY VALVE	4	EACH
6" FIRE HYDRANT	8	EACH
6" ANCHORING COUPLING, 18"	9	EACH
16" ANCHORING COUPLING, 18"	1	EACH
16" RETAINER GLAND	28	EACH
12" RETAINER GLAND	41	EACH
6" RETAINER GLAND	10	EACH
16" X 12" REDUCER, M.J.	1	EACH
16" X 6" REDUCER, M.J.	1	EACH
16" PLUG, M.J.	1	EACH
12" PLUG, M.J.	3	EACH
16" x 12" CROSS, M.J.	1	EACH
12" X 6" TEE	3	EACH
12" X 12" TEE	1	EACH
16" X 6" TEE	4	EACH
16" X 16" TEE	1	EACH
12" X 11.25 DEG BEND	2	EACH
12" X 45 DEG BEND	4	EACH
16" X 90 DEG BEND	2	EACH
CONCRETE FOR PLUGS AND COLLARS	2.2	CUBIC YARDS
STEEL FOR PLUGS AND COLLARS	110.9	POUNDS
CONCRETE FOR THRUST BLOCKS AND ANCHORAGES	11.2	CUBIC YARDS
STEEL FOR THRUST BLOCKS AND ANCHORAGES	436.5	POUNDS

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

File: 09336001 Water Main Summary of Quantities.dgn
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Date: 13-MAR-2025 08:17
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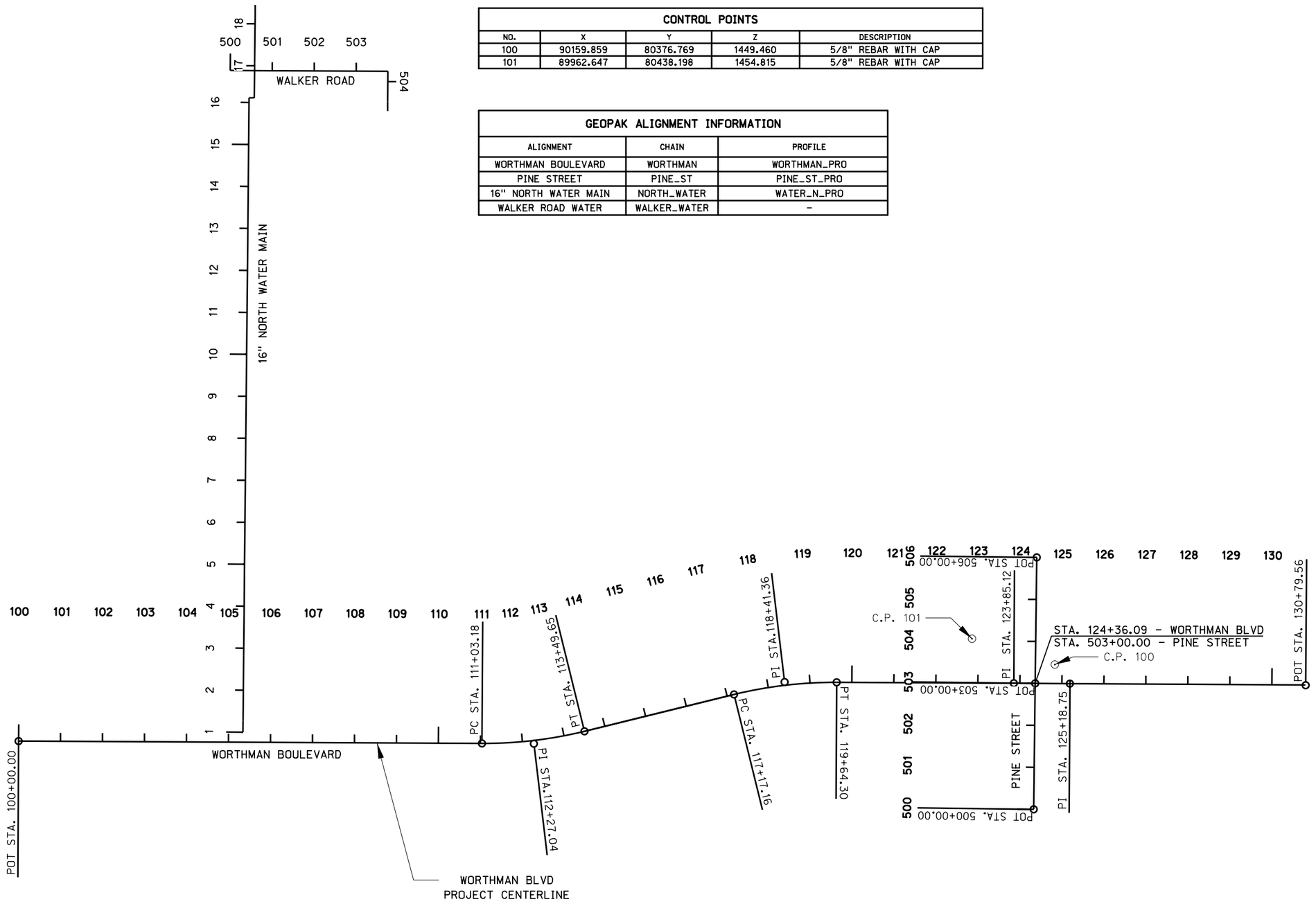
PROJECT NO.	SHEET NO.
09336.001-B	F1

ROADWAY DESIGN DIVISION.



CONTROL POINTS

NO.	X	Y	Z	DESCRIPTION
100	90159.859	80376.769	1449.460	5/8" REBAR WITH CAP
101	89962.647	80438.198	1454.815	5/8" REBAR WITH CAP

GEOPAK ALIGNMENT INFORMATION

ALIGNMENT	CHAIN	PROFILE
WORTHMAN BOULEVARD	WORTHMAN	WORTHMAN_PRO
PINE STREET	PINE_ST	PINE_ST_PRO
16" NORTH WATER MAIN	NORTH_WATER	WATER_N_PRO
WALKER ROAD WATER	WALKER_WATER	-

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HORIZONTAL ALIGNMENT & CONTROL

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Beginning chain WORTHMAN description

Point 28	N	80,194.376 E	87,692.471 Sta	100+00.00

Course from 28 to PC WORTHMAN1 S 89° 42' 37" E Dist 1,103.184

Curve Data

Curve WORTHMAN1			
P.I. Station	112+27.04 N	80,188.172 E	88,919.498
Delta =	14° 07' 16" (LT)		
Degree =	5° 43' 46"		
Tangent =	123.858		
Length =	246.461		
Radius =	1,000.000		
External =	7.641		
Long Chord =	245.838		
Mid. Ord. =	7.583		
P.C. Station	111+03.18 N	80,188.798 E	88,795.641
P.T. Station	113+49.65 N	80,217.782 E	89,039.765
C.C.	N	81,188.785 E	88,800.698
Back = S	89° 42' 37" E		
Ahead = N	76° 10' 07" E		
Chord Bear = N	83° 13' 45" E		

Course from PT WORTHMAN1 to PC WORTHMAN2 N 76° 10' 07" E Dist 367.510

Curve Data

Curve WORTHMAN2			
P.I. Station	118+41.36 N	80,335.336 E	89,517.223
Delta =	14° 09' 38" (RT)		
Degree =	5° 43' 46"		
Tangent =	124.207		
Length =	247.148		
Radius =	1,000.000		
External =	7.684		
Long Chord =	246.520		
Mid. Ord. =	7.626		
P.C. Station	117+17.16 N	80,305.642 E	89,396.618
P.T. Station	119+64.30 N	80,334.622 E	89,641.428
C.C.	N	79,334.639 E	89,635.685
Back = N	76° 10' 07" E		
Ahead = S	89° 40' 15" E		
Chord Bear = N	83° 14' 56" E		

Course from PT WORTHMAN2 to 29 S 89° 40' 15" E Dist 420.818

Point 29	N	80,332.205 E	90,062.239 Sta	123+85.12

Course from 29 to 30 S 89° 38' 56" E Dist 133.629

Point 30	N	80,331.386 E	90,195.865 Sta	125+18.75

Course from 30 to 31 S 89° 39' 24" E Dist 560.813

Point 31	N	80,328.026 E	90,756.668 Sta	130+79.56

Ending chain WORTHMAN description

Beginning chain PINE_ST description

Point 14	N	80,031.915 E	90,109.581 Sta	500+00.00

Course from 14 to 15 N 0° 41' 33" E Dist 300.000

Point 15	N	80,331.893 E	90,113.207 Sta	503+00.00

Course from 15 to 16 N 0° 41' 33" E Dist 300.000

Point 16	N	80,631.871 E	90,116.834 Sta	506+00.00

Ending chain PINE_ST description

Beginning chain NORTH_WATER description

Point 136	N	80,215.675 E	88,226.695 Sta	1+00.00

Course from 136 to 137 N 0° 32' 58" E Dist 400.000

Point 137	N	80,615.657 E	88,230.531 Sta	5+00.00

Course from 137 to 138 N 0° 32' 58" E Dist 800.000

Point 138	N	81,415.620 E	88,238.203 Sta	13+00.00

Course from 138 to 139 N 0° 32' 58" E Dist 326.000

Point 139	N	81,741.605 E	88,241.329 Sta	16+26.00

Course from 139 to 140 S 89° 40' 23" E Dist 12.500

Point 140	N	81,741.534 E	88,253.829 Sta	16+38.50

Course from 140 to 141 N 0° 32' 38" E Dist 50.012

Point 141	N	81,791.544 E	88,254.304 Sta	16+88.51

Course from 141 to 142 N 0° 32' 38" E Dist 156.433

Point 142	N	81,947.969 E	88,255.788 Sta	18+44.94

Ending chain NORTH_WATER description

Beginning chain WALKER_WATER description

Point 143	N	81,791.838 E	88,196.323 Sta	500+00.00

Course from 143 to 144 S 89° 42' 33" E Dist 375.264

Point 144	N	81,789.934 E	88,571.582 Sta	503+75.26

Course from 144 to 145 S 0° 17' 21" W Dist 72.000

Point 145	N	81,717.934 E	88,571.218 Sta	504+47.26

Course from 145 to 146 S 0° 17' 21" W Dist 22.704

Point 146	N	81,695.230 E	88,571.104 Sta	504+69.97

Ending chain WALKER_WATER description

HORIZONTAL ALIGNMENT & CONTROL

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GENERAL INFORMATION

ROADWAY DESIGN DIVISION.

LEGEND

- GAS LINE
- ELECTRICAL SERVICE
- POWER LINE
- OVERHEAD POWER LINE
- SANITARY SEWER
- STORM SEWER
- TELEPHONE LINE
- FIBER OPTIC TELE. LINE
- OVERHEAD TELEPHONE LINE
- CABLE TV LINE
- OVERHEAD CABLE TV LINE
- WATER LINE
- FENCE - CHAIN LINK
- FENCE - R.O.W. OR WIRE
- FENCE - WOOD
- FLOWLINE
- CENTER LINE DRIVE
- BENCH MARK
- CENTER PIVOT
- CONTROL POINT
- DIKE
- GAS METER
- GAS VALVE
- GRID TICK
- GUARDRAIL
- GUARD POST
- GUY POLE
- GUY WIRE
- OR LIGHT POLE
- MAILBOX
- MANHOLE
- MARSH
- OIL WELL
- PHOTO CODE POINT
- POWER BOX
- POWER POLE
- POWER PULL BOX
- PROPANE TANK
- R.O.W. MARKER
- ADVANCED R.R. WARNING SIGN
- RAILROAD WARNING
- RAILROAD TRACKS
- RETAINING WALL
- SATELLITE DISH
- SIGN
- TRAFFIC SIGNAL
- TRAFFIC SIGNAL/ST. LIGHT
- TELEPHONE BOX
- TELE. FIBER OPTICS BOX
- TELEPHONE PULL BOX
- TELEPHONE POLE
- TELEVISION BOX
- TREE - CONIFEROUS
- TREE - DECIDUOUS
- TREE STUMP
- WATER (FIRE) HYDRANT
- WATER VALVE
- WATER METER
- WELL
- WINDMILL

COMPACTION REQUIREMENTS

The following compaction requirements are recommended for the plans.

COMPACTION REQUIREMENTS
Class III (See Specifications)

	SOIL TYPE	DEPTH BELOW FINISH SUBGRADE	PERCENT DENSITY	MOISTURE REQUIREMENTS MINIMUM	MOISTURE REQUIREMENTS MAXIMUM
Embankment / Roadway Grading, including driveways, to receive concrete pavement	Silt-Clay	Upper 3 feet	98 Min.	Opt. -3%	Opt. +2%
	Silt-Clay	At depths greater than 3 feet	95 Min.	Opt. -3%	Opt. +2%
	Granular	All depths	100 Min.	**	**
Embankment / Roadway Grading, including driveways, to receive flexible pavement	Silt-Clay	Upper 3 feet	100 Min.	Opt. -2%	Opt. +1%
	Silt-Clay	At depths greater than 3 feet	95 Min.	Opt. -3%	Opt. +2%
	Granular	All depths	100 Min.	**	**
Embankment / Roadway Grading to receive gravel surfacing / crushed rock embedment	All	All depths	95 Min.	**	**
Embankment / Roadway Grading not to be surfaced	All	All depths	95 Min.	Opt. -3%	Opt. +2%
Subgrade Preparation, Shoulder Subgrade Preparation (Concrete Pavement)	Silt-Clay	The upper 6 inches of subgrade soil	98 Min.	Opt. -3%	Opt. +2%
	Granular	The upper 6 inches of subgrade soil	100 Min.	**	**
Subgrade Preparation, Shoulder Subgrade Preparation (Flexible Pavement)	Silt-Clay	The upper 6 inches of subgrade soil	100 Min.	Opt. -2%	Opt. +1%
	Granular	The upper 6 inches of subgrade soil	100 Min.	**	**
Embankment of driveways which are not to be surfaced	All	All depths	Class I	(See Specifications)	
Bituminous Pavement Patching	All	Underlying Material	100 Min.	(See Specifications)	
Foundation Course / Subgrade Stabilization	--	--	100 Min.	(See Specifications)	
Granular Structural Fill (MSE Walls, Granular Fill for bridges, Culverts, etc)	Granular	All depths	100 Min.	Opt. -3%	Opt. +3%

** Moisture as necessary to obtain density.
(A moisture target value at maximum density shall be established in the field by the Contractor during the compaction process. The acceptable moisture content shall be ± 2% of the target value.)

NOTES

The location of all aerial and underground utility facilities may not be indicated in these plans. Underground utilities, whether indicated or not will be located and flagged by the utilities at the request of the contractor. Utilities are located within the project area. Any utility relocation will be at the contractors expense. Nebraska One Call will be utilized.

No excavation will be permitted in the area of underground utility facilities until all such facilities have been located and identified to the satisfaction of all parties. The excavation must be accomplished with extreme care in order to avoid any possibility of damage to the utility facility.

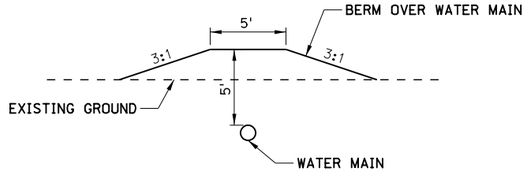
The Contractor will be required to furnish Borrow on this Project.

The Contractor shall furnish and maintain all necessary barricades, warning signs, lights and flaggers per the MUTCD and NDOT Standard Specifications. The Contractor shall inspect and verify all appropriate barricades and signs are placed accordingly and upright at the end of each construction day, or as directed by the Engineer.

Prior to construction, Contractor shall submit to the City Engineer for approval a traffic control plan and construction schedule for road closure. Contractor must give 48 hours notice prior to pavement or tree removals to the City Engineer.

Contractor to remove, salvage and reset any necessary traffic signs in their original location, unless noted otherwise.

Concrete washout stations shall be constructed as needed during the paving operations. This shall be considered subsidiary to other items receiving direct payment.



EARTH BERM DETAIL
NOT TO SCALE

EARTHWORK QUANTITIES

STATION TO STATION	EXCAVATION AVAILABLE (CU. YDS.)	EARTHWORK MEASURED IN EMBANKMENT (CU. YDS.)
105+15.17 - 106+93	22	602

NO BALANCE FACTOR APPLIED.

PROFESSIONAL CIVIL ENGINEER
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Date: 12-MAR-2025 09:02

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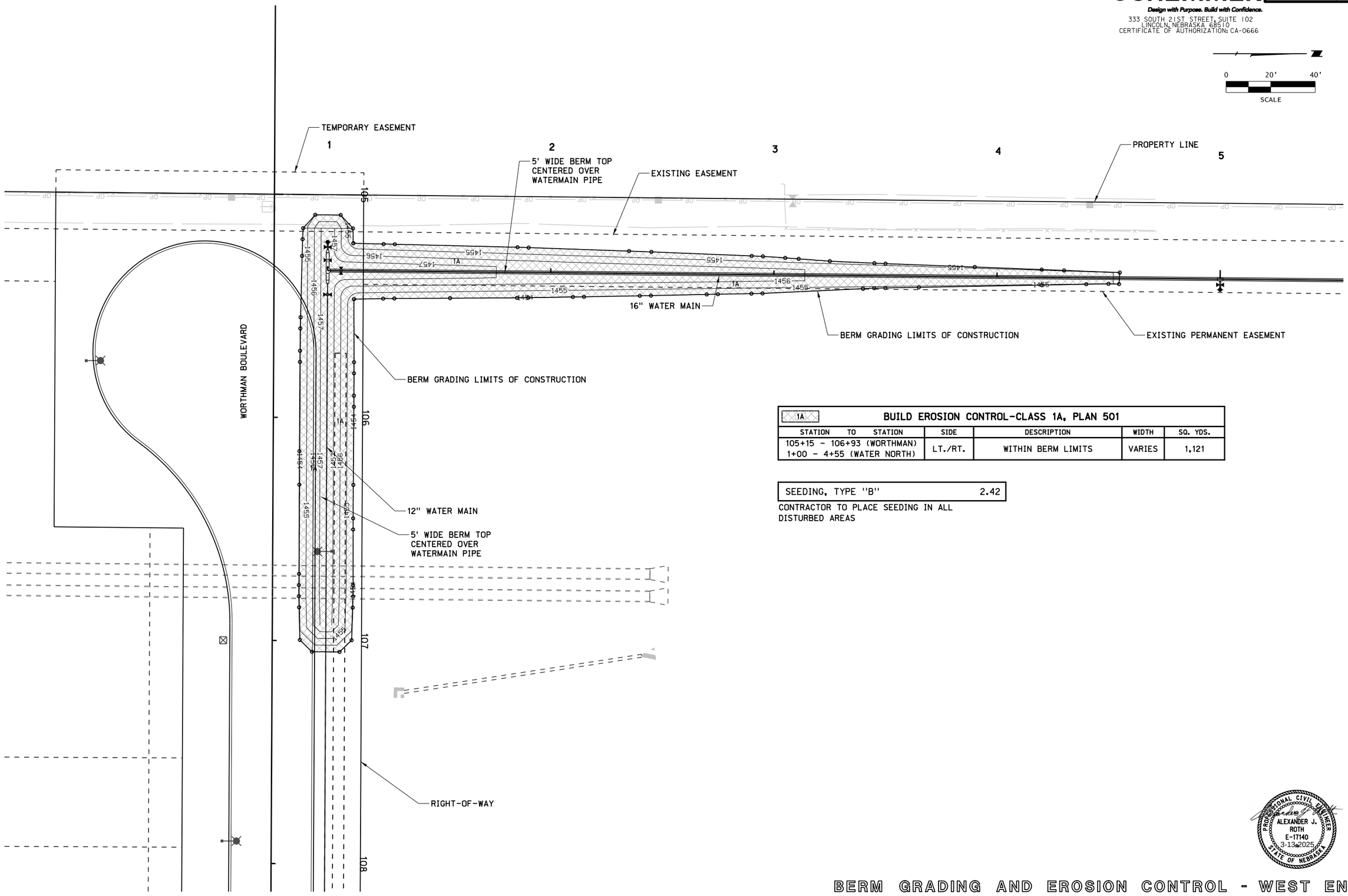
ROADWAY DESIGN DIVISION.



0 20' 40'
SCALE

1A	BUILD EROSION CONTROL-CLASS 1A, PLAN 501				
STATION TO STATION		SIDE	DESCRIPTION	WIDTH	SQ. YDS.
105+15 - 106+93 (WORTHMAN) 1+00 - 4+55 (WATER NORTH)		LT./RT.	WITHIN BERM LIMITS	VARIES	1,121

SEEDING, TYPE "B"	2.42

CONTRACTOR TO PLACE SEEDING IN ALL DISTURBED AREAS

PROFESSIONAL CIVIL ENGINEER
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E-17140
3-13-2025
STATE OF NEBRASKA

BERM GRADING AND EROSION CONTROL - WEST END

File: 09336001 Water Main Berm Grading.dgn
Scale: 1:40
Computer: LINMEGANS
Date: 13-MAR-2025 08:18

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PROJECT NO.	SHEET NO.
09336.001-B	J1

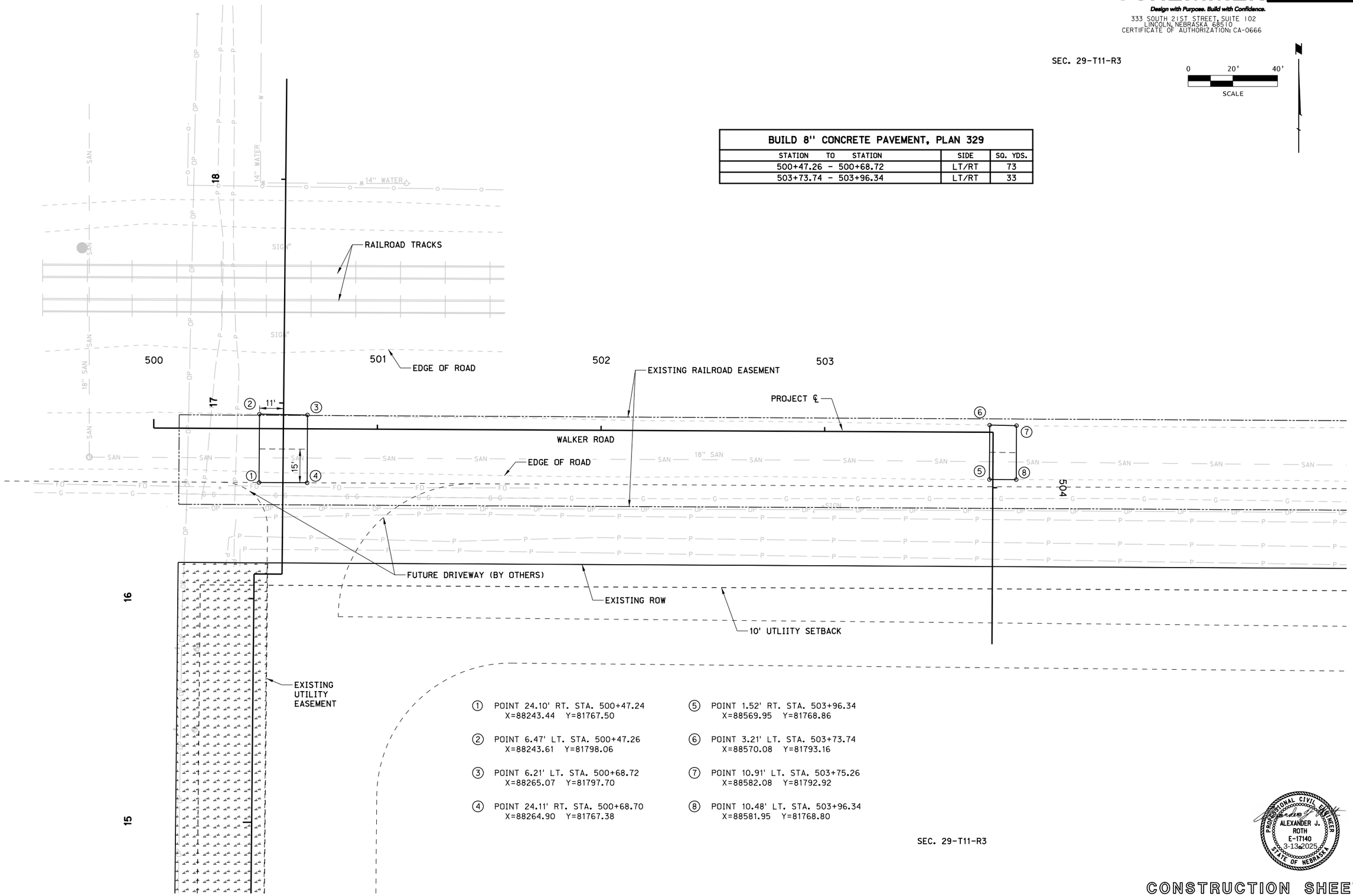
ROADWAY DESIGN DIVISION.

SEC. 29-T11-R3

0 20' 40'
SCALE

N

BUILD 8" CONCRETE PAVEMENT, PLAN 329		
STATION TO STATION	SIDE	SQ. YDS.
500+47.26 - 500+68.72	LT/RT	73
503+73.74 - 503+96.34	LT/RT	33



① POINT 24.10' RT. STA. 500+47.24
X=88243.44 Y=81767.50

② POINT 6.47' LT. STA. 500+47.26
X=88243.61 Y=81798.06

③ POINT 6.21' LT. STA. 500+68.72
X=88265.07 Y=81797.70

④ POINT 24.11' RT. STA. 500+68.70
X=88264.90 Y=81767.38

⑤ POINT 1.52' RT. STA. 503+96.34
X=88569.95 Y=81768.86

⑥ POINT 3.21' LT. STA. 503+73.74
X=88570.08 Y=81793.16

⑦ POINT 10.91' LT. STA. 503+75.26
X=88582.08 Y=81792.92

⑧ POINT 10.48' LT. STA. 503+96.34
X=88581.95 Y=81768.80

SEC. 29-T11-R3

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E-17140
3-13-2025
STATE OF NEBRASKA

CONSTRUCTION SHEET

File: 09336001 CR01 - Phase II.dgnPROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 13-MAR-2025 08:18
Computer: LINMEGANS
Scale: 1:40

ROADWAY DESIGN DIVISION.

SITE INFORMATION

SPRING 2025		CSW-202509449:Seward Worthman Water Main Phase II	
Estimated Start Date		NDEQ NOI Number	
WORTHMAN BOULEVARD WATER MAIN PHASE II			
Project Name		Address	
N/A	N/A	Seward	Seward
Subdivision Name	S&ID #	City	County
40.890372°	-97.107679°	Nebraska	68434
Latitude	Longitude	State	Zip Code

Total Site Area (Acres)	2.42	Estimated Permit Duration (Months)	12
Disturbed Area (Acres)	2.42		
Undisturbed Area (Acres)	0		

GENERAL NOTES

1. All OPERATORS/CONTRACTORS must confirm with the APPLICANT that any and all applicable governmental approvals have been received prior to the start of work.
2. BMP's may not be removed without INSPECTOR and applicable governmental approval.
3. The INSPECTOR will evaluate compliance with the applicable construction stormwater general permit commitments during Storm Event Inspections.
4. The INSPECTOR will perform inspections on projects regulated under the applicable construction stormwater general permit once every 14 days and within 24 hours or the next business day following a rain event of 0.25 inches of precipitation or greater; or every seven days.
5. The CONTRACTOR'S Environmental Representative is not required to accompany the Engineer on Storm Event Inspections.
6. Subject to storm events, inspections may begin on the first day of construction activities cause land disturbance and end on the date of project completion as evidenced by the completion date in the Construction Agreement.
7. The permitee is prohibited from discharging the following:

   Wastewater from the washout of concrete; except in approved concrete washout basin.

   Wastewater from the washout and cleanout of stucco, paint, form release oils, curing compounds, and other constructions materials;

   Fuels, oils, and other pullutants used in vehicle and equipment operation and maintenance; and

   Soaps or solvents used in vehicle equipments washing.
8. The permitee is authorized for the following non-stormwater discharges:
   a. Discharges from firefighting activities
   b. Fire hydrant flushings
   c. Water used to wash vehicles where detergents are not used
   d. Water used to control dust
   e. Potable water including uncontaminated water line flushings
   f. Routine external building wash down that does not use detergents
   g. Pavement wash water where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been recovered) and where detergents are not used
   h. Uncontaminated air conditioning or compressor condensate
   i. Uncontaminated groundwater or spring water
   j. Foundation or footing drains where flows are not contaminated with process materials such as solvent
   k. Landscape irrigation

File: 09336001_SWPP - Phase II.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Scale: 1:200 Date: 13-MAR-2025 10:59 Computer: LINMEGANS

PRELIMINARY PLAN
NOT FINAL - SUBJECT TO CHANGE

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MAINTENANCE SCHEDULE

The following Maintenance Schedule has been provided. The INSPECTOR must perform the inspections. The OPERATOR/CONTRACTOR must perform all needed maintenance. Furthermore, all erosion control feature requiring maintenance may not be listed below. The OPERATOR/CONTRACTOR and INSPECTOR must perform their respective duties on all BMP's that are not listed below as well.

1. Construction Entrance – The entrance shall be maintained in a condition which will prevent tracking or flow of sediment onto public rights-of-way. This may require periodic top dressing with additional stone or the washing and reworking of existing stone as conditions demand and repair and/or cleanout of any structures used to trap sediment. All materials spilled, dropped, washed, or tracked from vehicles onto roadways or into storm drains must be removed immediately. The use of water trucks to remove materials dropped, washed, or tracked onto roadways will not be permitted under any circumstances.

2. Silt Fence – The maintenance measures are as follows: (2.1) silt fences shall be inspected immediately after each rainfall and at least daily during prolonged rainfall, any required repairs shall be made immediately; (2.2) close attention shall be paid to the repair of damaged silt fence resulting from end runs and undercutting; (2.3) should the fabric on a silt fence decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, the fabric shall be replaced promptly; (2.4) sediment deposits must be removed when the level of deposition reaches approximately one-half the height of the barrier; and (2.5) any sediment deposits remaining in place after the silt fence is no longer required shall be dressed to conform to the existing grade, prepared and seeded.

3. Storm Drain Inlet Protection – The maintenance measures are as follows: (3.1) structures shall be inspected after each rain and repairs made as necessary and (3.2) structures shall be removed and the area stabilized when the remaining drainage area has been properly stabilized.

4. Temporary Diversion Dike – The measure shall be inspected after every storm and repairs made to the dike, flow channel, outlet or sediment trapping facility, as necessary. Once every two weeks, whether a storm event has occurred or not, the measure shall be inspected and repairs made if needed. Damages caused by construction traffic or other activity must be repaired before the end of each working day.

5. Temporary Fill Diversion – Since the practice is temporary and under most situations will be covered the next working day. The maintenance required should be low. If the practice is to remain in use for more than one day, an inspection shall be made at the end of each work day and repairs made to the measure if needed. The OPERATOR/CONTRACTOR should avoid the placement of any material over the structure while it is in use. Construction traffic should not be permitted to cross the diversion.

6. Temporary Sediment Trap – The maintenance measures are as follows: (6.1) sediment shall be removed and the trap restored to its original dimensions when the sediment has accumulated to one half the design volume of the wet storage, sediment removal from the basin shall be deposited in a suitable area and in such a manner that it will not erode and cause sedimentation problems; (6.2) filter stone shall be regularly checked to ensure that filtration performance is maintained, stone choked with sediment shall be removed and cleaned or replaced; and (6.3) the structure should be checked regularly to ensure that it is structurally sound and has not been damaged by erosion or construction equipment, the height of the stone outlet should be checked to ensure that its center is at least 1 foot below the top of the embankment.

7. Temporary Sediment Basin – The basin embankment should be checked regularly to ensure that it is structurally sound and has not been damaged by erosion or construction equipment. The emergency spillway should be checked regularly to ensure that its lining is well established and erosion-resistant. The basin should be checked after each runoff producing rainfall for sediment cleanout and trash removal. When the sediment reaches the cleanout level, it shall be removed and properly disposed of.

8. Temporary Seeding – Areas which fail to establish vegetative cover adequate to prevent rill erosion will be re-seeded as soon as such areas are identified. Control weeds by mowing.

9. Permanent Seeding – The maintenance measures are as follows: (9.1) in general, a stand of vegetation cannot be determined to be fully established until it has been maintained for one full year after planning; (9.2) new seedlings shall be supplied with adequate moisture, supply water as needed, especially late in the season, in abnormally hot or dry conditions, or on adverse sites, water applications shall be controlled to prevent excessive runoff; (9.3) inspect all seeded areas for failures and make necessary repairs, replacements, and reseedings within the planting season, if possible; [9.3.a] if stand is inadequate for erosion control, over seed and fertilize using half of the rates originally specified; [9.3.b] if stand is 60% damaged, re-establish following seedbed and seeding recommendations; [9.3.c] if stand has less than 40% cover, re-evaluate choice of plant materials and quantities of lime and fertilizer, the soil must be tested to determine if acidity or nutrient imbalances are responsible, re-establish the stand following seedbed and seeding recommendations.

10. Mulching – All mulches and soil coverings should be inspected periodically (particularly after rainstorms) to check for erosion. Where erosion is observed in mulched areas, additional mulch should be applied. Nets and mats should be inspected after rainstorms for dislocation or failure. If washouts or breakage occur, reinstall netting or matting as necessary after repairing damage to the slope or ditch. Inspections should take place until grasses are firmly established. Where mulch is used in conjunction with ornamental plantings, inspect periodically throughout the year to determine if mulch is maintaining coverage of the soil surface; repair as needed.

11. Soil Stabilization Blankets & Matting – All soil stabilization blankets and matting should be inspected periodically following installation, particularly after rainstorms to check for erosion and undermining. Any dislocation or failure should be repaired immediately. If washouts or breakage occurs, reinstall the material after repairing damage to the slope or ditch. Continue to monitor these areas until which time they become permanently stabilized; at that time an annual inspections should be adequate.

12. Street Cleaning / Sweeping – The maintenance measures are as follows: (12.1) evaluate access points daily for sediment tracking; (12.2) when tracked or spilled sediment is found on paved surfaces, it will be removed daily, during times of heavy track-out, such as during rains, cleaning may be done several times throughout the day; (12.3) unknown spills or objects will not be mixed with the sediment; and (12.4) if sediment is mixed with other pollutants, it will be disposed of properly at an authorized landfill.

CONSTRUCTION ACTIVITIES & SCHEDULING

ACTIVITY	SCHEDULE
Install all BMP's needed and associated with the Grading Phase such as stabilized construction entrances, silt basins, riser pipes, outlet pipes, silt traps, silt fence, diversions, terraces, and etcetera.	Prior to any stripping of existing vegetation or grading.
Proceed with stripping of existing vegetation and grading in accordance with the grading plan, while disturbing no more than necessary.	After Installing all BMP's needed and associated with the Grading Phase. Furthermore, INSPECTOR approval must be obtained before the start of any stripping of existing vegetation or grading.
Proceed with infrastructure installation.	Infrastructure installation must occur prior to any lot development.
Implement the installation of Temporary Seeding, Permanent Seeding, and/or Mulching.	Stabilization measures must be initiated as soon as possible in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased
Implement the installation all BMP's needed and associated with the Building Phase.Building	Building Phase BMP's must be installed concurrently with lot development.
Proceed with removal of BMP's.	BMP's may not be removed until each impacted drainage basin has been fully developed. Full development shall mean installation of pavement, buildings, and utilities, landscaping, and fully established permanent seeding. Furthermore, INSPECTOR approval must be obtained before the removal of any BMP's.

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STORM WATER POLLUTION PREVENTION PLAN

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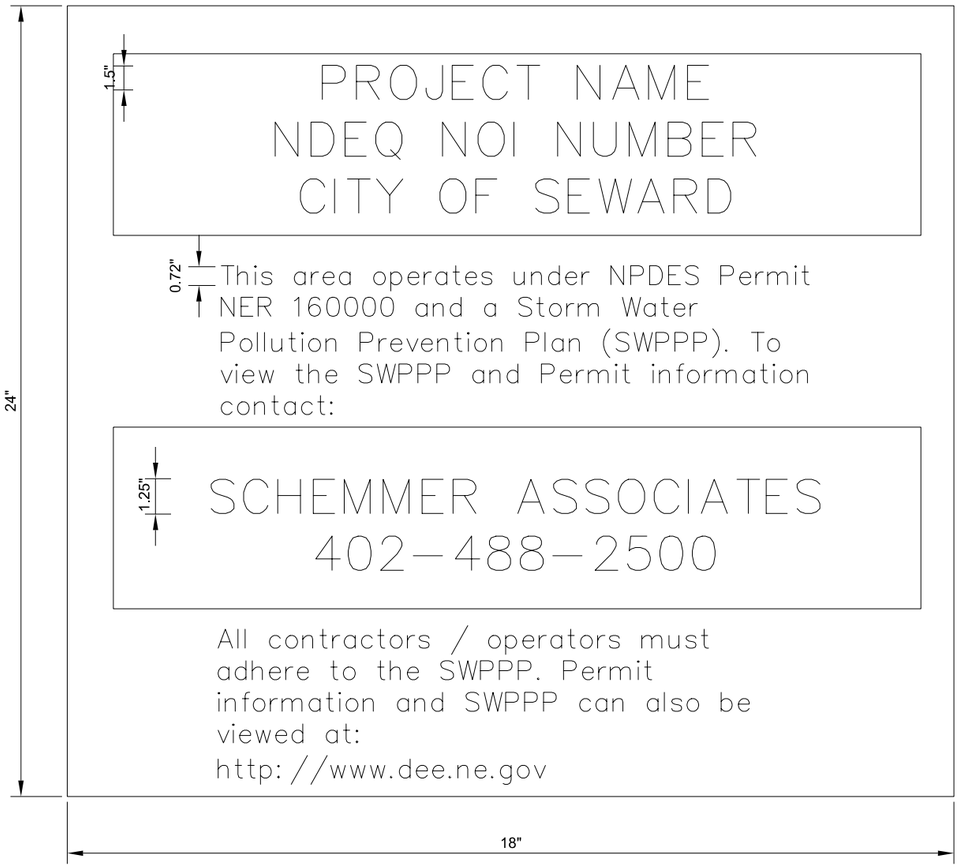
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336.001-B	J3



SWPPP NOTIFICATION SIGN

1. *POST AT ENTRANCES TO CONSTRUCTION PROJECTS.*
2. *PROVIDE STURDY BACKING & POST FOR SIGNS.*

STORM WATER POLLUTION PREVENTION PLAN

File: 09336001_SWPP - Phase II.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD. SEWARD, NE
Scale: 1:200 Date: 13-MAR-2025 10:59 Computer: LINMEGANS

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CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-B	K1
C.N.	

WATER MAIN

NO.	STATION TO STATION	SIDE	SIZE	L.F.
1	105+26.11 - 105+29.48	24' LT.	16"	4
2	105+29.48 - 105+34.10	24' LT.	16"	5
3	105+34.10	24'-30' LT.	16"	6
4	105+34.10 - 105+38.36	24' LT.	16"	7
5	105+40.10 - 110+25.11	24' LT.	12"	485

DUCTILE IRON WATER MAIN FITTINGS, M.J.

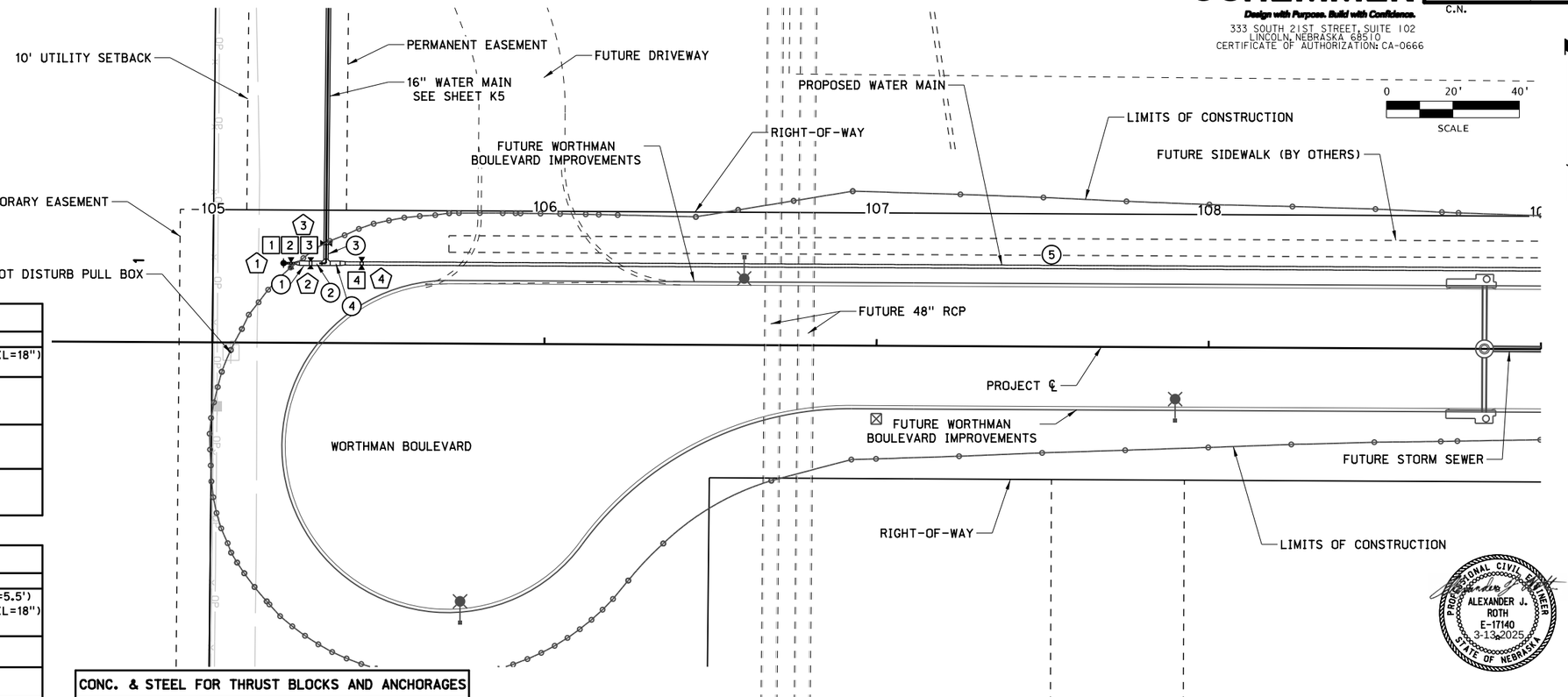
NO.	STATION	OFFSET	DESCRIPTION
1	105+24.61	24' LT.	1 - 6" ANCHORING COUPLING, M.J.(L=18") 2 - 6" RETAINER GLANDS
2	105+26.11	24' LT.	1 - 16"x6" REDUCER, M.J. 1 - 16" RETAINER GLAND 1 - 6" RETAINER GLAND
3	105+34.10	24' LT.	1 - 16"x16" TEE, M.J. 3 - 16" RETAINER GLAND 1 - 16" TEE BLOCK
4	105+38.36	24' LT.	1 - 16"x12" REDUCER, M.J. 1 - 16" RETAINER GLAND 1 - 12" RETAINER GLAND

WATER VALVE AND/OR HYDRANT

NO.	STATION	OFFSET	DESCRIPTION
1	105+21.33	24.00' LT.	1 - HYDRANT COMPLETE (TYPE V, L=5.5') 1 - 6" ANCHORING COUPLING, M.J. (L=18") 1 - 6" GATE VALVE, M.J.
2	105+29.48	24.00' LT.	1 - 16" BUTTERFLY VALVE, M.J. 2 - 16" RETAINER GLANDS
3	105+34.13	30.00' LT.	1 - 16" BUTTERFLY VALVE, M.J. 2 - 16" RETAINER GLANDS
4	105+44.86	24.00' LT.	1 - 12" GATE VALVE, M.J. 2 - 12" RETAINER GLANDS

CONC. & STEEL FOR THRUST BLOCKS AND ANCHORAGES

STATION	OFFSET	SIZE	CONC (CY)	STEEL (LB)
105+34.10	24' LT.	16"	1.0	42.8



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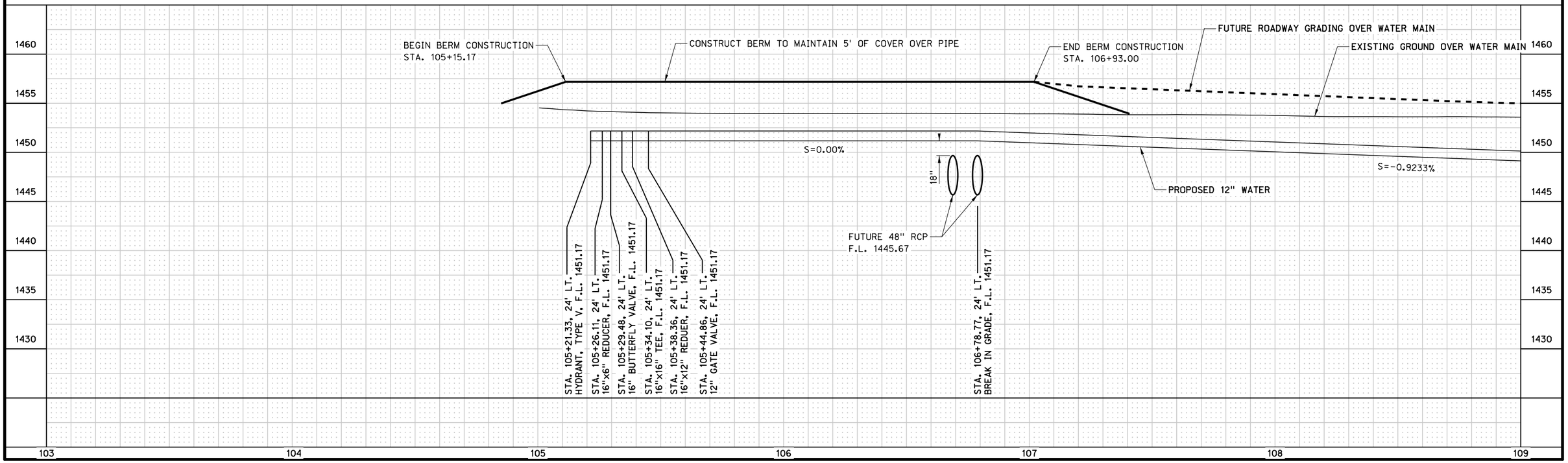
3-13-2025
STATE OF NEBRASKA

WATER MAIN



File: 09336001 PW01 - Phase II.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD. SEWARD, NE
Scale: 1:40 Date: 12-MAR-2025 09:02 Computer: LINMEGANS

ROADWAY DESIGN DIVISION.

DUCTILE IRON WATER MAIN FITTINGS, M.J.

NO.	STATION	OFFSET	DESCRIPTION
5	110+25.11	24' LT.	1 - 12"x6" TEE, M.J. 2 - 12" RETAINER GLANDS 1 - 6" RETAINER GLAND 1 - 6" TEE BLOCK
6	111+65.00	22.13' LT.	1 - 12"x11.25 DEG BEND, M.J. 2 - 12" RETAINER GLANDS 1 - 12" THRUST BLOCK
7	113+49.65	24' LT.	1 - 12"x11.25 DEG BEND, M.J. 2 - 12" RETAINER GLANDS 1 - 12" THRUST BLOCK
8	114+04.68	24' LT.	1 - 12"x45 DEG BEND, M.J. 2 - 12" RETAINER GLANDS 1 - 12"x45° ANCHORAGE

DUCTILE IRON WATER MAIN FITTINGS, M.J.

NO.	STATION	OFFSET	DESCRIPTION
9	114+14.04	24' LT.	1 - 12"x45 DEG BEND, M.J. 2 - 12" RETAINER GLANDS 1 - 12" THRUST BLOCK
10	114+38.36	24' LT.	1 - 12"x45 DEG BEND, M.J. 2 - 12" RETAINER GLANDS 1 - 12" THRUST BLOCK
11	114+50.29	24' LT.	1 - 12"x45 DEG BEND, M.J. 2 - 12" RETAINER GLANDS 1 - 12"x45° ANCHORAGE
12	114+99.88	24' LT.	1 - 12"x6" TEE, M.J. 2 - 12" RETAINER GLANDS 1 - 6" RETAINER GLAND 1 - 6" TEE BLOCK

WATER MAIN

NO.	STATION TO STATION	SIDE	SIZE	L.F.
6	110+25.11 - 111+65.00	24' LT.	12"	139
7	111+65.00 - 113+49.65	24' LT.	12"	182
8	113+49.65 - 114+04.68	24' LT.	12"	55
9	114+04.68 - 114+14.04	24' LT.	12"	10
10	114+14.04 - 114+38.36	24' LT.	12"	25
11	114+38.36 - 114+50.29	24' LT.	12"	12
12	114+50.29 - 114+99.88	24' LT.	12"	50

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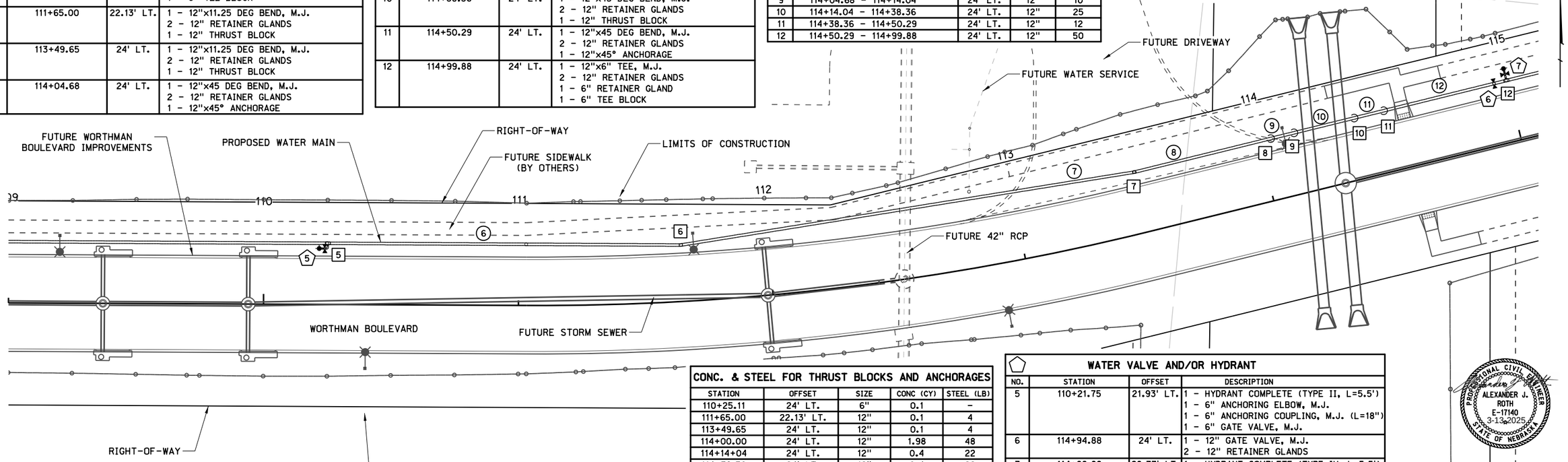
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-B	K2

C.N.

0 20' 40'
SCALE



CONC. & STEEL FOR THRUST BLOCKS AND ANCHORAGES

STATION	OFFSET	SIZE	CONC (CY)	STEEL (LB)
110+25.11	24' LT.	6"	0.1	-
111+65.00	22.13' LT.	12"	0.1	4
113+49.65	24' LT.	12"	0.1	4
114+00.00	24' LT.	12"	1.98	48
114+14+04	24' LT.	12"	0.4	22
114+38.36	24' LT.	12"	0.4	22
114+50.29	24' LT.	12"	1.98	48
114+99.88	24' LT.	6"	0.1	-

WATER VALVE AND/OR HYDRANT

NO.	STATION	OFFSET	DESCRIPTION
5	110+21.75	21.93' LT.	1 - HYDRANT COMPLETE (TYPE II, L=5.5') 1 - 6" ANCHORING ELBOW, M.J. 1 - 6" ANCHORING COUPLING, M.J. (L=18") 1 - 6" GATE VALVE, M.J.
6	114+94.88	24' LT.	1 - 12" GATE VALVE, M.J. 2 - 12" RETAINER GLANDS
7	114+99.88	28.77' LT.	1 - HYDRANT COMPLETE (TYPE IV, L=5.5') 1 - 6" ANCHORING COUPLING, M.J. (L=18") 1 - 6" GATE VALVE, M.J.

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3-13-2025
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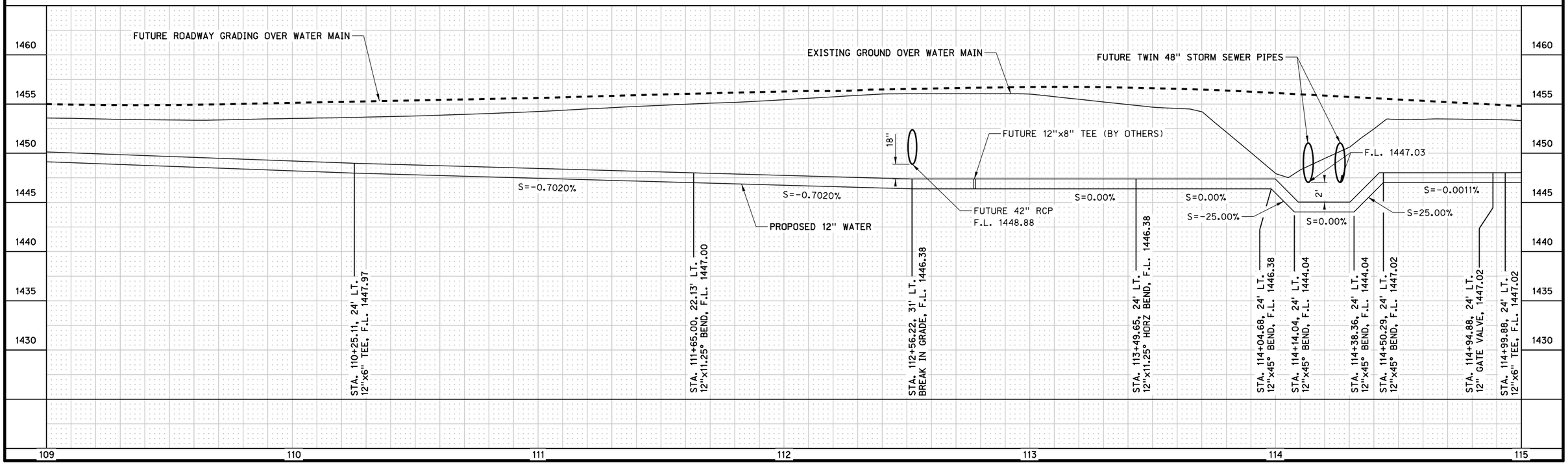
WATER MAIN



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PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 09:02
Computer: LINMEGANS

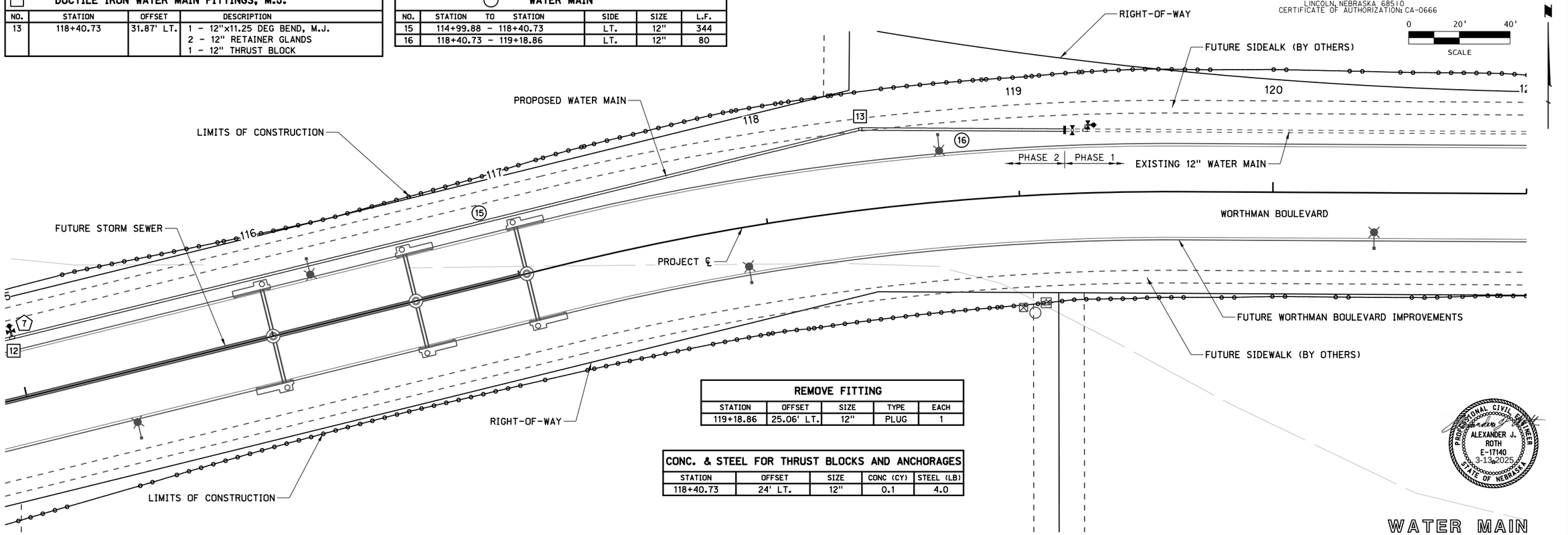
ROADWAY DESIGN DIVISION.

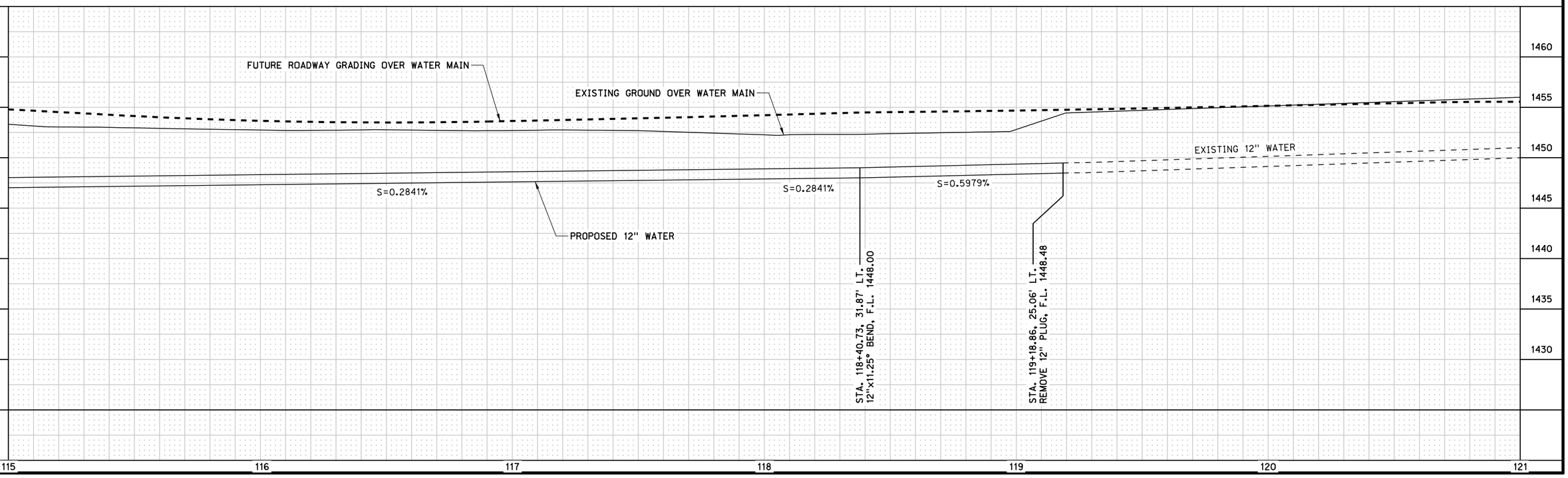
DUCTILE IRON WATER MAIN FITTINGS, M.J.			
NO.	STATION	OFFSET	DESCRIPTION
13	118+40.73	31.87' LT.	1 - 12"x11.25 DEG BEND, M.J. 2 - 12" RETAINER GLANDS 1 - 12" THRUST BLOCK

WATER MAIN				
NO.	STATION TO STATION	SIDE	SIZE	L.F.
15	114+99.88 - 118+40.73	LT.	12"	344
16	118+40.73 - 119+18.86	LT.	12"	80

REMOVE FITTING				
STATION	OFFSET	SIZE	TYPE	EACH
119+18.86	25.06' LT.	12"	PLUG	1

CONC. & STEEL FOR THRUST BLOCKS AND ANCHORAGES				
STATION	OFFSET	SIZE	CONC (CY)	STEEL (LB)
118+40.73	24' LT.	12"	0.1	4.0





WATER MAIN

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PROJECT NO.	SHEET NO.
09336001-B	K3
C.N.	

0 20' 40'
SCALE

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

File: 09336001 PW03 - Phase II.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD. SEWARD, NE
Scale: 1:40 Date: 12-MAR-2025 09:02 Computer: LINMEGANS

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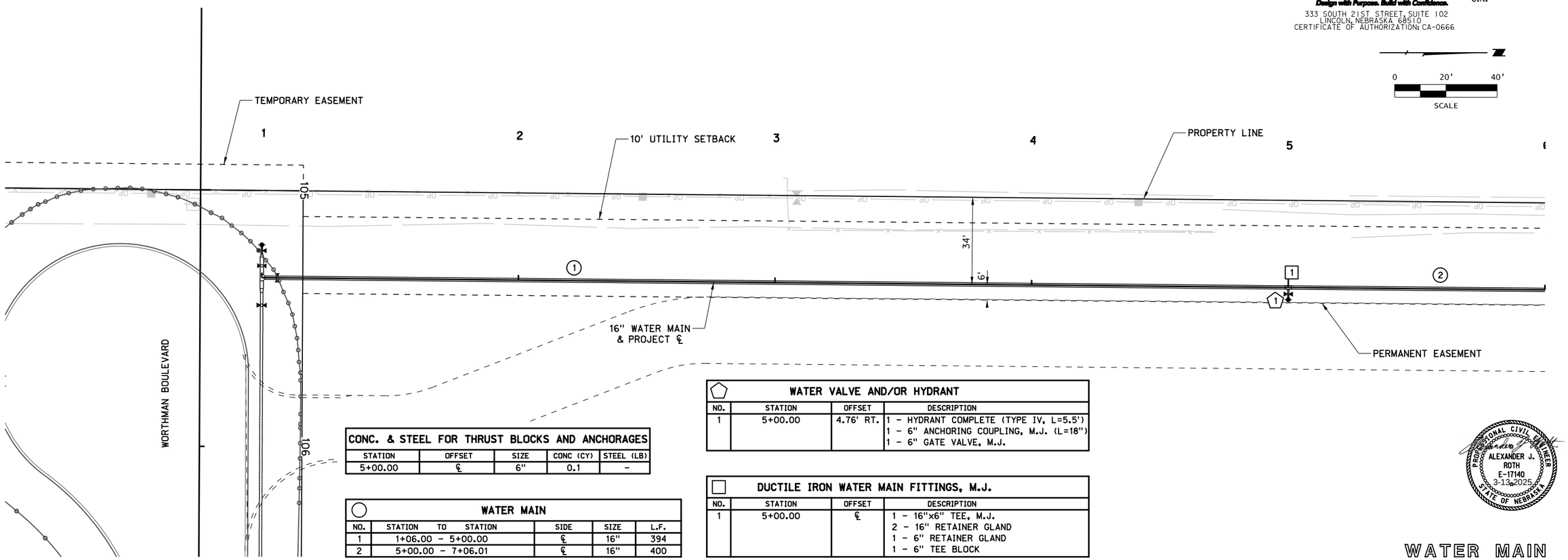
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-B	K4

C.N.

0 20' 40'
SCALE



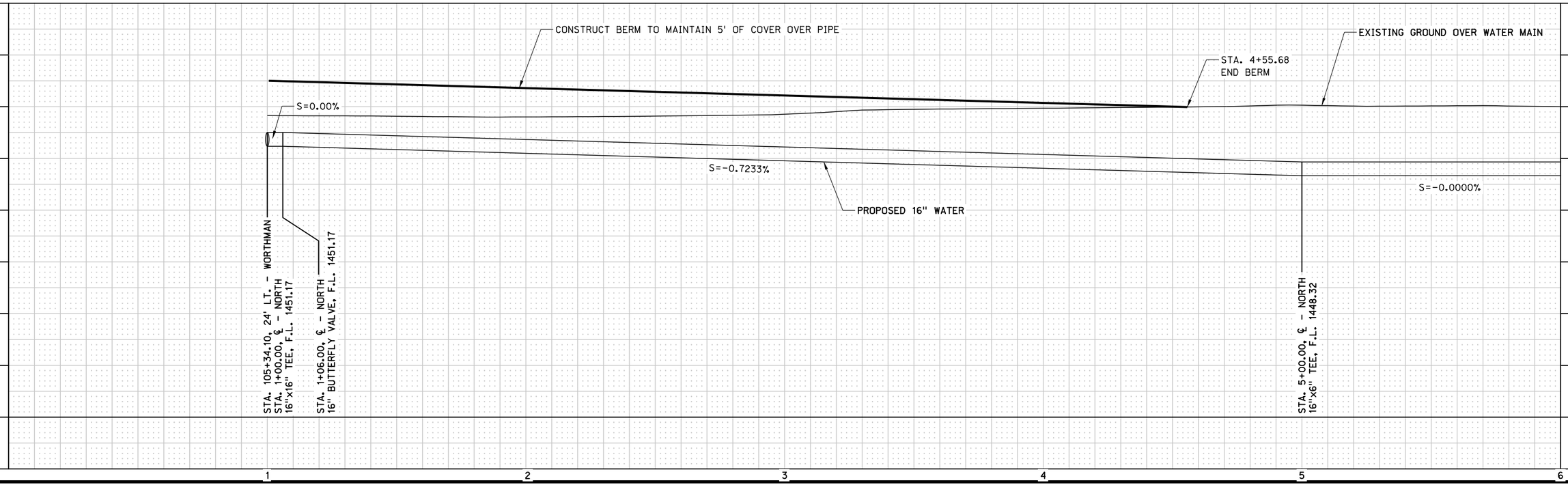
CONC. & STEEL FOR THRUST BLOCKS AND ANCHORAGES				
STATION	OFFSET	SIZE	CONC (CY)	STEEL (LB)
5+00.00	℄	6"	0.1	-

WATER MAIN				
NO.	STATION TO STATION	SIDE	SIZE	L.F.
1	1+06.00 - 5+00.00	℄	16"	394
2	5+00.00 - 7+06.01	℄	16"	400

WATER VALVE AND/OR HYDRANT			
NO.	STATION	OFFSET	DESCRIPTION
1	5+00.00	4.76' RT.	1 - HYDRANT COMPLETE (TYPE IV, L=5.5') 1 - 6" ANCHORING COUPLING, M.J. (L=18") 1 - 6" GATE VALVE, M.J.

DUCTILE IRON WATER MAIN FITTINGS, M.J.			
NO.	STATION	OFFSET	DESCRIPTION
1	5+00.00	℄	1 - 16"x6" TEE, M.J. 2 - 16" RETAINER GLAND 1 - 6" RETAINER GLAND 1 - 6" TEE BLOCK

WATER MAIN



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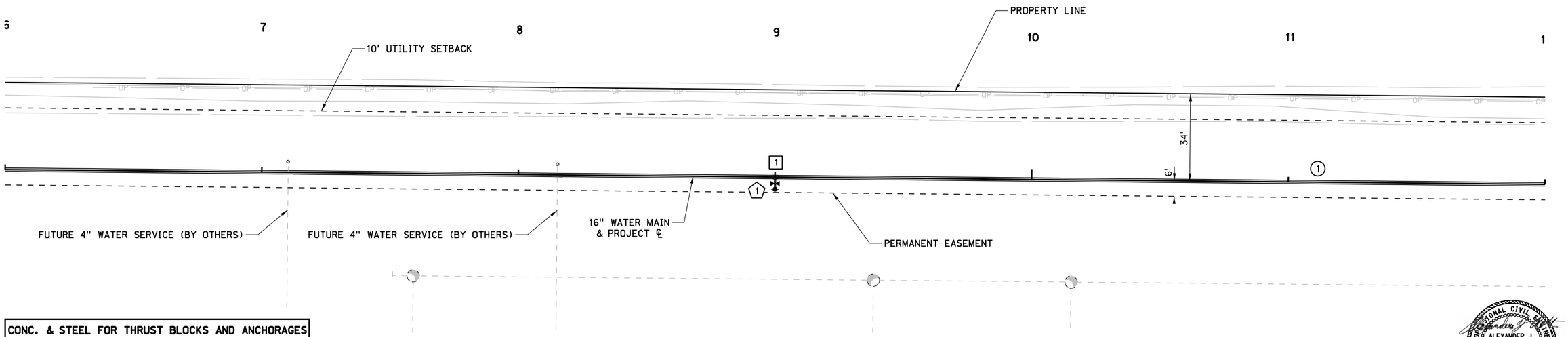
PROJECT NO.	SHEET NO.
09336001-B	K5

C.N.

ROADWAY DESIGN DIVISION.

0 20' 40'
SCALE



CONC. & STEEL FOR THRUST BLOCKS AND ANCHORAGES				
STATION	OFFSET	SIZE	CONC (CY)	STEEL (LB)
9+00.00	℄	6"	0.1	-

○ WATER MAIN				
NO.	STATION TO STATION	SIDE	SIZE	L.F.
1	9+00.00 - 13+00.00	℄	12"	400

⬠ WATER VALVE AND/OR HYDRANT			
NO.	STATION	OFFSET	DESCRIPTION
1	9+00.00	4.77' RT.	1 - HYDRANT COMPLETE (TYPE IV, L=5.5') 1 - 6" ANCHORING COUPLING, M.J. (L=18") 1 - 6" GATE VALVE, M.J.

□ DUCTILE IRON WATER MAIN FITTINGS, M.J.			
NO.	STATION	OFFSET	DESCRIPTION
1	9+00.00	℄	1 - 16"x6" TEE, M.J. 2 - 16" RETAINER GLAND 1 - 6" RETAINER GLAND 1 - 6" TEE BLOCK

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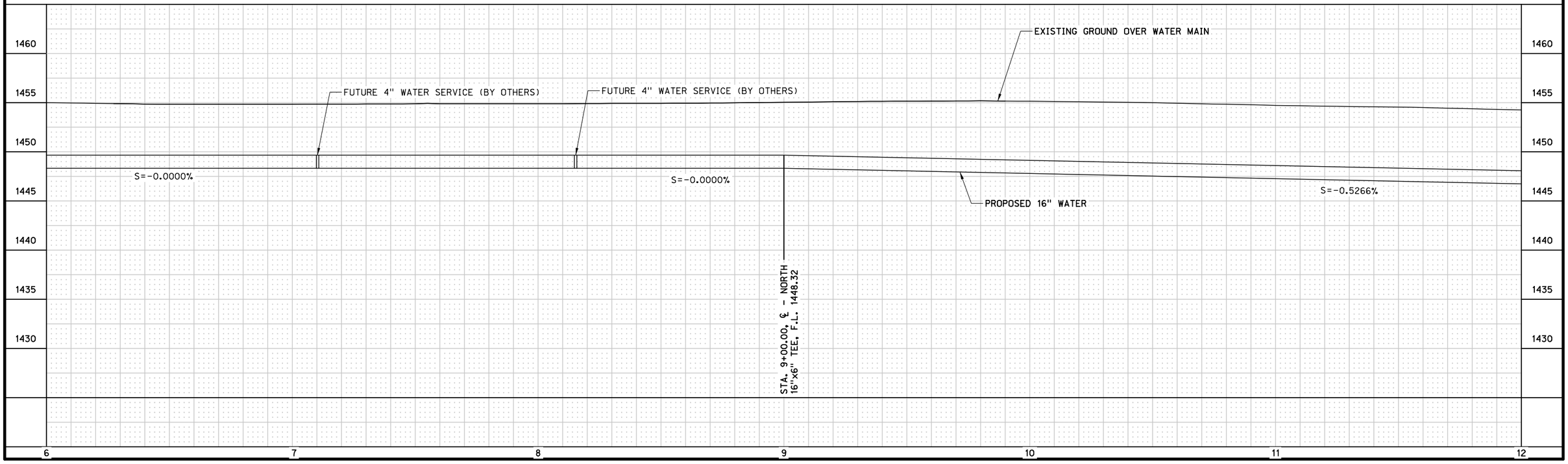
E-17140
3-13-2025
PROFESSIONAL CIVIL ENGINEER
STATE OF NEBRASKA

WATER MAIN



File: 09336001 PW06 - Phase II.dgn
Scale: 1:40
PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 12-MAR-2025 09:02
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PROJECT NO.	SHEET NO.
09336001-B	K6
C.N.	

DUCTILE IRON WATER MAIN FITTINGS, M.J.

NO.	STATION	OFFSET	DESCRIPTION
1	13+00.00	℄	1 - 16"x6" TEE, M.J. 2 - 16" RETAINER GLANDS 1 - 6" RETAINER GLAND 1 - 6" TEE BLOCK
2	15+95.00	℄	1 - 16"x6" TEE, M.J. 2 - 16" RETAINER GLANDS 1 - 6" RETAINER GLAND 1 - 6" TEE BLOCK
3	16+11.00	℄	1 - 16"x90° BEND, M.J. 2 - 16" RETAINER GLANDS 1 - 16" THRUST BLOCK

DUCTILE IRON WATER MAIN FITTINGS, M.J.

NO.	STATION	OFFSET	DESCRIPTION
4	16+23.50	℄	1 - 16"x90° BEND, M.J. 2 - 16" RETAINER GLANDS 1 - 16" THRUST BLOCK
5	16+88.50	℄	1 - 16"x12" CROSS, M.J. 2 - 16" RETAINER GLANDS 2 - 12" RETAINER GLANDS
6	16+93.50	℄	1 - 16" PLUG, M.J. 1 - 16" RETAINER GLAND 1 - 16" PLUG BLOCK

WATER MAIN

NO.	STATION TO STATION	SIDE	SIZE	L.F.
1	13+00.00 - 16+26.00	℄	16"	325
2	16+26.00 - 16+38.50	℄	16"	13
3	16+38.50 - 16+88.50	℄	16"	50
4	16+90.14 - 16+93.50	℄	16"	3

WATER VALVE AND/OR HYDRANT

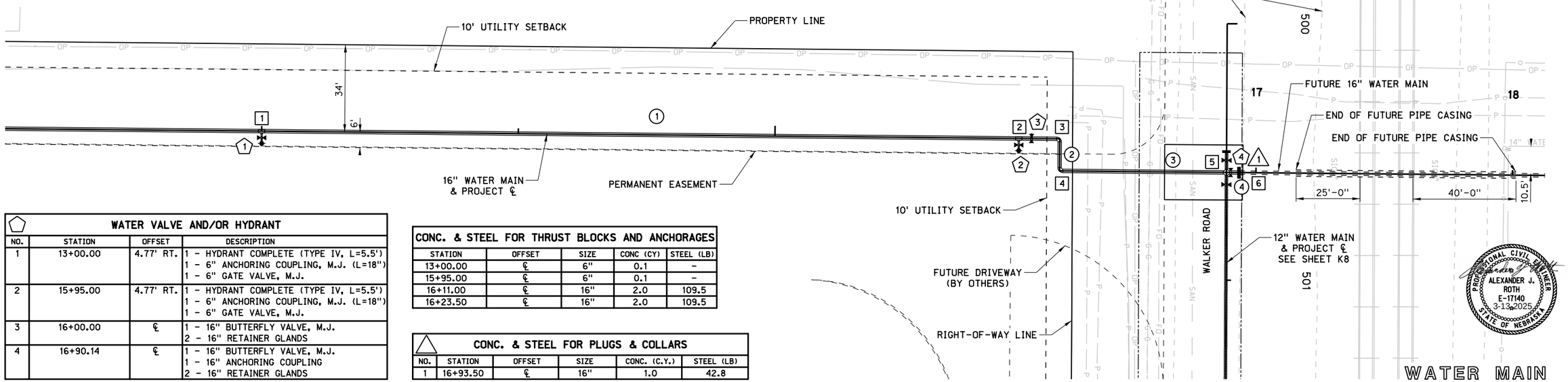
NO.	STATION	OFFSET	DESCRIPTION
1	13+00.00	4.77' RT.	1 - HYDRANT COMPLETE (TYPE IV, L=5.5') 1 - 6" ANCHORING COUPLING, M.J. (L=18") 1 - 6" GATE VALVE, M.J.
2	15+95.00	4.77' RT.	1 - HYDRANT COMPLETE (TYPE IV, L=5.5') 1 - 6" ANCHORING COUPLING, M.J. (L=18") 1 - 6" GATE VALVE, M.J.
3	16+00.00	℄	1 - 16" BUTTERFLY VALVE, M.J. 2 - 16" RETAINER GLANDS
4	16+90.14	℄	1 - 16" BUTTERFLY VALVE, M.J. 1 - 16" ANCHORING COUPLING 2 - 16" RETAINER GLANDS

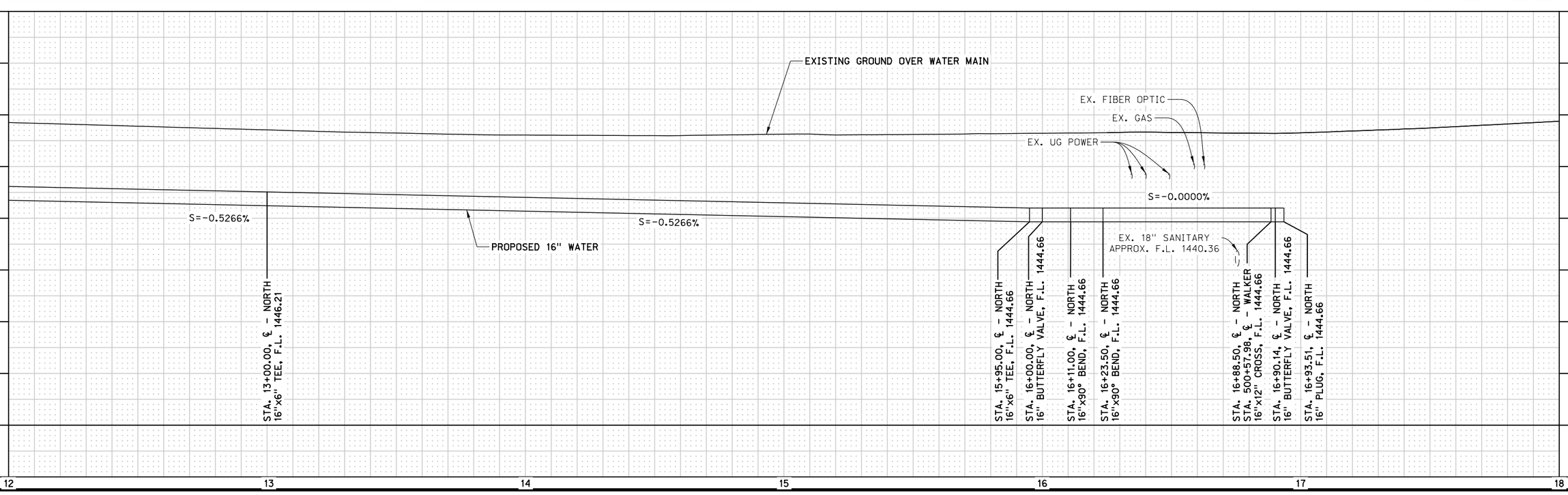
CONC. & STEEL FOR THRUST BLOCKS AND ANCHORAGES

STATION	OFFSET	SIZE	CONC (CY)	STEEL (LB)
13+00.00	℄	6"	0.1	-
15+95.00	℄	6"	0.1	-
16+11.00	℄	16"	2.0	109.5
16+23.50	℄	16"	2.0	109.5

CONC. & STEEL FOR PLUGS & COLLARS

NO.	STATION	OFFSET	SIZE	CONC. (C.Y.)	STEEL (LB)
1	16+93.50	℄	16"	1.0	42.8





ALEXANDER J. ROTH
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E-17140
3-13-2025
STATE OF NEBRASKA

WATER MAIN

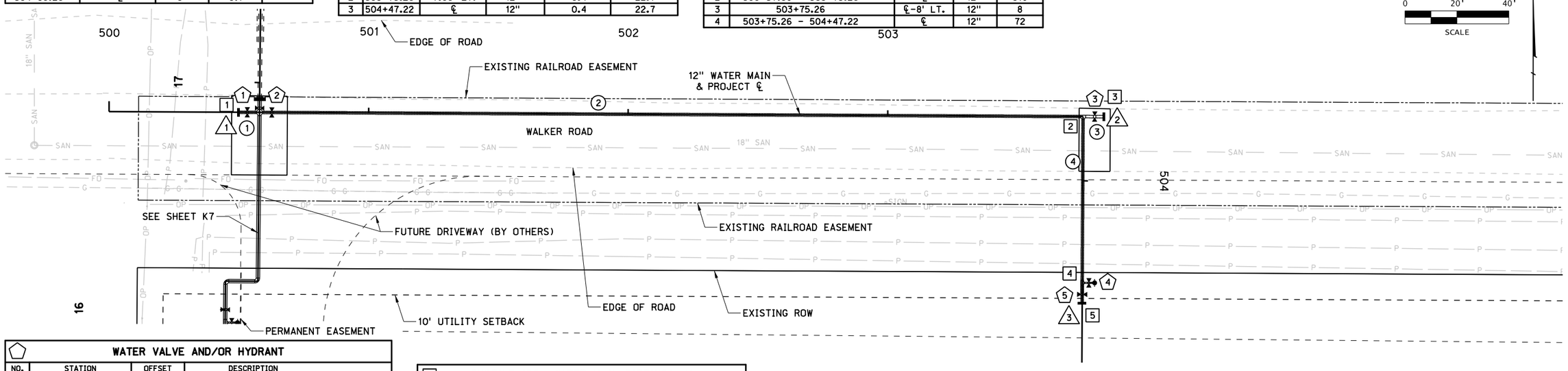
File: 09336001 PW07 - Phase II.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Scale: 1:40 Date: 13-MAR-2025 08:19 Computer: LINNEGANS

ROADWAY DESIGN DIVISION.

CONC. & STEEL FOR THRUST BLOCKS AND ANCHORAGES				
STATION	OFFSET	SIZE	CONC (CY)	STEEL (LB)
503+75.26	℄	12"	0.4	22.7
504+39.26	℄	6"	0.1	-

△ CONC. & STEEL FOR PLUGS & COLLARS					
NO.	STATION	OFFSET	SIZE	CONC. (C.Y.)	STEEL (LB)
1	500+49.78	℄	12"	0.4	22.7
2	503+75.26	7.96' LT.	12"	0.4	22.7
3	504+47.22	℄	12"	0.4	22.7

○ WATER MAIN				
NO.	STATION TO STATION	SIDE	SIZE	L.F.
1	500+49.78 - 500+57.98	℄	12"	8
2	500+57.98 - 503+75.26	℄	12"	318
3	503+75.26	℄-8' LT.	12"	8
4	503+75.26 - 504+47.22	℄	12"	72



⬠ WATER VALVE AND/OR HYDRANT			
NO.	STATION	OFFSET	DESCRIPTION
1	500+53.26	℄	1 - 12" GATE VALVE, M.J. 2 - 12" RETAINER GLANDS
2	500+62.71	℄	1 - 12" GATE VALVE, M.J. 2 - 12" RETAINER GLANDS
3	500+75.26	4.48' LT.	1 - 12" GATE VALVE, M.J. 2 - 12" RETAINER GLANDS
4	504+47.26	4.77' LT.	1 - HYDRANT COMPLETE (TYPE IV, L=5.5') 1 - 6" ANCHORING COUPLING, M.J. (L=18") 1 - 6" GATE VALVE, M.J.
5	504+43.74	℄	1 - 12" GATE VALVE, M.J. 2 - 12" RETAINER GLANDS

□ DUCTILE IRON WATER MAIN FITTINGS, M.J.			
NO.	STATION	OFFSET	DESCRIPTION
1	500+49.78	℄	1 - 12" PLUG, M.J. 1 - 12" RETAINER GLAND 1 - 12" PLUG BLOCK
2	503+75.26	℄	1 - 12"x12" TEE, M.J. 3 - 12" RETAINER GLANDS 1 - 12" TEE BLOCK
3	503+75.26	7.96' LT.	1 - 12" PLUG, M.J. 1 - 12" RETAINER GLAND 1 - 12" PLUG BLOCK

□ DUCTILE IRON WATER MAIN FITTINGS, M.J.			
NO.	STATION	OFFSET	DESCRIPTION
4	504+39.26	℄	1 - 12"x6" TEE, M.J. 2 - 12" RETAINER GLANDS 1 - 6" RETAINER GLAND 1 - 6" TEE BLOCK
5	504+47.22	℄	1 - 12" PLUG, M.J. 1 - 12" RETAINER GLAND 1 - 12" PLUG BLOCK

SCHEMMER
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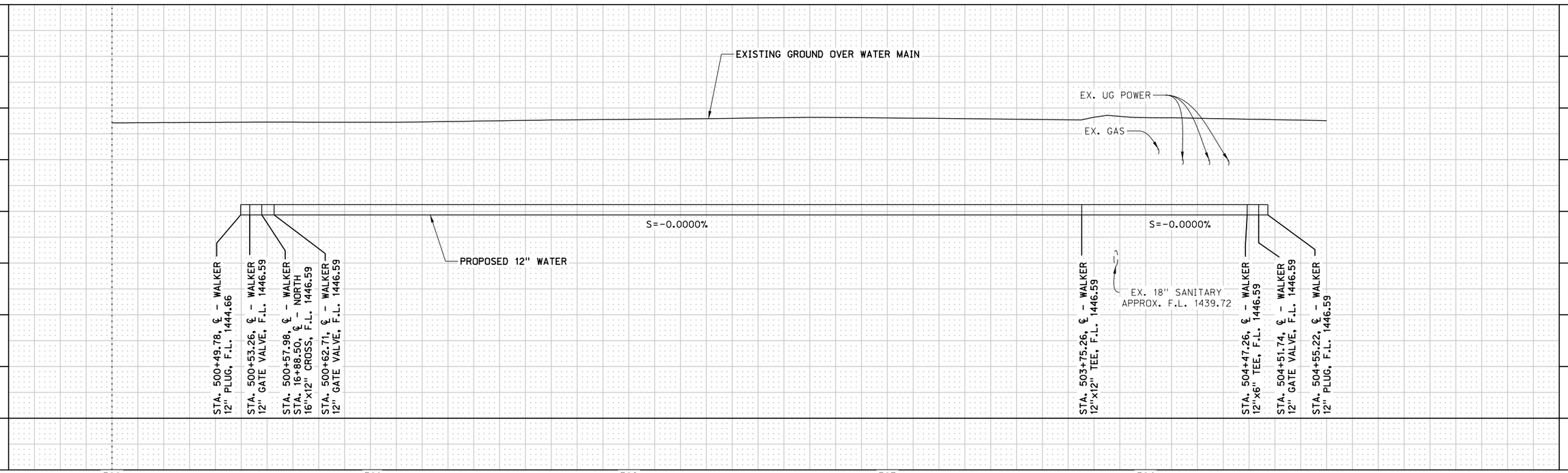
333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

PROJECT NO.	SHEET NO.
09336001-B	K7
C.N.	

0 20' 40'
SCALE

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

WATER MAIN



File: 09336001 PW08 - Phase II.dgn PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Scale: 1:40 Date: 13-MAR-2025 08:19 Computer: LINMEGANS

ROADWAY DESIGN DIVISION.

SCHEMMER	PROJECT NO.	SHEET NO.
Design with Purpose. Build with Confidence.	09336.001-B	W1

333 SOUTH 21ST STREET, SUITE 102
LINCOLN, NEBRASKA 68510
CERTIFICATE OF AUTHORIZATION: CA-0666

OWNERSHIP				EASEMENTS	
TRACT NO.	OWNER	DESCRIPTION	TAKING SQ. FT.	PERM. EASE. SQ. FT.	TEMP. EASE. SQ. FT.
T-2	CITY OF SEWARD	SEWARD RAIL CAMPUS PUD SECOND ADDITION, LOT 17	-	-	-

SEC. 29-T11-R3

0 20' 40'
SCALE

TENSENE001 LLC
SEWARD 29-11-3 TRACT IN NE 1/4 60.33 AC

FUTURE 16" WATER MAIN
END OF FUTURE PIPE CASING
EDGE OF ROAD
RAILROAD TRACKS
40'-0"
25'-0"
END OF FUTURE PIPE CASING
FUTURE DRIVEWAY (BY OTHERS)
EXISTING RAILROAD EASEMENT
12" WATER MAIN & PROJECT ℄
WALKER ROAD
EDGE OF ROAD
EXISTING ROW
10' UTILITY SETBACK
EXISTING UTILITY EASEMENT
500
501
502
503
504
15
16
17
18

T-2
LOT 17

LEGEND
- PERMANENT EASEMENT
- EXISTING PERMANENT EASEMENT
- TEMPORARY EASEMENT
- NEW RIGHT-OF-WAY

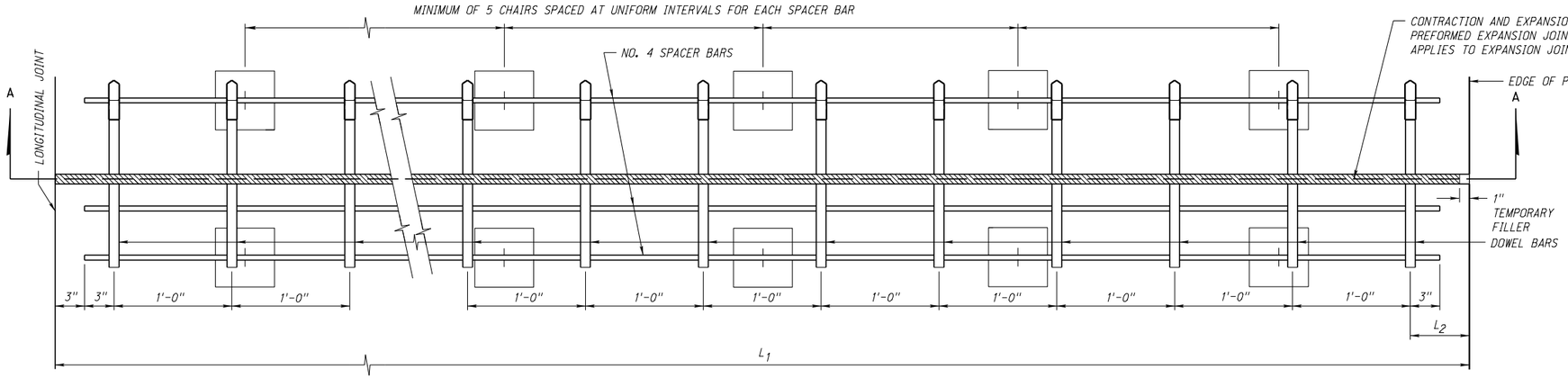
SEC. 29-T11-R3

PROFESSIONAL CIVIL ENGINEER
ALEXANDER J. ROTH
E-17140
3-13-2025
STATE OF NEBRASKA

RIGHT-OF-WAY

File: 09336001 RW01 - Phase II.dgn
PROJECT LOCATION: HIGHWAY 15 & WORTHMAN BLVD, SEWARD, NE
Date: 13-MAR-2025 08:19
Computer: LINMEGANS
Scale: 1:40

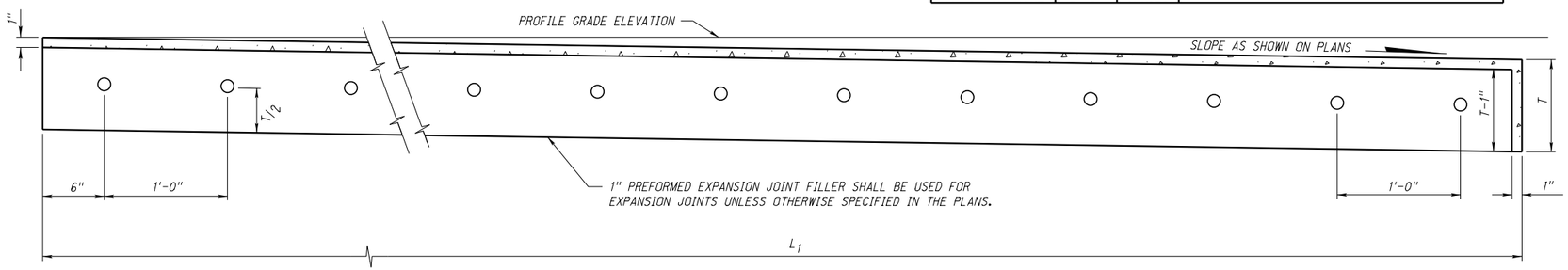
ROADWAY DESIGN DIVISION



ASSEMBLY PLAN

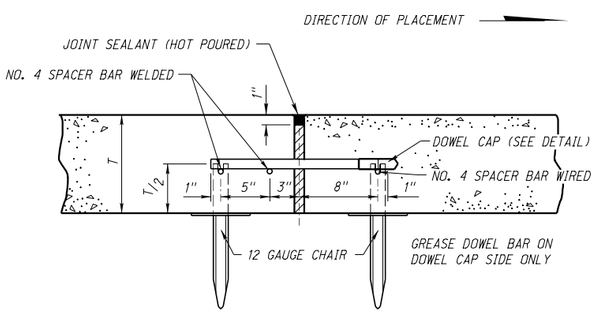
DOWEL BAR HEIGHT AND DIAMETER			
PAVEMENT THICKNESS (T)	MINIMUM BAR DIA.	DOWEL BAR HEIGHT (T/2)	SKEW TOLERANCE
LESS THAN 10"	1¼"	T/2 ± ½"	¼"
10" OR MORE	1½"	T/2 ± ½"	¼"

DOWEL BAR LOCATION TABLE			
L_1	L_2	#BARS	DESCRIPTION
* LESS THAN 12'-0'	6"	VARIES	IRREGULAR AREAS (WIDEN, FILLETS, GORE....)
12'-0"	6"	12	12'-0" PAVEMENT
14'-0"	2'-6"	12	14'-0" PAVEMENT
15'-0"	2'-6"	13	15'-0' PAVEMENT (INCLUDES 3'-0" SHOULDER)
16'-0"	3'-6"	13	16'-0" PAVEMENT (INCLUDES 4'-0" SHOULDER)
16'-0"	6"	16	16'-0" RAMP & LOOPS
LESS THAN 14'-6"	1'-6"	VARIES	PAVEMENT WITH CURB
14'-6" OR MORE	2'-6"	VARIES	

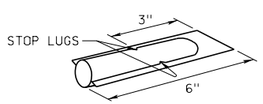


SECTION A-A

CONTRACTION AND EXPANSION JOINTS (PREFORMED EXPANSION JOINTS FILLER APPLIES TO EXPANSION JOINTS ONLY)

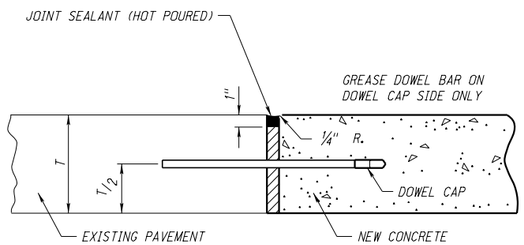


SECTION



DOWEL CAP

EXPANSION JOINT
(SUBSIDIARY)



NOTES:
DOWEL BARS SHALL BE DRILLED TO A DEPTH OF 8" INTO EXISTING PAVEMENT AND EPOXIED.

SECTION

NOTES:

THE CONTRACTOR MAY SUBSTITUTE OTHER DESIGNS FOR EXPANSION AND CONTRACTION JOINT SUPPORTS IN LIEU OF THE TYPE SHOWN WITH PRIOR WRITTEN APPROVAL BY THE ENGINEER.

DOWEL BARS SHALL BE A MINIMUM OF 17¾" IN LENGTH, CENTERED ON JOINTS AND BE SMOOTH BARS.

TIE BARS SHALL BE DEFORMED BARS.

FOR LOAD TRANSFER DEVICES AT EXPANSION JOINTS IN LANES OTHER THAN THE LANES SHOWN, MAINTAIN THE SPACING OF THE 1'-6" DOWEL BARS AT 1 FT. INTERVALS.

THE ENDS OF THE NO. 4 SPACER BARS SHALL NOT BE LESS THAN 3" FROM THE EDGES OF THE PAVEMENT OR THE LONGITUDINAL JOINT.

TIE, DOWEL & SPACER BARS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

KEY TYPE LONGITUDINAL JOINTS AND TRANSVERSE CONSTRUCTION JOINTS SHALL BE EDGED WITH ¼" R. AT TIME OF CONCRETE PLACEMENT.

CONCRETE PAVEMENT SHALL BE TINED UNLESS OTHERWISE SHOWN IN THE PLANS.

EXPANSION JOINTS SHALL BE INSTALLED AT LOCATIONS SHOWN IN THE PLANS.

PAVEMENT PLACED ADJACENT TO R.R. TRACKS REQUIRES 3-EXPANSION JOINTS SPACED AT APPROXIMATELY 49'-6" INTERVALS.

EXPANSION JOINTS SHALL NOT BE SKEWED.

T= PAVEMENT THICKNESS

* THE DEPARTMENT REQUIRES THAT DOWEL BASKETS BE PLACED IN ALL CONTRACTION JOINTS WHICH ARE 6'-0" OR WIDER. THE DOWEL BASKETS SHALL BE PLACED TRANSVERSE TO THE DIRECTION OF THE PREDOMINANT TRAFFIC DIRECTION.

REV. NO.	DATE	DESCRIPTION OF REVISION
R11	JUL 20	CHANGED TINING INFORMATION
R10	JAN 18	CHANGED DOWEL BAR LOCATION TABLE
R9	JUL 11	JOINT: EARLY SAW CUT

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 329-R11

8 TO 16 INCH CONCRETE PAVEMENT

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

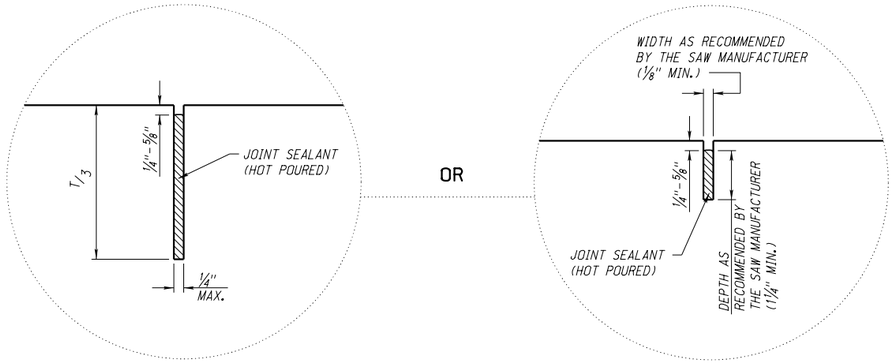
PROFESSIONAL CIVIL ENGINEER * MICK S. SYSLO E-10043 * STATE OF NEBRASKA

DATE

ORIGINAL: OCTOBER 25, 1994
DATE

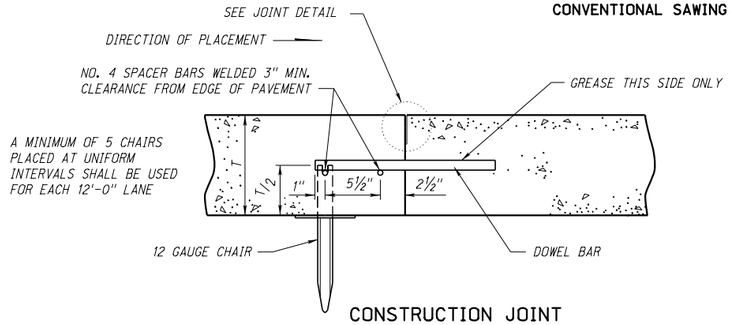
1/4

Computer: NDOTDESIGN134
Date: 29-JUN-2021 09:18
File: 329000e11.dgn



CONVENTIONAL SAWING | **EARLY-SAW CUT**

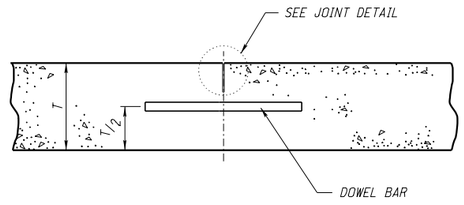
JOINT DETAIL



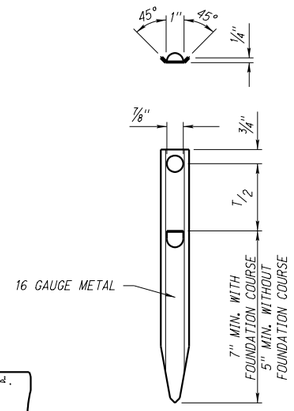
CONSTRUCTION JOINT

(BARS ARE SUBSIDIARY) TO PAVEMENT

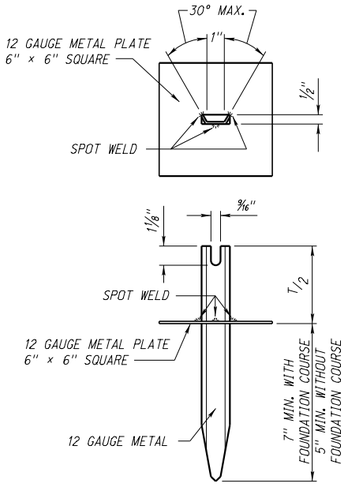
THE DOWEL BAR SPACING SHALL BE THE SAME AS SHOWN FOR THE EXPANSION JOINT. REFER TO DOWEL BAR LOCATION TABLE AND THE DOWEL BAR HEIGHT AND DIAMETER TABLE ON SHEET 1 OF 4.



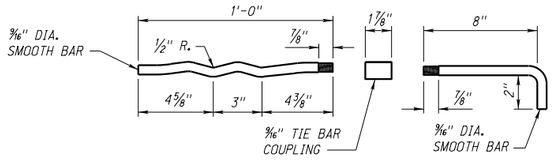
CONTRACTION JOINT



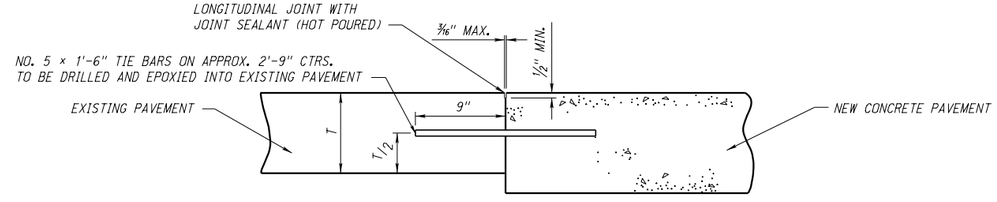
TIE BAR PIN



CHAIR

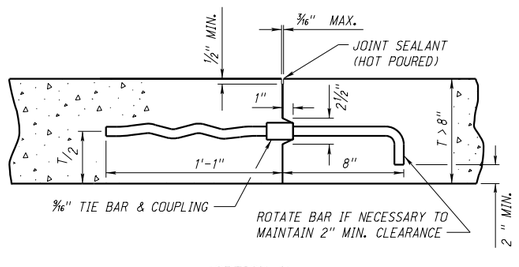


DETAILS OF "W" BAR



TIE BARS ARE TO BE INSTALLED WHERE NEW CONCRETE PAVEMENT IS PLACED ADJACENT TO EXISTING CONCRETE PAVEMENT

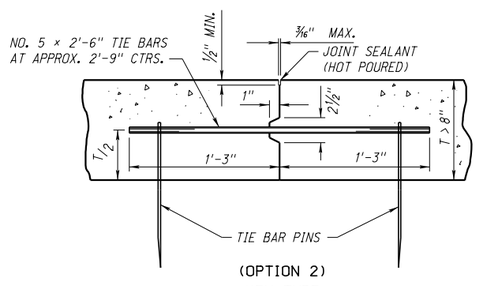
DETAILS OF TIE BAR



(OPTION 1)

KEY TYPE

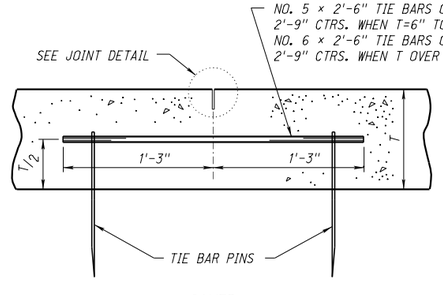
NO. 5 HOOK AND W-BARS AT APPROX. 2'-9" CTRS. OR 3/16" HOOK AND W-BARS AT APPROX. 2'-9" CTRS.



(OPTION 2)

KEY TYPE

KEY TYPE JOINT SHALL BE USED ON ALL LONGITUDINAL CONSTRUCTION JOINTS WHEN THE ADJACENT LANE IS NOT PLACED AT THE SAME TIME



SAWED

WHEN TWO ADJACENT LANES ARE PLACED AT THE SAME TIME, THE LONGITUDINAL JOINT COMMON TO THE LANES SHALL BE SAWED

LONGITUDINAL JOINTS

NOTE:
NO TIE BARS SHALL BE CLOSER THAN 1'-3" TO A TRANSVERSE JOINT. ALL LONGITUDINAL JOINTS BETWEEN LANES AND BETWEEN LANES AND SHOULDERS MUST BE TIED. MEDIAN SHOULD NOT BE TIED.

NOTE: T = PAVEMENT THICKNESS

REV. NO.	DATE	DESCRIPTION OF REVISION
R11	JUL 20	CHANGED TINING INFORMATION
R10	JAN 18	CHANGED DOWEL BAR LOCATION TABLE
R9	JUL 11	JOINT: EARLY SAW CUT

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 329-R11

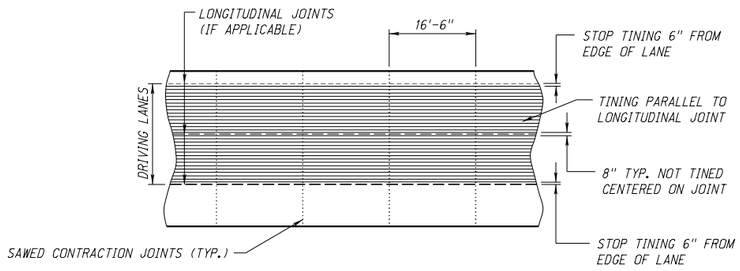
8 TO 16 INCH CONCRETE PAVEMENT

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

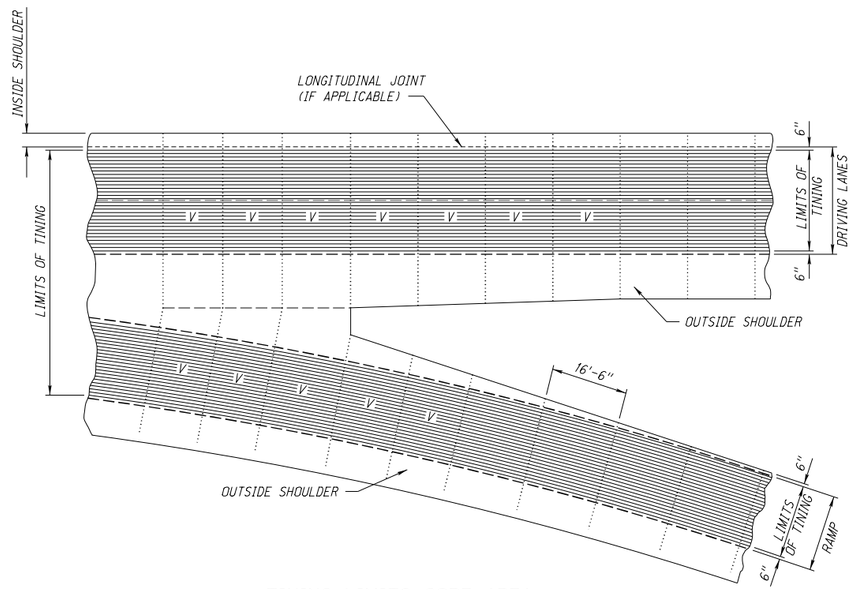
DATE

PROFESSIONAL CIVIL ENGINEER
MICK S. SYSLO
E-10043
STATE OF NEBRASKA

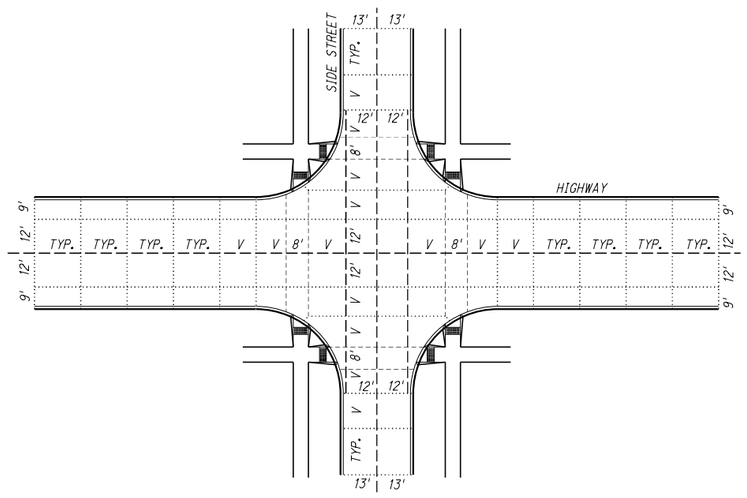
ORIGINAL: OCTOBER 25, 1994
DATE



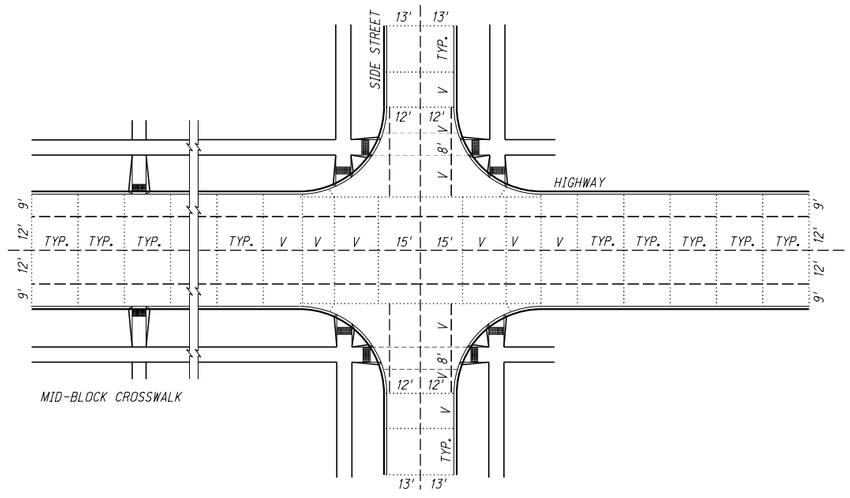
TINING WITH CONCRETE SHOULDER



TINING LIMITS GORE AREA



STOP OR YIELD CONTROL ON ALL FOUR LEGS



STOP OR YIELD CONTROL ON THE SIDE STREETS ONLY

NOTES:

TINING IS REQUIRED FOR PAVEMENT WITH POSTED SPEEDS GREATER THAN 40 MPH (INCLUDING TURN LANES).

16'-6" TRANSVERSE JOINT SPACING IS THE STANDARD JOINT SPACING REGARDLESS OF THE PAVEMENT THICKNESS.

V VARIES FROM 10'-0" TO MAX. 16'-6".

THE LONGITUDINAL JOINT BETWEEN THE SHOULDER AND THE 12'-0" DRIVING LANE IS NOT REQUIRED FOR SHOULDER WIDTHS OF 4'-0" OR LESS.

TRANSVERSE JOINTS FOR DOWELED CONCRETE PAVEMENT SHALL BE CONSTRUCTED PERPENDICULAR TO THE ROADWAY.

REV. NO.	DATE	DESCRIPTION OF REVISION
R11	JUL 20	CHANGED TINING INFORMATION
R10	JAN 18	CHANGED DOWEL BAR LOCATION TABLE
R9	JUL 11	JOINT: EARLY SAW CUT

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 329-R11

8 TO 16 INCH CONCRETE PAVEMENT

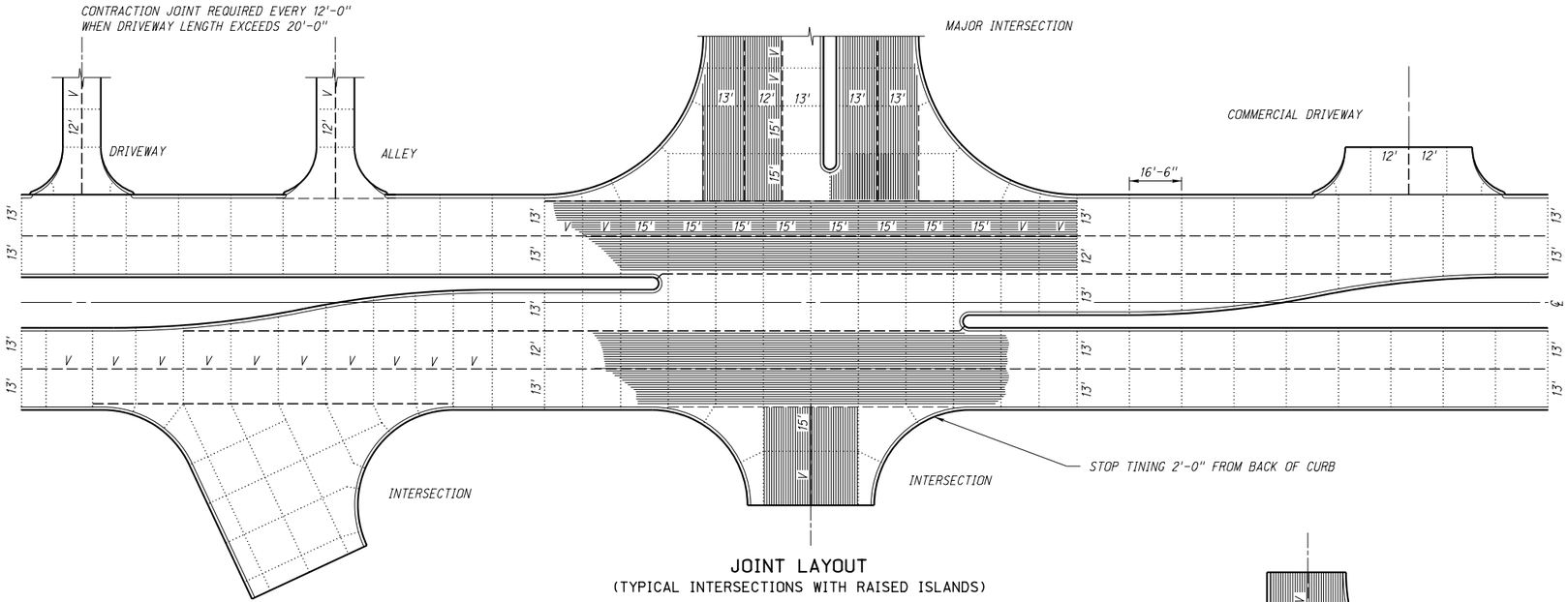
ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
MICK S. SYSLO
E-10043
STATE OF NEBRASKA

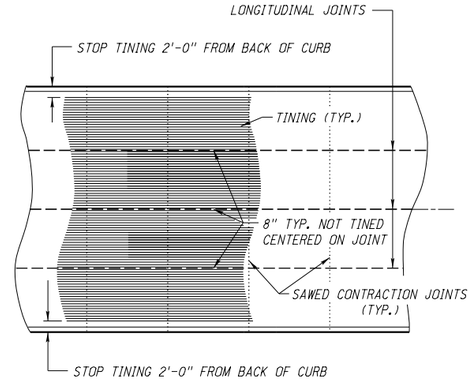
DATE

ORIGINAL:
OCTOBER 25, 1994
DATE

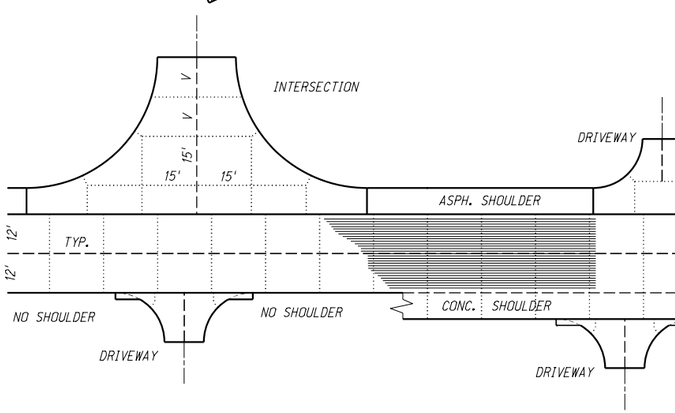
File: 32900e11.dgn Date: 29-JUN-2021 09:18 Computer: NDOTDESIGN134

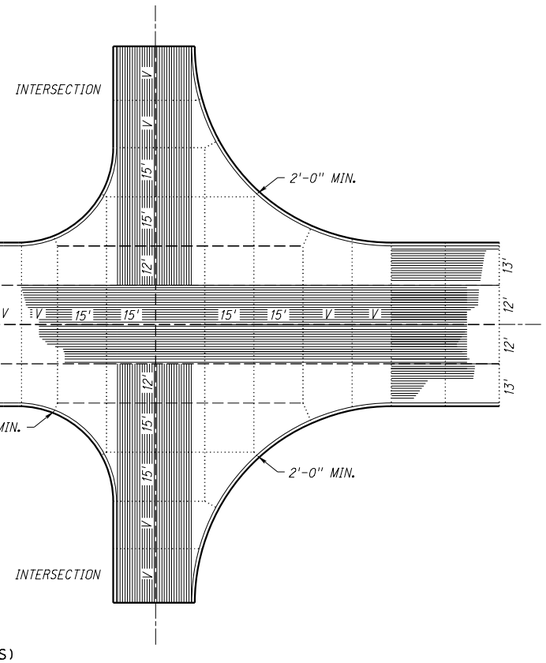


JOINT LAYOUT
(TYPICAL INTERSECTIONS WITH RAISED ISLANDS)

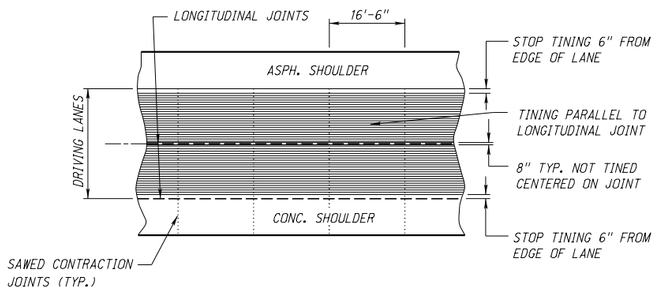


TINING LIMITS





JOINT LAYOUT
(TYPICAL INTERSECTIONS & DRIVES)



RURAL TINING LIMITS WITH SURFACED SHOULDERS

LEGEND
- SAWED CONTRACTION JOINT
- LONGITUDINAL JOINT

NOTES:

TINING IS REQUIRED FOR PAVEMENT WITH POSTED SPEEDS GREATER THAN 40 MPH (INCLUDING TURN LANES).

16'-6" TRANSVERSE JOINT SPACING IS THE STANDARD JOINT SPACING REGARDLESS OF THE PAVEMENT THICKNESS.

V VARIES FROM 10'-0" TO MAX. 16'-6".

VARIABLE SPACING IS USED AROUND INTERSECTIONS AND LARGE DRIVEWAYS WHICH IS TIED TO THE CONCRETE LANES OR SHOULDERS TO MATCH THE JOINTS.

REV. NO.	DATE	DESCRIPTION OF REVISION
R11	JUL 20	CHANGED TINING INFORMATION
R10	JAN 18	CHANGED DOWEL BAR LOCATION TABLE
R9	JUL 11	JOINT: EARLY SAW CUT

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 329-R11

8 TO 16 INCH CONCRETE PAVEMENT

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
MICK S. SYSLO
E-10043
STATE OF NEBRASKA

DATE

ORIGINAL:
OCTOBER 25, 1994
DATE

4
4

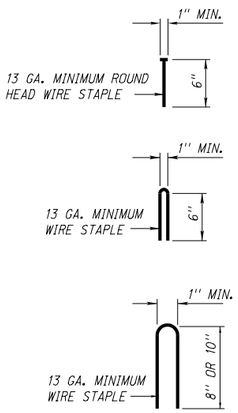
ROADWAY DESIGN DIVISION

Computer: NDOTDESIGN134

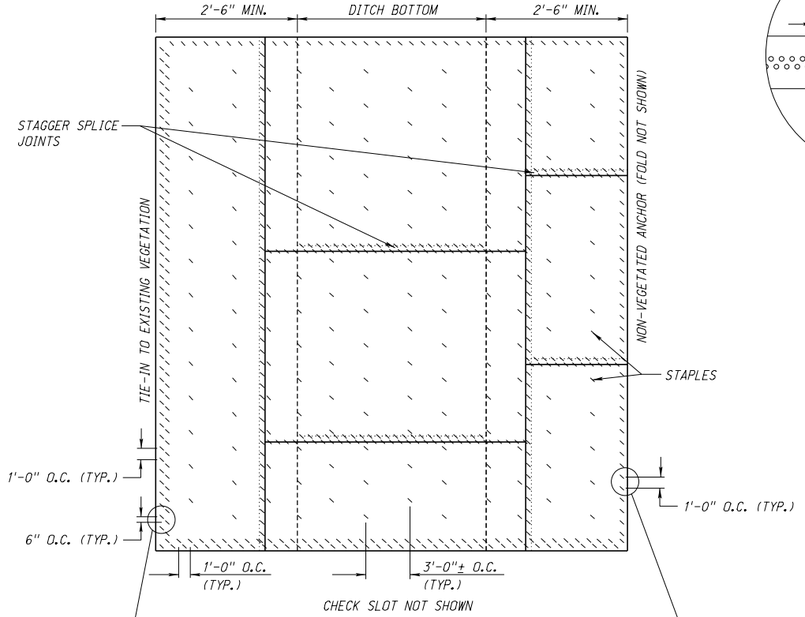
Date: 29-JUN-2021 09:18

File: 329001.dgn

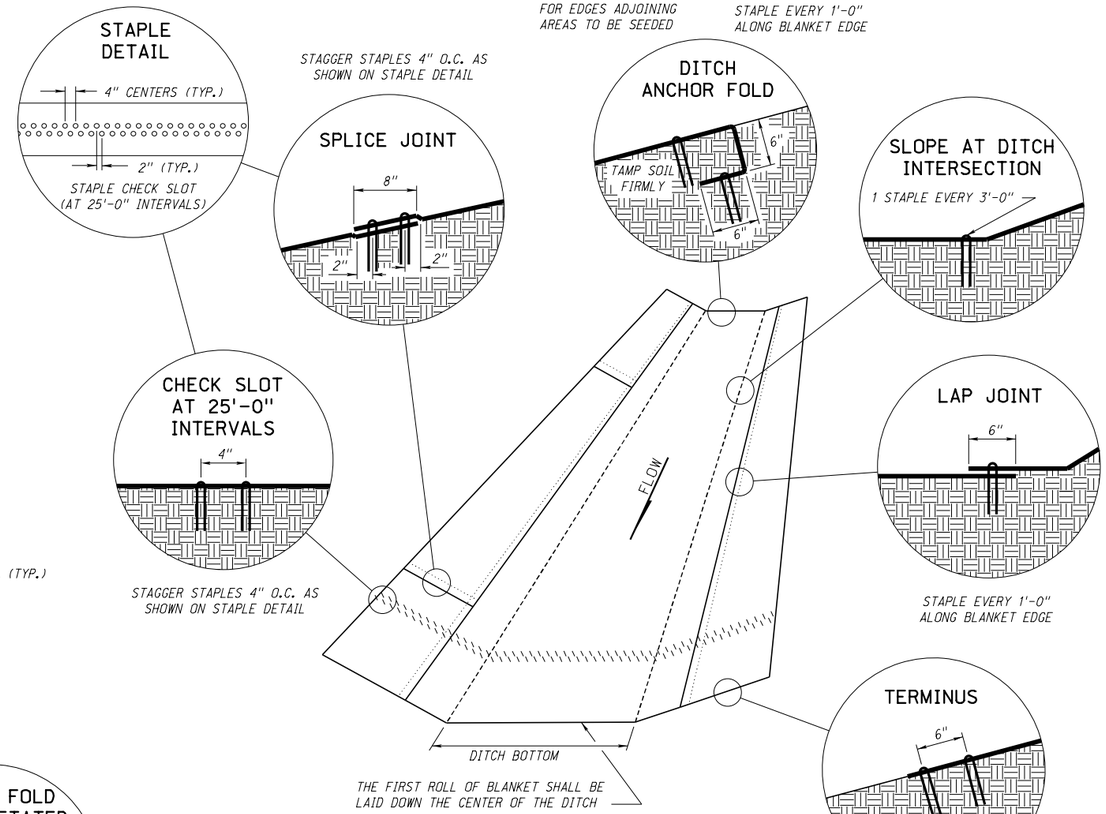
ROADWAY DESIGN DIVISION



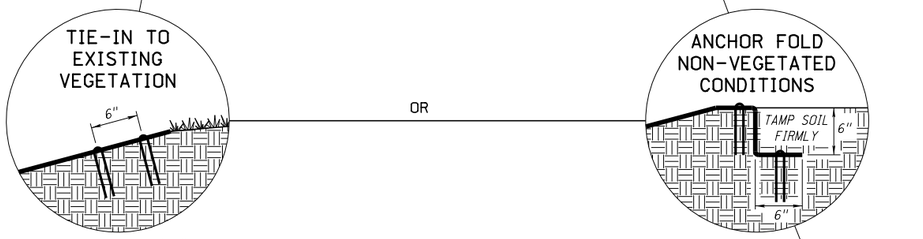
WIRE STAPLE DETAIL

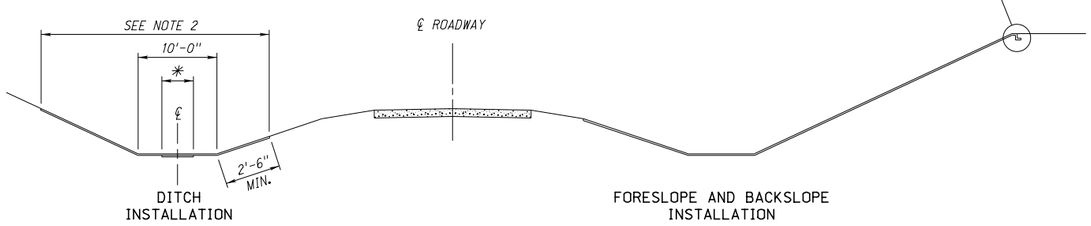


PLAN VIEW STAPLING DIAGRAM



TYPICAL EROSION CONTROL BLANKET INSTALLATION





TYPICAL CROSS-SECTION

* THE FIRST ROLL OF BLANKET SHALL BE LAID DOWN THE CENTER OF THE DITCH

NOTES:

1. THIS PLAN IS APPLICABLE FOR THE FOLLOWING: EROSION CONTROL CLASS 1B, 1C, 1D, 1E, 1F, 2A, 2B & 2C.
2. SOIL RETENTION BLANKET SHALL BE LAID A MINIMUM OF 2'-6" UP THE BACKSLOPE AND FORESLOPE.
3. CHECK SLOTS ARE PLACED PERPENDICULAR TO DITCH CENTER LINE ON 25'-0" INTERVALS.
4. THE MANUFACTURERS' RECOMMENDED STAPLING PATTERNS SHALL GOVERN OVER THE PLANS.

REV. NO.	DATE	DESCRIPTION OF REVISION
R7	JAN 18	NDOR BORDER TO NDOT BORDER
R6	APR 14	UPDATE INSTALLATION METHOD
R5	OCT 07	EROSION CONTROL AT SPLASH BASIN

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 501-R7

EROSION CONTROL

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
BRANDIE S. NEEMANN
E-11829
STATE OF NEBRASKA

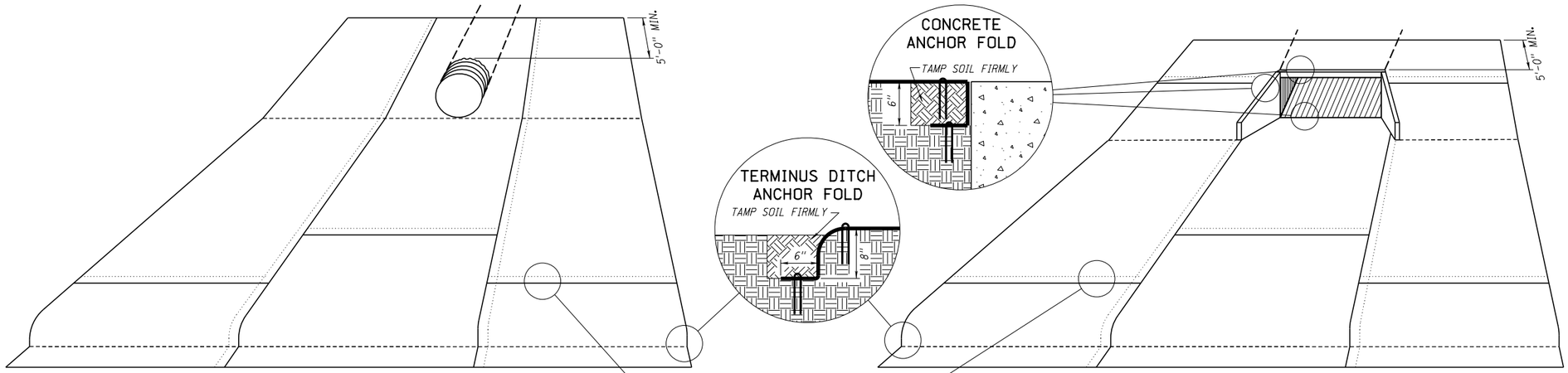
DATE

ORIGINAL: NOVEMBER 1973
DATE

1/3

Computer: NDOTDESIGN134
Date: 29-JUN-2021 09:20
File: 50100e07.dgn

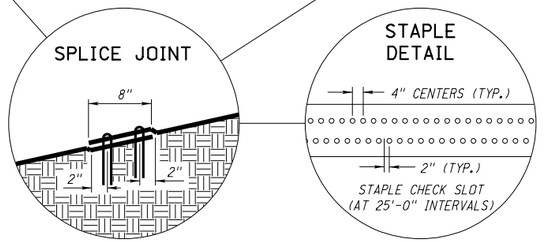
ROADWAY DESIGN DIVISION

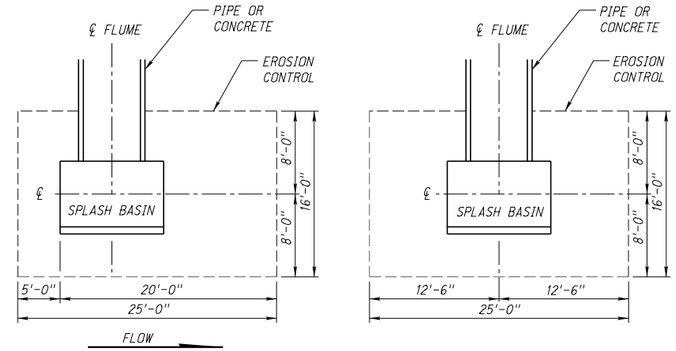


TYPICAL INSTALLATION AT PIPE CULVERT

(SHOWING STRAIGHT PIPE)

TYPICAL INSTALLATION AT BOX CULVERT

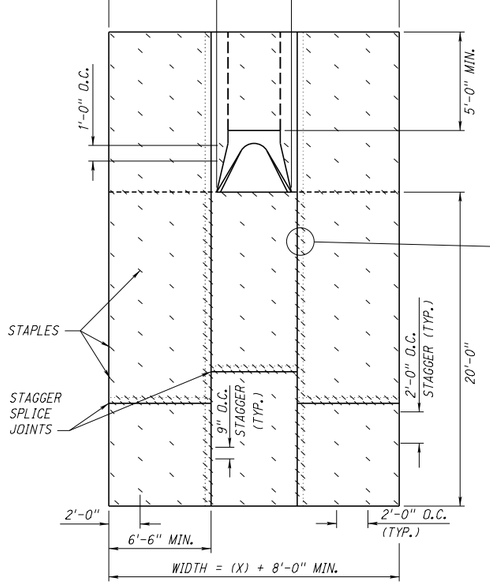




NOTE:
OFFSET EROSION CONTROL PLACEMENT ALONG THE DRAINAGE PATH

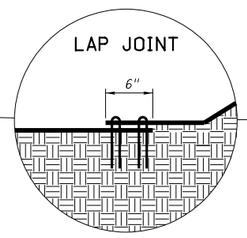
NOTE:
CENTER EROSION CONTROL ON FLUME WHERE THERE IS NO DEFINED DRAINAGE PATH

EROSION CONTROL BLANKET PLACEMENT AT SPLASH BASIN

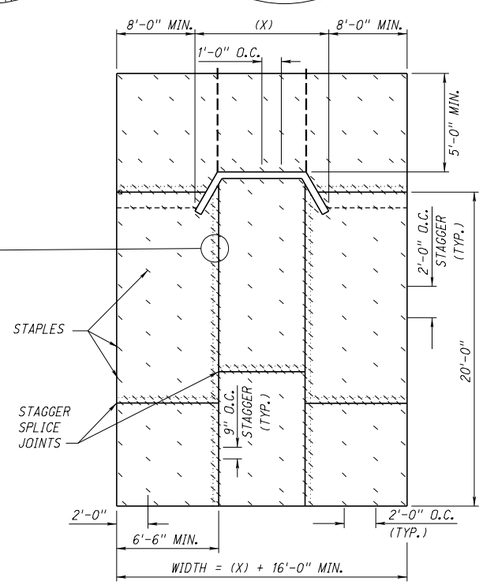


PLAN VIEW STAPLING DIAGRAM

(X) IS EQUAL TO THE OUTSIDE WIDTH OF THE FLARED END SECTION



STAGGER STAPLES EVERY 1'-0" O.C. WITHIN 20'-0" OF PIPE



PLAN VIEW STAPLING DIAGRAM

(X) IS EQUAL TO THE OUTSIDE WIDTH OF THE WING WALLS

REV. NO.	DATE	DESCRIPTION OF REVISION
R7	JAN 18	NDOR BORDER TO NDOT BORDER
R6	APR 14	UPDATE INSTALLATION METHOD
R5	OCT 07	EROSION CONTROL AT SPLASH BASIN

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 501-R7

EROSION CONTROL

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

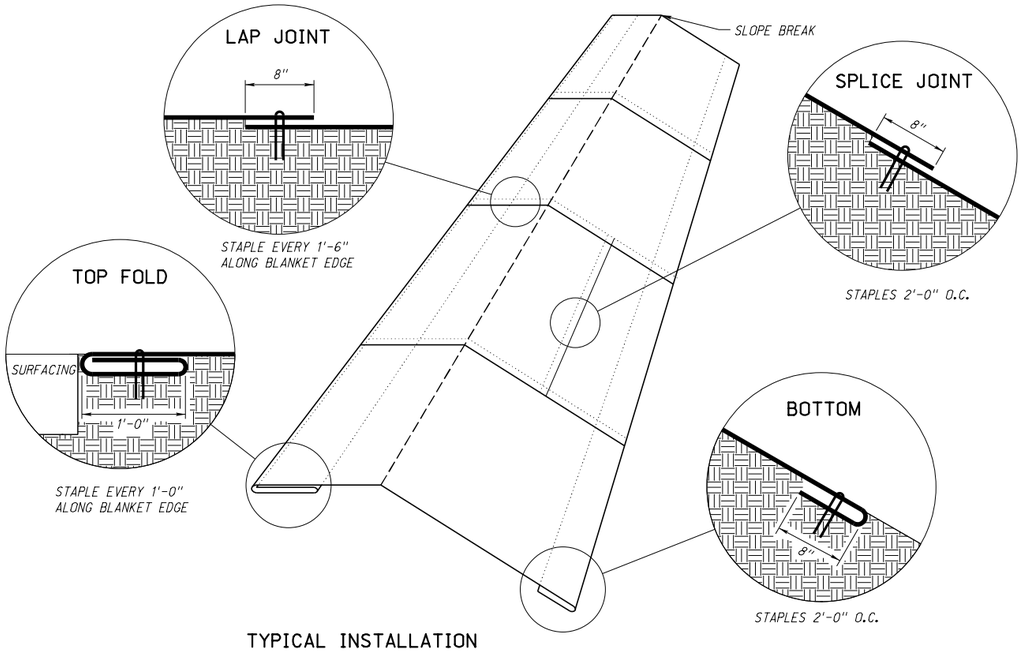
PROFESSIONAL CIVIL ENGINEER
BRANDIE S. NEEMANN
E-11829
STATE OF NEBRASKA

DATE

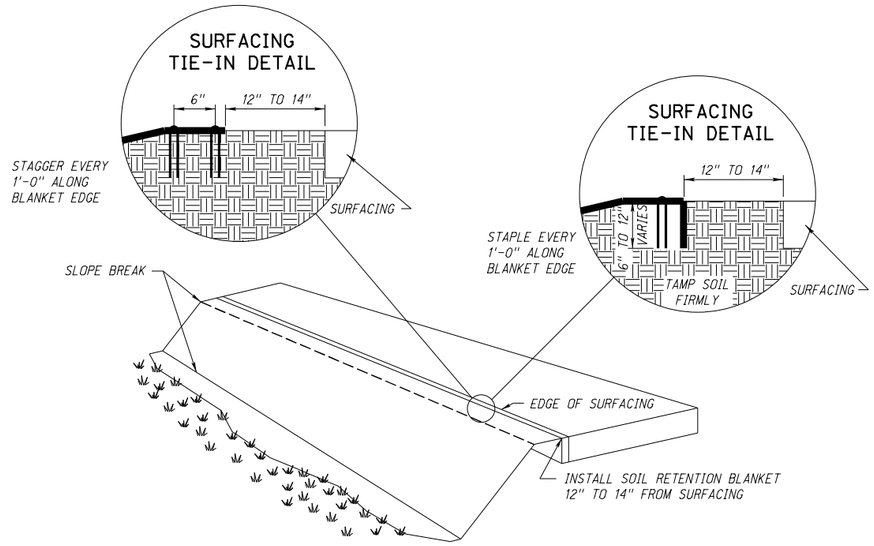
ORIGINAL:
NOVEMBER 1973
DATE

2
3

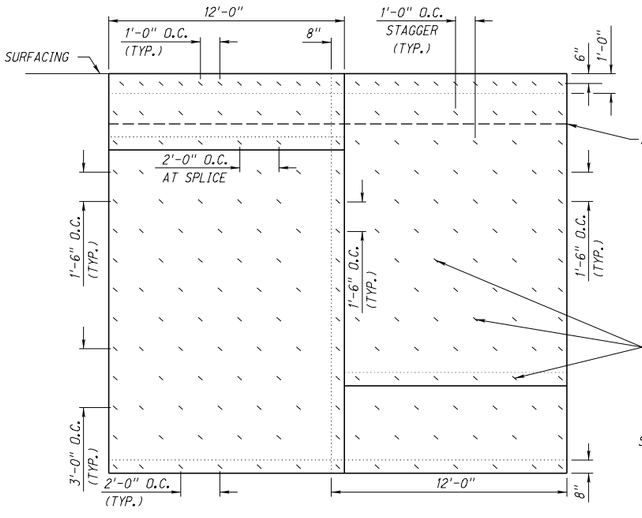
File: 50100e07.dgn Date: 29-JUN-2021 09:20 Computer: NDOTDESIGN134



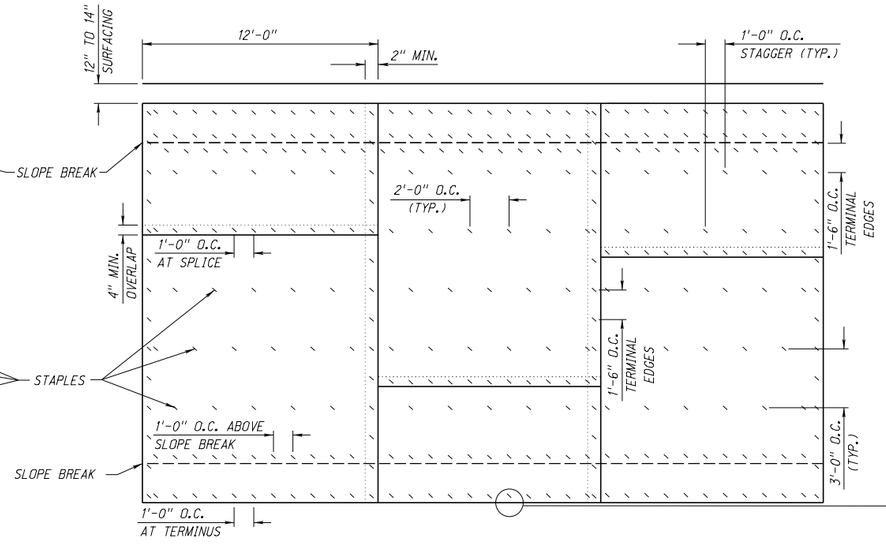
TYPICAL INSTALLATION
CLASS 1A (SLOPE PROTECTION, SAND)



SURFACING INSTALLATION

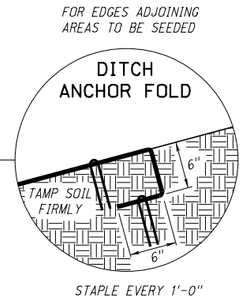


PLAN VIEW STAPLING DIAGRAM FOR
CLASS 1A (SLOPE PROTECTION, SAND)



TERMINATE BLANKET AT THE TOE OF SLOPE OR AT UNDISTURBED VEGETATION

PLAN VIEW STAPLING DIAGRAM FOR
CLASS 1B, 1C, 1D, 1E, 1F, 2A, 2B, & 2C



NOTES:

1. THE MANUFACTURERS' RECOMMENDED STAPLING PATTERNS SHALL GOVERN OVER THE PLANS.
2. SURFACING INSTALLATION IS APPLICABLE FOR ASPHALT, CONCRETE, OR BEVELLED EDGE.

REV. NO.	DATE	DESCRIPTION OF REVISION
R7	JAN 18	NDOR BORDER TO NDOT BORDER
R6	APR 14	UPDATE INSTALLATION METHOD
R5	OCT 07	EROSION CONTROL AT SPLASH BASIN

NEBRASKA DEPARTMENT OF TRANSPORTATION
STANDARD PLAN NO. 501-R7

EROSION CONTROL

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

DATE

PROFESSIONAL CIVIL ENGINEER
BRANDIE S. NEEMANN
E-11829
STATE OF NEBRASKA

ORIGINAL:
NOVEMBER 1973
DATE

3
3

File: 501000e07.dgn Date: 29-JUN-2021 09:20 Computer: NDOTDESIGN134

CHANNELIZATION DEVICES

THE FUNCTION OF CHANNELIZATION DEVICES IS TO WARN ROAD USERS OF CONDITIONS CREATED BY WORK ACTIVITIES IN OR NEAR THE TRAVELED WAY, TO PROTECT WORKERS IN THE TEMPORARY TRAFFIC CONTROL ZONE, AND TO GUIDE DRIVERS AND PEDESTRIANS SAFELY. CHANNELIZING DEVICES INCLUDE BUT ARE NOT LIMITED TO CONES, TUBULAR POSTS, VERTICAL PANELS, DRUMS, BARRICADES, TRAFFIC LANE DIVIDERS, TEMPORARY RAISED ISLANDS, AND BARRIERS.

DEVICES USED FOR CHANNELIZATION SHOULD PROVIDE FOR SMOOTH AND GRADUAL TRAFFIC MOVEMENT FROM ONE LANE TO ANOTHER, ONTO A BYPASS OR DETOUR, OR TO REDUCE THE WIDTH OF THE TRAVELED WAY. THEY MAY ALSO BE USED TO SEPARATE TRAFFIC FROM THE WORK SPACE, PAVEMENT DROP-OFFS, PEDESTRIAN PATHS, OR OPPOSING DIRECTIONS OF TRAFFIC.

CHANNELIZING DEVICES SHALL MEET THE CRASHWORTHY PERFORMANCE CRITERIA CONTAINED IN THE NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM (NCHRP) REPORT 350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH). THEY SHOULD BE CONSTRUCTED AND BALLASTED TO PERFORM IN A PREDICTABLE MANNER WHEN INADVERTENTLY STRUCK BY A VEHICLE. IF STRUCK, THE DEVICE SHOULD YIELD OR BREAK AWAY, FRAGMENTS OR OTHER DEBRIS FROM THE DEVICE SHOULD NOT PENETRATE THE PASSENGER COMPARTMENT OF THE VEHICLE OR BE A POTENTIAL HAZARD TO WORKERS OR PEDESTRIANS IN THE IMMEDIATE AREA.

SPACING OF CHANNELIZING DEVICES SHOULD NOT EXCEED A DISTANCE IN FEET EQUAL TO THE SPEED WHEN USED FOR THE TAPER CHANNELIZATION, AND A DISTANCE IN FEET OF TWICE THE SPEED WHEN USED FOR TANGENT CHANNELIZATION.

SPACING OF CHANNELIZATION DEVICES

SPEED (MPH) S	SPACING OF DEVICES (FEET)	
	TAPER	TANGENT
25	25	50
35	35	70
45	45	90
55	55	110
60	60	120
65	65	130
75	75	150

WARNING LIGHTS MAY BE ADDED TO CHANNELIZING DEVICES IN AREAS WITH FREQUENT FOG, SNOW, OR SEVERE ROADWAY CURVATURE, OR WHERE VISUAL DISTRACTIONS ARE PRESENT, EXCEPT FOR THE SEQUENTIAL FLASHING WARNING LIGHTS, WARNING LIGHTS PLACED ON CHANNELIZING DEVICES USED IN A SERIES TO CHANNELIZE ROAD USERS SHALL BE STEADY-BURN.

THE RETROREFLECTIVE MATERIAL USED ON CHANNELIZING DEVICES SHALL HAVE A SMOOTH, SEALED OUTER SURFACE, MEETING THE REQUIREMENTS OF THE ASTM SPECIFICATION D4956, FOR TYPE IV SHEETING OR TYPE V REBOUNDABLE SHEETING (OR GREATER).

COEFFICIENT OF RETROREFLECTION ($CD/LUX/M^2$)

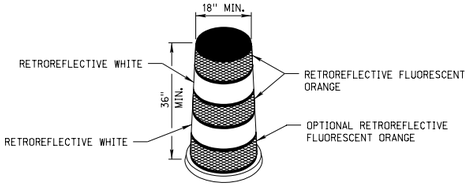
WHITE	ORANGE	RED	YELLOW
250	100	45	170

THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) "QUALITY GUIDELINES FOR WORK ZONE TRAFFIC CONTROL DEVICES" SHALL BE USED AS A VISUAL GUIDE FOR DETERMINING IF A TRAFFIC CONTROL DEVICE/OR SIGN IS ACCEPTABLE, MARGINAL OR UNACCEPTABLE.

THE NAME AND TELEPHONE NUMBER OF THE AGENCY, CONTRACTOR, OR SUPPLIER MAY BE SHOWN ON THE CHANNELIZING DEVICE BACK OR SUPPORT, BUT NOT ON THE DEVICE FACE. THE LETTERS AND NUMBERS SHALL BE A NON-REFLECTIVE COLOR AND NOT OVER 15 SQUARE INCHES IN TOTAL AREA.

PARTICULAR ATTENTION SHOULD BE GIVEN TO MAINTAINING THE CHANNELIZING DEVICES TO KEEP THEM CLEAN, VISIBLE, AND PROPERLY POSITIONED. DEVICES SHALL BE REPLACED THAT ARE DAMAGED AND/OR HAVE LOST A SIGNIFICANT AMOUNT OF THEIR RETROREFLECTIVITY AND EFFECTIVENESS.

REFLECTORIZED PLASTIC DRUMS



DESIGN

REFLECTORIZED PLASTIC DRUMS USED FOR TRAFFIC WARNING OR CHANNELIZATION SHALL BE CONSTRUCTED OF LIGHTWEIGHT, FLEXIBLE, AND DEFORMABLE MATERIALS AND BE A MINIMUM OF 36 INCHES IN HEIGHT AND HAVE A MINIMUM WIDTH OF AT LEAST A 18 INCHES, REGARDLESS OF ORIENTATION. THE PREDOMINANT COLOR OF THE DRUM SHALL BE ORANGE. METAL DRUMS SHALL NOT BE USED. THE MARKINGS ON DRUMS SHALL BE HORIZONTAL, SHALL BE CIRCUMFERENTIAL, AND SHALL DISPLAY FOUR 6 INCH WIDE BANDS OF RETROREFLECTIVE SHEETING, ALTERNATING FLUORESCENT ORANGE-WHITE-FLUORESCENT ORANGE-WHITE, DRUMS SHALL HAVE CLOSED TOPS THAT WILL NOT ALLOW COLLECTION OF CONSTRUCTION OR OTHER DEBRIS.

APPLICATION

DRUMS ARE MOST COMMONLY USED TO CHANNELIZE OR DELINEATE TRAFFIC FLOW BUT MAY ALSO BE USED INDIVIDUALLY OR IN GROUPS TO MARK SPECIFIC LOCATIONS. DRUMS ARE HIGHLY VISIBLE AND HAVE GOOD TARGET VALUE; THEY GIVE THE APPEARANCE OF BEING FORMIDABLE OBSTACLES AND, THEREFORE, COMMAND THE RESPECT OF ROAD USERS.

BALLAST SHALL NOT BE PLACED ON TOP OF THE DRUM. DRUMS SHOULD NOT BE WEIGHTED WITH SAND, WATER, OR ANY MATERIAL.

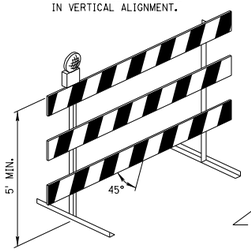
BARRICADES

BARRICADE TYPE	TYPE II	TYPE III
WIDTH OF RAIL ✳	8 INCHES MIN. - 12 INCHES MAX.	8 INCHES MIN. - 12 INCHES MAX.
LENGTH OF RAIL	36 INCHES	8 FEET ✳✳
WIDTH OF STRIPES	6 INCHES	6 INCHES
HEIGHT	36 INCHES	5 FEET
REFLECTIVE SHEETING	TYPE IV	TYPE IV
NUMBER OF REFLECTORIZED RAIL FACES	4 (TWO EACH DIRECTION)	6 (THREE EACH DIRECTION)

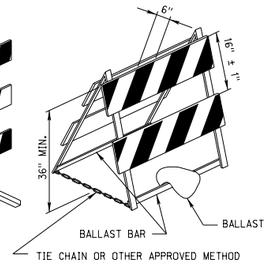
✳NOMINAL DIMENSIONS ARE PERMISSIBLE WHEN CONSTRUCTED FROM LUMBER.
✳✳WHEN LATERAL SPACE IS LIMITED, SOME TYPE III BARRICADES WITH A 4 FOOT LENGTH OF RAIL, MAY BE ALLOWED WHEN APPROVED BY THE ENGINEER.

TYPE III BARRICADE

TYPICAL MOUNTING OF FLASHING WARNING LIGHTS. LIGHTS SHALL ALWAYS BE IN VERTICAL ALIGNMENT.



TYPE II BARRICADE



BALLAST SHALL NOT BE PLACED OVER ANY REFLECTIVE DEVICE

DESIGN

A BARRICADE IS A PORTABLE OR FIXED DEVICE HAVING TWO OR THREE RAILS WITH APPROPRIATE MARKINGS. IT IS USED TO CONTROL ROAD USERS BY CLOSING, RESTRICTING, OR DELINEATING ALL OR A PORTION OF THE RIGHT-OF-WAY.

BARRICADES SHALL BE ONE OF TWO TYPES; TYPE II OR TYPE III.

STRIPES ON BARRICADE RAILS SHALL BE ALTERNATING ORANGE AND WHITE RETROREFLECTIVE STRIPES SLOPING DOWNWARD AT AN ANGLE OF 45 DEGREES IN THE DIRECTION ROAD USERS ARE TO PASS. THE STRIPES SHALL BE 6 INCHES WIDE. THE MINIMUM RAIL LENGTH FOR A TYPE II BARRICADE IS 36 INCHES.

WHERE BARRICADES EXTEND ENTIRELY ACROSS A ROADWAY, THE STRIPES SHOULD SLOPE DOWNWARD IN THE DIRECTION TOWARD WHICH ROAD USERS MUST TURN. WHERE BOTH RIGHT AND LEFT TURNS ARE PROVIDED, THE STRIPES MAY SLOPE DOWNWARD IN BOTH DIRECTIONS FROM THE CENTER OF THE BARRICADE OR BARRICADES. WHERE NO TURNS ARE INTENDED, THE STRIPES SHOULD SLOPE DOWNWARD TOWARD THE CENTER OF THE BARRICADE OR BARRICADES.

BARRICADE RAILS SHOULD BE SUPPORTED IN A MANNER THAT WILL ALLOW THEM TO BE SEEN BY THE ROAD USER, AND IN A MANNER THAT PROVIDES A STABLE SUPPORT THAT IS NOT EASILY BLOWN OVER OR DISPLACED.

ON HIGH-SPEED ROADWAYS OR IN OTHER SITUATIONS WHERE BARRICADES MAY BE SUSCEPTIBLE TO OVERTURNING IN THE WIND, SANDBAGS SHOULD BE USED FOR BALLASTING. SANDBAGS MAY BE PLACED ON LOWER PARTS OF THE FRAME OR STAYS TO PROVIDE THE REQUIRED BALLAST BUT SHALL NOT BE PLACED ON TOP OF ANY STRIPED RAIL. BARRICADES SHALL NOT BE BALLASTED BY HEAVY OBJECTS SUCH AS ROCKS OR CHUNKS OF CONCRETE.

THE BARRICADE OWNERS NAME, NOT TO EXCEED 15 SQUARE INCHES SHALL BE SHOWN ON THE BARRICADE BACK OR SUPPORT BUT NOT ON ITS FACE.

✳✳ WHEN LATERAL SPACE IS LIMITED, SOME TYPE III BARRICADES WITH A 4 FOOT LENGTH OF RAIL, MAY BE ALLOWED WHEN APPROVED BY THE ENGINEER.

APPLICATION

TYPE II BARRICADES ARE INTENDED FOR USE IN SITUATIONS WHERE TRAFFIC IS MAINTAINED THROUGH THE TEMPORARY TRAFFIC CONTROL ZONE. THEY MAY BE USED INDIVIDUALLY OR IN GROUPS TO MARK A SPECIFIC CONDITION, OR THEY MAY BE USED IN A SERIES FOR CHANNELIZING TRAFFIC. ON THE INTERSTATE, FREEWAY AND EXPRESSWAY SYSTEM, TYPE II BARRICADES SHALL NOT BE USED FOR CHANNELIZATION.

TYPE III BARRICADES USED AT A ROAD CLOSURE MAY EXTEND COMPLETELY ACROSS A ROADWAY FROM CURB TO CURB. WHERE PROVISION IS MADE FOR ACCESS OF AUTHORIZED EQUIPMENT AND VEHICLES, THE RESPONSIBILITY FOR THE TYPE III BARRICADES SHOULD BE ASSIGNED TO A PERSON WHO SHALL PROVIDE PROPER CLOSURE AT THE END OF EACH WORK DAY.

WHEN A HIGHWAY IS LEGALLY CLOSED BUT ACCESS MUST STILL BE ALLOWED FOR LOCAL TRAFFIC, THE TYPE III BARRICADES MAY NOT BE EXTENDED COMPLETELY ACROSS A ROADWAY. A SIGN WITH THE APPROPRIATE LEGEND CONCERNING PERMISSIBLE USE BY LOCAL TRAFFIC SHALL BE MOUNTED.

NORMALLY PERMANENT SIGNS MOUNTED ON BARRICADES SHALL BE ERECTED ABOVE THE BARRICADE. THE SIGNS "ROAD CLOSED", OR "ROAD WORK AHEAD", FOR EXAMPLE CAN EFFECTIVELY BE MOUNTED ABOVE THE BARRICADE THAT CLOSES THE ROADWAY. TYPE III BARRICADES SHALL BE SUPPLEMENTED WITH A LIGHTING DEVICE UNLESS SPECIFICALLY OMITTED BY THE ENGINEER. DETOUR ARROW AND LARGE WARNING ARROW SIGNS SHOULD BE PLACED ON THE FACE OF BARRICADE.

CONES

DESIGN

CONES SHALL BE PREDOMINANTLY ORANGE, FLOURESCENT RED-ORANGE, OR FLOURESCENT YELLOW/ORANGE. NOT LESS THAN 28 INCHES IN HEIGHT, AND SHALL BE MADE OF A MATERIAL THAT CAN BE STRUCK WITHOUT DAMAGING VEHICLES ON IMPACT. CONES WHEN ALLOWED ON THE INTERSTATE, FREEWAY OR EXPRESSWAY SYSTEM SHALL BE A MINIMUM OF 36 INCHES IN HEIGHT.

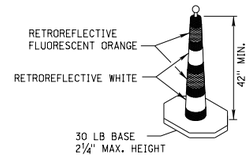
FOR NIGHTTIME USE, CONES SHALL BE RETROREFLECTIVE OR EQUIPPED WITH LIGHTING DEVICES FOR MAXIMUM VISIBILITY. RETROREFLECTION OF 28 INCH OR 36 INCH CONES SHALL BE PROVIDED BY A WHITE BAND 6 INCHES WIDE, NO MORE THAN 4 INCHES FROM THE TOP OF THE CONE, AND AN ADDITIONAL 4 INCH WIDE WHITE BAND A MINIMUM OF 2 INCHES BELOW THE 6 INCH BAND.

APPLICATION

TRAFFIC CONES ARE USED TO CHANNELIZE TRAFFIC, DIVIDE OPPOSING TRAFFIC LANES, DIVIDE TRAFFIC LANES WHEN TWO OR MORE LANES ARE KEPT OPEN IN THE SAME DIRECTION, AND DELINEATE SHORT-DURATION MAINTENANCE AND UTILITY WORK. CONES SHALL NOT BE USED FOR LANE CLOSURE TAPERS OR SHIFTS, CONES SMALLER THAN 42 INCHES SHALL NOT BE USED AT NIGHT ON RURAL HIGHWAYS, UNLESS SHOWN ON THE PLANS OR AS APPROVED OR DIRECTED BY THE ENGINEER.

STEPS SHOULD BE TAKEN TO ENSURE THAT CONES WILL NOT BE BLOWN OVER OR DISPLACED BY WIND OR MOVING TRAFFIC. CONES CAN BE DOUBLED UP TO INCREASE THEIR WEIGHT. SOME CONES ARE CONSTRUCTED WITH BASES THAT CAN BE FILLED WITH BALLAST. OTHERS HAVE SPECIAL WEIGHTED BASES, OR WEIGHTS SUCH AS SANDBAG RINGS THAT CAN BE DROPPED OVER THE CONES AND ONTO THE BASE TO PROVIDE ADDED STABILITY. BALLAST, HOWEVER, SHOULD NOT PRESENT A HAZARD IF THE CONES ARE INADVERTENTLY STRUCK.

42 INCH CONES



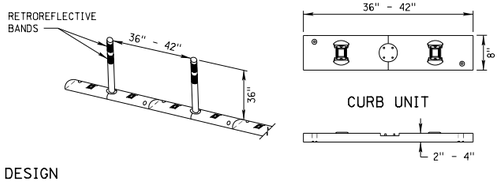
DESIGN

42 INCH CONES SHALL INCLUDE A 30 POUND RUBBER BASE AND DISPLAY FOUR 6 INCH WIDE BANDS OF RETROFEFLECTIVE SHEETING, ALTERNATING FLUORESCENT ORANGE-WHITE-FLOURESCENT ORANGE-WHITE.

APPLICATION

WHEN APPROVED BY THE ENGINEER OR SHOWN IN THE PLANS, 42 INCH REFLECTIVE CONES MAY BE USED IN LIEU OF TYPE II BARRICADES OR REFLECTORIZED DRUMS. 42 INCH CONES SHALL NOT BE USED FOR LANE-CLOSURE TAPERS OR SHIFTS. IF A RECTANGULAR BASE IS USED, THE LONG SIDE OF THE BASE SHOULD BE ORIENTED PARALLEL TO THE DIRECTION OF TRAFFIC.

TUBULAR POST AND CURB SYSTEM



DESIGN

TUBULAR POSTS USED IN THE SYSTEM SHALL BE 36 INCHES HIGH AND A MINIMUM OF 2 INCHES WIDE WHEN FACING TRAFFIC. THE TUBULAR POST AND CURB SYSTEM SHALL BE MADE OF A MATERIAL THAT CAN BE STRUCK WITHOUT DAMAGING IMPACTING VEHICLES. THE COLOR SHALL BE AS SHOWN IN THE PLANS.

THE TUBULAR POSTS SHALL BE RETROREFLECTIVE. RETROREFLECTION OF TUBULAR POSTS SHALL BE PROVIDED BY TWO 3-INCH WIDE RETROREFLECTIVE BANDS PLACED A MAXIMUM OF 2 INCHES FROM THE TOP WITH A MAXIMUM OF 6 INCHES BETWEEN THE BANDS. EACH CURB SECTION SHALL CONTAIN ONE RETROREFLECTIVE MARKER FACING EACH DIRECTION OF TRAFFIC. THE COLOR OF THE RETROREFLECTIVE BANDS AND MARKERS SHALL MATCH THE POST/CURB COLOR.

THE CURB SECTIONS SHALL BE CONFIGURED TO ALLOW FOR DRAINAGE FROM THE PAVEMENT SURFACE.

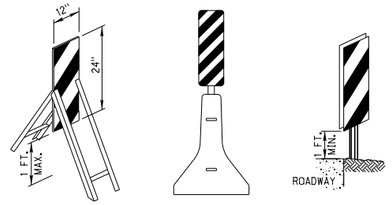
APPLICATION

TUBULAR POST AND CURB SYSTEMS MAY BE USED TO DIVIDE OPPOSING LANES OF TRAFFIC OR TO DIVIDE TRAFFIC LANES WHEN TWO OR MORE LANES ARE KEPT OPEN IN THE SAME DIRECTION.

FASTENING THE CURBS TO THE PAVEMENT WITH ANCHOR BOLTS OR OTHER SUITABLE METHODS AS DIRECTED BY THE MANUFACTURER IS REQUIRED TO MINIMIZE THE CHANCE OF BEING MOVED BY TRAFFIC.

TUBULAR POST AND CURB SYSTEMS SHALL BE INSTALLED IN THE LOCATIONS SHOWN IN THE PLANS OR DIRECTED BY THE ENGINEER.

VERTICAL PANELS



DESIGN

RETROREFLECTIVE MATERIAL ON VERTICAL PANELS SHALL BE 12 INCHES WIDE AND AT LEAST 24 INCHES HIGH. THEY SHALL HAVE ALTERNATING ORANGE AND WHITE STRIPES, WHERE THE HEIGHT OF THE RETROREFLECTIVE MATERIAL ON THE VERTICAL PANEL IS MORE THAN 36 INCHES, A PANEL STRIPE WIDTH OF 6 INCHES SHALL BE USED. WHERE THE HEIGHT OF THE RETROREFLECTIVE MATERIAL ON THE VERTICAL PANEL IS 36 INCHES OR LESS, A PANEL STRIPE WIDTH OF 4 INCHES SHALL BE USED. IF USED FOR TWO-WAY TRAFFIC, BACK-TO-BACK PANELS SHALL BE USED.

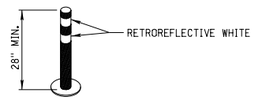
MARKINGS FOR VERTICAL PANELS SHALL BE ALTERNATING ORANGE AND WHITE RETROREFLECTORIZED STRIPES SLOPING DOWNWARD AT AN ANGLE OF 45 DEGREES IN THE DIRECTION TRAFFIC IS TO PASS.

POST MOUNTED VERTICAL PANELS SHALL BE MOUNTED WITH THE BOTTOM A MINIMUM OF 1 FOOT ABOVE THE ROADWAY. VERTICAL PANELS ON A TEMPORARY STAND SHALL BE MOUNTED WITH THE BOTTOM A MAXIMUM OF 1 FOOT ABOVE THE ROADWAY.

APPLICATION

WHERE SPACE IS LIMITED VERTICAL PANELS MAY BE USED TO CHANNEL TRAFFIC, DIVIDE OPPOSING LANES OF TRAFFIC, DIVIDE TRAFFIC LANES OR REPLACE BARRICADES. WHEN APPROVED BY THE ENGINEER, VERTICAL PANELS MAY BE POST-MOUNTED ALONG THE SIDE OF THE ROADWAY.

TUBULAR POSTS



DESIGN

TUBULAR POSTS SHALL BE PREDOMINANTLY ORANGE, NOT LESS THAN 28 INCHES HIGH, BE A MINIMUM OF 2 INCHES WIDE WHEN FACING TRAFFIC, AND MADE OF A MATERIAL THAT CAN BE STRUCK WITHOUT DAMAGING IMPACTING VEHICLES.

TUBULAR POSTS SHALL BE RETROREFLECTIVE. RETROREFLECTION OF TUBULAR POSTS SHALL BE PROVIDED BY TWO 3 INCHES WIDE WHITE BANDS PLACED A MAXIMUM OF 2 INCHES FROM THE TOP, WITH A MAXIMUM OF 6 INCHES BETWEEN THE BANDS. THE BASE SHALL NOT BE WIDER THAN 12 INCHES OR HIGHER THAN 2 INCHES.

APPLICATION

TUBULAR POSTS HAVE LESS VISIBLE AREA THAN OTHER DEVICES AND SHOULD BE USED ONLY WHERE SPACE RESTRICTIONS DO NOT ALLOW FOR THE USE OF OTHER MORE VISIBLE DEVICES. THEY MAY BE USED EFFECTIVELY TO DIVIDE OPPOSING LANES OF TRAFFIC OR TO DIVIDE TRAFFIC LANES WHEN TWO OR MORE LANES ARE KEPT OPEN IN THE SAME DIRECTION.

STEPS SHOULD BE TAKEN TO ASSURE THAT TUBULAR POSTS WILL NOT BE BLOWN OVER OR DISPLACED BY TRAFFIC BY EITHER AFFIXING THEM TO THE PAVEMENT WITH ANCHOR BOLTS OR ADHESIVE, IF A NONCYLINDRICAL DEVICE IS USED, IT SHALL BE ATTACHED TO THE PAVEMENT TO ENSURE THAT THE WIDTH FACING TRAFFIC MEETS THE MINIMUM REQUIREMENTS.

TUBULAR POSTS SHOULD NOT BE USED FOR PEDESTRIAN CHANNELIZATION OR A PEDESTRIAN BARRIERS IN TEMPORARY TRAFFIC CONTROL ZONES ON OR ALONG SIDEWALKS.

REV. NO.	DATE	DESCRIPTION OF REVISION
R7	JAN 18	NDOR BORDER TO NDOT BORDER
R6	JUN 14	2009 MUTCD UPDATE
R5	OCT 98	REVISE CHANNELIZATION DEVICES, TAPER

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 920-R7

TRAFFIC CONTROL, CONSTRUCTION AND MAINTENANCE

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
DANIEL J. WADDLE
E-6289
STATE OF NEBRASKA

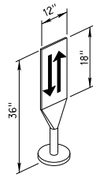
DATE

ORIGINAL: OCTOBER 1998
DATE

1/3

File: 92000e07.dgn Date: 29-JUN-2021 09:21 Computer: NDOTDESIGN134

OPPOSING TRAFFIC LANE DIVIDERS



DESIGN

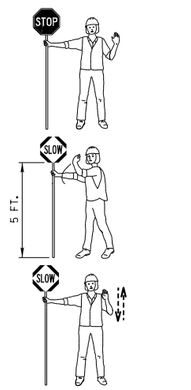
OPPOSING TRAFFIC LANE DIVIDERS SHALL BE A TWO SIDED UPRIGHT RETROREFLECTORIZED ORANGE PANEL, WITH A WIDTH OF 12 INCHES AND A HEIGHT OF 18 INCHES. THE TOP OF THE PANEL SHALL BE 36 INCHES ABOVE THE PAVEMENT. THE SYMBOL ON EACH SIDE SHALL BE TWO OPPOSING BLACK ARROWS. THE LANE DIVIDER SHALL BE MADE OF LIGHTWEIGHT MATERIAL THAT WILL YIELD UPON IMPACT BY A VEHICLE. THE LANE DIVIDER BASE SHALL NOT BE WIDER THAN 12 INCHES OR HIGHER THAN 4 INCHES. THE BASE SHALL BE ATTACHED TO THE EXISTING SURFACE BY EPOXY OR OTHER SUITABLE ADHESIVE, TO ENSURE THAT THE PANEL REMAINS FACING TRAFFIC.

APPLICATION

OPPOSING TRAFFIC LANE DIVIDERS ARE DELINEATION DEVICES USED AS CENTER LANE DIVIDERS TO SEPARATE OPPOSING TRAFFIC ON A TWO-LANE, TWO-WAY OPERATION.

FLAGGERS

REQUIRED METHOD



EMERGENCY USE ONLY

FLAGGER PADDLE

THE STOP/SLOW PADDLE SHALL HAVE AN OCTAGONAL SHAPE ON A RIGID HANDLE. STOP/SLOW PADDLES SHALL BE AT LEAST 18 INCHES WIDE WITH LETTERS AT LEAST 6 INCHES HIGH. IF THE STOP/SLOW PADDLE IS PLACED ON A RIGID STAFF, THE MINIMUM LENGTH OF THE STAFF, MEASURED FROM THE BOTTOM OF THE SIGN TO THE END OF THIS STAFF THAT RESTS ON THE GROUND, SHOULD BE 5 FEET. THE STOP/SLOW PADDLE SHOULD BE THE PRIMARY AND PREFERRED HAND-SIGNALING DEVICE BECAUSE THE STOP/SLOW PADDLE GIVES ROAD USERS MORE POSITIVE GUIDANCE THAN RED FLAGS. USE OF FLAGS SHOULD BE LIMITED TO EMERGENCY SITUATIONS.

FLAGGERS

A FLAGGER MUST BE DRESSED FOR SAFETY. IN ADDITION TO THE REQUIREMENTS OF THE "WORKER VISIBILITY" SECTION LISTED BELOW, FLAGGERS SHALL WEAR:

1. AN ORANGE OR YELLOW/GREEN CAP OR HARD HAT.
2. A SHIRT WITH SLEEVES, PANTS AND SHOES (TANK TOPS, SHORTS OR SANDALS SHALL NOT BE WORN).

FLAGGERS SHALL BE INSTRUCTED IN THE PROPER LOCATION, DUTIES AND PROCEDURES FOR FLAGGING AS OUTLINED IN THE CURRENT MUTCD AND THE DEPARTMENT OF ROADS FLAGGER'S HANDBOOK. AS REQUIRED BY THE DEPARTMENT OF ROADS, THE FLAGGER SHALL BE CERTIFIED, AND HAVE IN THEIR POSSESSION, A VALID FLAGGER CERTIFICATION CARD.

WORKER VISIBILITY

ALL WORKERS WITHIN THE RIGHT-OF-WAY WHO ARE EXPOSED EITHER TO TRAFFIC (VEHICLES USING THE HIGHWAY FOR PURPOSES OF TRAVEL) OR TO CONSTRUCTION EQUIPMENT WITHIN THE WORK AREA SHALL WEAR HIGH-VISIBILITY SAFETY APPAREL. HIGH-VISIBILITY SAFETY APPAREL IS DEFINED TO MEAN PERSONAL PROTECTIVE SAFETY CLOTHING THAT;

1. IS INTENDED TO PROVIDE CONSPICUITY DURING BOTH DAYTIME AND NIGHTTIME USAGE, AND
2. MEETS THE PERFORMANCE CLASS 2 OR CLASS 3 REQUIREMENTS OF THE ANSI/ISEA 107-2004 PUBLICATION ENTITLED "AMERICAN NATIONAL STANDARDS FOR HIGH-VISIBILITY SAFETY APPAREL AND HEADWEAR"

LIGHTING DEVICES

FUNCTION

CONSTRUCTION AND MAINTENANCE ACTIVITIES OFTEN CREATE CONDITIONS ON OR NEAR THE TRAVELED WAY THAT ARE PARTICULARLY HAZARDOUS AT NIGHT. IT IS OFTEN DESIRABLE AND NECESSARY TO SUPPLEMENT THE REFLECTORIZED SIGNS, BARRIERS, AND CHANNELIZING DEVICES WITH LIGHTING DEVICES. STROBE TYPE LIGHTS ARE NOT PERMITTED.

BARRICADE WARNING LIGHTS DESIGN (BATTERY OPERATED)

TYPE "A" LOW INTENSITY FLASHING WARNING LIGHTS ARE MOST COMMONLY MOUNTED ON BARRICADES, OR WITH SIGNS AND ARE INTENDED TO WARN THE DRIVER THAT THEY ARE PROCEEDING IN A HAZARDOUS AREA. THESE LIGHTS SHALL NOT BE USED FOR DELINEATION, AS A SERIES OF FLASHING LIGHTS IN A ROW WOULD TEND TO OBSCURE THE DESIRED PATH.

TYPE "A" HIGH INTENSITY FLASHING WARNING LIGHTS ARE NORMALLY MOUNTED ON THE TYPE III BARRICADE THAT ACCOMPANIES THE ADVANCE WARNING SIGNS.

TYPE "C" STEADY BURN LIGHTS AS USED HEREIN, SHALL MEAN A SERIES OF LOW WATTAGE YELLOW ELECTRIC LIGHTS. WHERE LIGHTS ARE NEEDED TO DELINEATE OR MARK THE TRAVELED WAY THROUGH AND AROUND OBSTRUCTIONS IN A CONSTRUCTION MAINTENANCE AREA, THE DELINEATION SHALL BE ACCOMPLISHED BY USE OF STEADY BURNING LIGHTS. WHEN USED TO SUPPLEMENT CHANNELIZATION, THE MAXIMUM SPACING FOR WARNING LIGHTS SHOULD BE IDENTICAL TO THE CHANNELIZING DEVICE SPACING REQUIREMENTS. WHEN USED TO DELINEATE A CURVE, TYPE "C" WARNING LIGHTS SHOULD ONLY BE USED ON DEVICES ON THE OUTSIDE OF THE CURVE, AND NOT ON THE INSIDE OF THE CURVE.

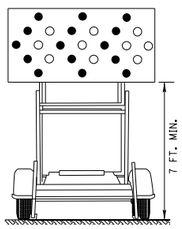
FLASHING ARROW PANEL (DISPLAY)

AN ARROW PANEL IS A SIGN WITH A MATRIX OF ELEMENTS, CAPABLE OF EITHER FLASHING OR SEQUENTIAL DISPLAYS. THIS SIGN SHALL PROVIDE ADDITIONAL WARNING AND DIRECTIONAL INFORMATION TO ASSIST IN MERGING AND CONTROLLING ROAD USERS THROUGH OR AROUND A TEMPORARY TRAFFIC CONTROL ZONE. AN ARROW PANEL SHOULD BE USED IN COMBINATION WITH APPROPRIATE SIGNS, CHANNELIZING DEVICES OR OTHER TRAFFIC CONTROL DEVICES.

DESIGN

ARROW PANELS SHALL MEET THE SIZE AND SPECIFICATIONS OF THE MUTCD FOR TYPE "C" ARROW DISPLAYS.

FLASHING ARROW PANEL SHALL BE RECTANGULAR, OF SOLID APPEARANCE AND FINISHED IN NON-REFLECTIVE BLACK. THE PANEL SHALL BE MOUNTED ON A VEHICLE, TRAILER OR OTHER SUITABLE SUPPORT. MINIMUM MOUNTING HEIGHT MEASURED VERTICALLY FROM THE BOTTOM OF THE PANEL TO THE ROADWAY BELOW IT OR TO THE ELEVATION OF THE NEAR EDGE OF THE ROADWAY. SHALL BE 7 FEET EXCEPT ON VEHICLE-MOUNTED PANELS, WHICH SHOULD BE AS HIGH AS PRACTICAL.



THE FOLLOWING SELECTIONS SHALL BE PROVIDED ON THE ARROW PANEL	
OPERATING MODE	PANEL DISPLAY
FLASHING ARROW	RIGHT SHOWN; LEFT OPPOSITE
SEQUENTIAL ARROW	RIGHT SHOWN; LEFT OPPOSITE
SEQUENTIAL CHEVRON	RIGHT SHOWN; LEFT OPPOSITE
FLASHING DOUBLE ARROW	
FLASHING OR ALTERNATING CAUTION	FLASHING LINE OR FLASHING CORNERS OR ALTERNATING DIAMOND CAUTION

THE ARROW PANEL SHALL HAVE A MINIMUM SIZE OF 96 INCHES WIDE AND 48 INCHES HIGH. THE MINIMUM LEGIBILITY DISTANCE SHALL BE 1 MILE. THE PANEL SHALL CONTAIN 25 LAMP ELEMENTS. ARROW PANEL ELEMENTS SHALL BE CAPABLE OF A MINIMUM 50 PERCENT DIMMING, AUTOMATICALLY WHEN AMBIENT LIGHT FALLS BELOW 50 LUX.

THE MINIMUM ELEMENT "ON TIME" SHALL BE 50 PERCENT FOR THE FLASHING MODE AND EQUAL INTERVALS OF 25 PERCENT FOR EACH SEQUENTIAL CHEVRON PHASE. THE FLASHING RATE SHALL BE NO FEWER THAN 25 NOR MORE THAN 40 FLASHES PER MINUTE.

APPLICATION

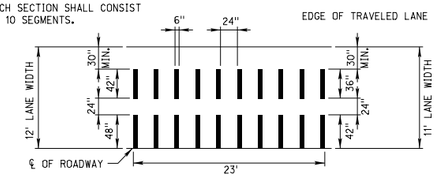
A FLASHING ARROW OR SEQUENTIAL CHEVRON MODE SHALL ONLY BE USED FOR STATIONARY OR MOVING LANE CLOSURES.

FOR SHOULDER WORK BLOCKING THE SHOULDER, FOR ROADSIDE WORK NEAR THE SHOULDER, OR FOR TEMPORARILY CLOSING ONE LANE ON A TWO-LANE, TWO-WAY ROADWAY, AN ARROW PANEL SHALL BE USED ONLY IN THE CAUTION MODE.

AN ARROW DISPLAY MODE SHALL NOT BE USED ON A TWO-LANE TWO-WAY ROADWAY FOR TEMPORARY ONE-LANE OPERATION OR LANE SHIFTS. AN ARROW DISPLAY SHALL NOT BE USED TO LATERALLY SHIFT TRAFFIC.

TEMPORARY RUMBLE STRIPS

EACH SECTION SHALL CONSIST OF 10 SEGMENTS.



DESIGN

TEMPORARY RUMBLE STRIPS MAY BE MADE OF ASPHALT PAVING MATERIAL, EPOXY AND AGGREGATE OR OTHER SUITABLE MATERIAL WHICH WILL MAINTAIN A DESIRABLE RUMBLE EFFECT. THE TEMPORARY RUMBLE STRIP SHOULD HAVE AN INSTALLED HEIGHT OF 5⁄8". PREFORMED RUMBLE STRIPS MAY BE USED PROVIDED THEY HAVE A MINIMUM ½" HEIGHT.

TRAFFIC SIGNALS

TRAFFIC SIGNALS MAY BE ALLOWED AT CERTAIN EQUIPMENT CROSSINGS WHERE THE VOLUME OF FILL MATERIAL AND THE NUMBER OF EQUIPMENT CROSSINGS PER HOUR IS HIGH. TRAFFIC SIGNALS MAY BE ALLOWED AT CERTAIN BRIDGE CONSTRUCTION SITES WHERE A COMBINATION OF ONE-WAY TRAFFIC AND HIGH TRAFFIC VOLUMES WOULD BE BEST SERVED WITH THIS TYPE OF TRAFFIC CONTROL.

ALL TRAFFIC SIGNAL REQUESTS AND METHOD OF INSTALLATION ON THE STATE HIGHWAY SYSTEM SHALL BE IN COMPLIANCE WITH THE MUTCD AND MUST BE APPROVED BY THE STATE TRAFFIC ENGINEER.

IF, AFTER THE SIGNAL ASSEMBLIES ARE ERECTED AND THE ROAD IS OPEN TO PUBLIC TRAVEL, THE SIGNAL SYSTEM IS NOT PUT IMMEDIATELY INTO OPERATION, THE SIGNAL FACES SHALL BE COVERED WITH BURLAP OR OTHER OPAQUE MATERIAL SUBJECT TO THE APPROVAL OF THE ENGINEER. INOPERATIVE SIGNALS ON ROADS OPEN TO THE PUBLIC SHALL ALWAYS BE COVERED. TILTING THE SIGNALS UPWARD IS NOT AN ACCEPTABLE ALTERNATIVE TO COVERING THE HEADS.

FLOODLIGHTS

WHEN NIGHTTIME WORK IS REQUIRED, FLOODLIGHTS SHALL BE USED TO ILLUMINATE FLAGGER STATIONS. FLOODLIGHTS SHOULD BE USED TO ILLUMINATE EQUIPMENT CROSSINGS, AND OTHER AREAS WHERE EXISTING LIGHT IS NOT ADEQUATE FOR THE WORK TO BE PERFORMED SAFELY.

IN NO CASE SHALL FLOODLIGHTING BE PERMITTED TO CREATE A DISABLING GLARE FOR DRIVERS. THE ADEQUACY OF THE FLOODLIGHT PLACEMENT AND ELIMINATION OF POTENTIAL GLARE SHOULD BE CHECKED BY DRIVING THROUGH THE PROJECT.

PAVEMENT MARKING

IT IS INTENDED TO THE EXTENT POSSIBLE, THAT MOTORISTS BE PROVIDED MARKINGS WITHIN A WORK AREA COMPARABLE TO THE MARKINGS NORMALLY MAINTAINED ALONG ADJACENT ROADWAYS, PARTICULARLY AT EITHER END OF THE WORK AREA.

ALL MARKINGS AND DEVICES USED TO DELINEATE VEHICLE AND PEDESTRIAN PATHS SHALL BE CAREFULLY REVIEWED DURING DAYTIME AND NIGHTTIME PERIODS TO AVOID INADVERTENTLY LEADING DRIVERS OR PEDESTRIANS FROM THE INTENDED PATH.

PAVEMENT MARKINGS NO LONGER APPLICABLE SHALL BE REMOVED UNLESS OTHERWISE APPROVED BY THE ENGINEER.

TAPERS

TAPERS ARE CREATED USING A SERIES OF CHANNELIZING DEVICES OR PAVEMENT MARKINGS TO MOVE TRAFFIC OUT OF OR INTO ITS NORMAL PATH.

MERGING TAPER

A MERGING TAPER REQUIRES THE LONGEST DISTANCE BECAUSE DRIVERS ARE REQUIRED TO MERGE INTO COMMON ROAD SPACE. THE TAPER SHOULD BE LONG ENOUGH TO ENABLE MERGING DRIVERS TO HAVE ADEQUATE ADVANCE WARNING AND SUFFICIENT LENGTH TO ADJUST THEIR SPEEDS AND MERGE INTO A SINGLE LANE BEFORE THE DOWNSTREAM END OF THE TRANSITION.

SHIFTING TAPER

A SHIFTING TAPER IS USED WHEN MERGING IS NOT REQUIRED, BUT A LATERAL SHIFT IS NEEDED. APPROXIMATELY ONE-HALF "L" HAS BEEN FOUND TO BE ADEQUATE. WHERE MORE SPACE IS AVAILABLE, IT MAY BE BENEFICIAL TO USE LONGER TAPERS. GUIDANCE FOR CHANGES IN ALIGNMENT MAY ALSO BE ACCOMPLISHED BY USING HORIZONTAL CURVES DESIGNED FOR NORMAL HIGHWAY SPEEDS.

SHOULDER TAPERS

A SHOULDER TAPER MAY BE BENEFICIAL ON HIGH-SPEED ROADWAYS WHERE SHOULDERS ARE PART OF THE ACTIVITY AREA AND ARE CLOSED, OR WHEN IMPROVED SHOULDERS MIGHT BE MISTAKEN AS A DRIVING LANE IN THESE INSTANCES, THE SAME TYPE, BUT ABBREVIATED, CLOSURE PROCEDURES USED ON A NORMAL PORTION OF THE ROADWAY CAN BE USED. IF USED, SHOULDER TAPERS APPROACHING THE ACTIVITY AREA SHOULD HAVE A LENGTH OF ABOUT ONE-THIRD "L".

DOWNSTREAM TAPERS

THE DOWNSTREAM TAPER MAY BE USEFUL IN TERMINATION AREAS TO PROVIDE A VISUAL CUE TO THE DRIVER THAT ACCESS IS AVAILABLE TO THE ORIGINAL LANE OR PATH THAT WAS CLOSED. WHEN USED, IT SHOULD HAVE A MINIMUM LENGTH OF ABOUT 100 FEET PER LANE, WITH DEVICES SPACED ABOUT 20 FEET APART.

ONE LANE, TWO WAY TAPER

THE ONE-LANE, TWO-WAY TAPER IS USED IN ADVANCE OF AN ACTIVITY AREA THAT OCCUPIES PART OF A TWO-WAY ROADWAY IN SUCH A WAY THAT A PORTION OF THE ROAD IS USED ALTERNATELY BY TRAFFIC IN EACH DIRECTION. A SHORT TAPER HAVING A MINIMUM LENGTH OF 50 FEET AND A MAXIMUM LENGTH OF 100 FEET WITH CHANNELZING DEVICES AT APPROXIMATELY 20 FOOT SPACINGS SHOULD BE USED TO GUIDE TRAFFIC INTO THE ONE-LANE-SECTION AND A DOWNSTREAM TAPER WITH A LENGTH OF APPROXIMATELY 100 FEET SHOULD BE USED TO GUIDE TRAFFIC BACK INTO THEIR ORIGINAL LANE.

TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES	
TYPE OF TAPER	TAPER LENGTH (FEET)
MERGING TAPER	L MINIMUM
SHIFTING TAPER	1/2 L MINIMUM
SHOULDER TAPER	1/3 L MINIMUM
TWO-WAY TAPER	100 FEET MAXIMUM

FORMULAS FOR L	
SPEED	FORMULA
40 MPH OR LESS	$L = \frac{WS^2}{60}$
45 MPH OR GREATER	L = WS

L = TAPER LENGTH IN FEET
W = WIDTH OF OFFSET IN FEET
S = POSTED SPEED LIMIT PRIOR TO WORK IN MPH

TAPER LENGTH L (FEET)			
SPEED (MPH)	LANE WIDTH		
S	10 FT.	11 FT.	12 FT.
25	105	115	125
30	150	165	180
35	205	225	245
40	270	295	320
45	450	495	540
50	500	550	600
55	550	605	660
60	600	660	720
65	650	715	780
75	750	825	900

REV. NO.	DATE	DESCRIPTION OF REVISION
R7	JAN 18	NDOR BORDER TO NDOT BORDER
R6	JUN 14	2009 MUTCD UPDATE
R5	OCT 98	REVISE CHANNELIZATION DEVICES, TAPER

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 920-R7

TRAFFIC CONTROL, CONSTRUCTION AND MAINTENANCE

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
DANIEL J. WADDLE
E-6289
STATE OF NEBRASKA

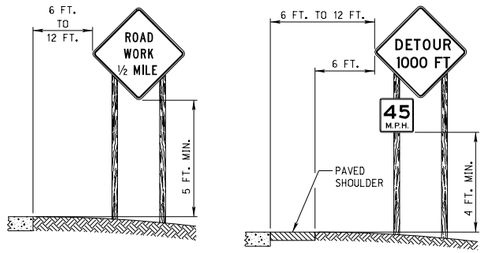
DATE

ORIGINAL: OCTOBER 1998
DATE

ROADWAY DESIGN DIVISION

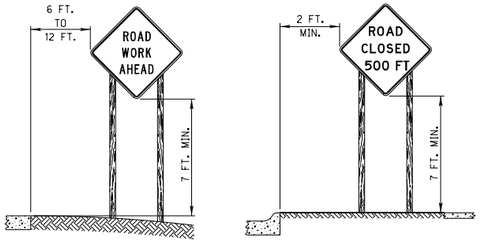
ROADSIDE SIGNS

HEIGHT AND LATERAL LOCATION OF SIGNS
RURAL AREA



WITH SPEED ADVISORY PLATE

URBAN AREA



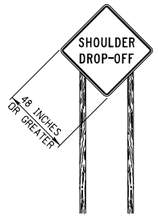
TYPICAL FIRST SIGN AT CONSTRUCTION SITE

WITH TYPE "A" FLASHING WARNING LIGHT MOUNTED ABOVE TYPE III BARRICADE

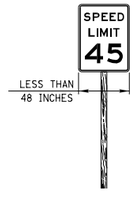
PORTABLE AND TEMPORARY MOUNTING

TYPICAL SIGN MOUNTINGS

POST MOUNTED



SIGNS 48 INCHES OR WIDER REQUIRE TWO POSTS



SIGN WIDTHS LESS THAN 48 INCHES MAY BE MOUNTED WITH ONE POST

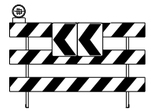
TYPICAL SIGN MOUNTINGS

OTHER THAN POST MOUNTED

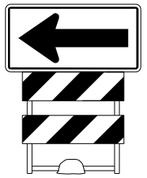
TYPE III BARRICADE WITH SIGN

PORTABLE AND TEMPORARY MOUNTING

TYPE III BARRICADE WITH SIGN AND DETOUR ARROW



TYPE III BARRICADE WITH CHEVRONS



TYPE II BARRICADE WITH DETOUR ARROW OR SIGN

PLASTIC DRUM WITH CHEVRON OR SIGN

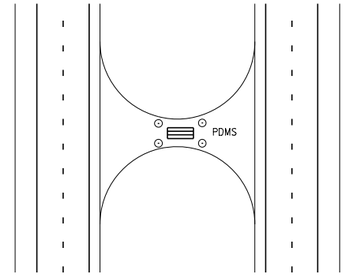
TEMPORARY SIGN SUPPORTS

ALL "TEMPORARY SIGN" SUPPORTS (BASES) SHALL BE NCHRP 350 OR MASH (TL-3) APPROVED.

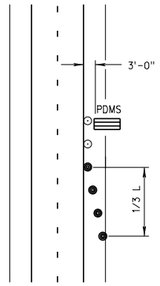
"TEMPORARY SIGNS" ARE ALL TEMPORARILY MOUNTED WORK ZONE SIGNS THAT ARE NOT POST MOUNTED IN THE GROUND AT THE TYPICAL 5 FOOT MOUNTING HEIGHT. TEMPORARY SIGNS ARE CONSIDERED NCHRP 350 OR MASH CATEGORY 2 DEVICES AND ARE MOUNTED ON TEMPORARY SIGN STANDS. TEMPORARY SIGNS SHALL BE MOUNTED A MINIMUM OF 1 FOOT ABOVE THE GROUND, UNLESS OTHERWISE REQUIRED TO BE MOUNTED AT A HIGHER HEIGHT.

TEMPORARY SIGNS AND THEIR SUPPORTS SHALL NOT BE IN PLACE LONGER THAN 3 DAYS. ANY SIGN THAT IS TO BE IN PLACE LONGER THAN 3 DAYS SHALL BE POST MOUNTED OR MOUNTED TO A DRUM, BARRICADE, OR BARRIER, AS REQUIRED BY THE PLANS OR SPECIFICATIONS.

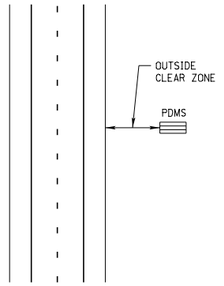
PORTABLE DYNAMIC MESSAGE SIGN DELINEATION



IN MEDIAN



ON SHOULDER



OFF SHOULDER

PORTABLE DYNAMIC MESSAGE SIGNS (PDMS)

THE PLACEMENT OF PDMS SHOULD BE IN THE FOLLOWING ORDER:

WHENEVER POSSIBLE, PDMS SHOULD BE PLACED OFF OF ANY USABLE PORTION OF THE ROADWAY ON THE RIGHT SIDE OF THE ROADWAY. WHEN PLACED OUTSIDE THE CLEAR ZONE OR BEHIND GUARDRAIL OR CONCRETE PROTECTION BARRIERS, DELINEATION IS NOT REQUIRED.

WHERE FIELD CONDITIONS DO NOT ALLOW FOR THIS PLACEMENT, THE SIGNS MAY BE LOCATED ON THE OUTSIDE SHOULDER OF THE ROADWAY OR WITHIN THE MEDIAN.

A. A MINIMUM CLEARANCE OF 3 FEET MEASURED HORIZONTALLY FROM THE EDGE OF THE SIGN TO THE EDGE OF THE TRAVELED WAY IS RECOMMENDED.
B. THE PDMS SHOULD HAVE A MINIMUM MOUNTED HEIGHT OF 7 FEET ON FREEWAYS, EXPRESSWAYS AND IN URBAN AREAS.
C. ALL OTHER RURAL APPLICATIONS SHOULD HAVE A MINIMUM HEIGHT OF 5 FEET.

THESE HEIGHTS ARE MEASURED VERTICALLY FROM THE BOTTOM OF THE SIGN TO THE ELEVATION OF THE NEAR EDGE OF THE PAVEMENT.

REFLECTORIZED PLASTIC DRUMS SHOULD BE USED TO DELINEATE EACH SIGN USING A 1/3 L TAPER. THESE DRUMS SHOULD BE POSITIONED ON THE UPSTREAM END OF THE SIGN TO FORM A TAPER LEADING UP TO THE TRAFFIC SIDE OF THE SIGN. FOR A SIGN LOCATED IN THE MEDIAN, THE SIGN SHOULD BE DELINEATED WITH A 42 INCH CONE ON ALL FOUR CORNERS.

WHEN DEPLOYED, THE SIGN SHALL BE SIGHTED AND ALIGNED WITH APPROACHING TRAFFIC TO ENSURE VISIBILITY OF THE MESSAGE. IF MULTIPLE SIGNS ARE USED, THE SIGNS SHOULD BE LOCATED ON THE SAME SIDE OF THE ROAD AND SEPARATED ACCORDING TO PROPER SIGN SPACING.

WHEN PRACTICAL, PDMS SHOULD NOT BE USED TO REPLACE STATIC SIGNS FOR LONG TERM USAGE (OVER 10 DAYS).

WHEN PDMS ARE TO BE DEPLOYED FOR LONG PERIODS, SUCH AS INCIDENT MANAGEMENT ROLES, CONCRETE PADS WITH APPROPRIATE TIE DOWNS SHOULD BE CONSTRUCTED FOR THEIR PLACEMENT.

PDMS NOT ACTIVELY BEING USED IN A CONSTRUCTION OR INCIDENT MANAGEMENT ROLE SHOULD BE REMOVED.

REFER TO NDOR "DMS GUIDELINES" FOR PROPER PDMS MESSAGE INFORMATION.

NOTES

1. ALL TRAFFIC CONTROL DEVICES SHALL MEET THE APPLICABLE STANDARDS AND SPECIFICATIONS PRESCRIBED IN PART 6 OF THE LATEST ADOPTED EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, (MUTCD)" AND THE STATE OF NEBRASKA SUPPLEMENT TO THE MUTCD. ALL TRAFFIC CONTROL DEVICES SHALL BE CRASHWORTHY AND QUALIFY AS SUCH ACCORDING TO THE TESTING AND ACCEPTANCE GUIDELINES OF THE NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM (NCHRP) REPORT 350 OR MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
2. TRAFFIC CONTROL PLANS AND DEVICES SHOULD FOLLOW THE PRINCIPLES SET FORTH, BUT MAY DEVIATE FROM THE TYPICAL DRAWINGS TO ALLOW FOR CONDITIONS AND REQUIREMENTS OF THE PROJECT.
3. TRAFFIC CONTROL DEVICES SHALL BE INSTALLED SO AS NOT TO OBSTRUCT THE VIEW OF OTHER TRAFFIC CONTROL DEVICES.
4. THE ENGINEER SHALL HAVE THE AUTHORITY TO REQUIRE THE USE, AND APPROVE THE LOCATION OF ANY OF THE DEVICES SHOWN IN THESE PLANS.

WORK ZONE SPEED LIMIT NOTES

A. WORK ZONE SPEED LIMITS SHALL NOT BE INSTALLED WITHOUT A SPEED ZONE AUTHORIZATION COMPLETED BY THE DEPARTMENT.
B. REDUCED SPEED LIMITS SHOULD BE USED ONLY IN THE SPECIFIC PORTION OF THE WORK ZONE WHERE CONDITIONS OR RESTRICTIVE FEATURES ARE PRESENT. HOWEVER, FREQUENT CHANGES IN THE SPEED LIMIT SHOULD BE AVOIDED. THE REDUCTION OF SPEED SHOULD BE DESIGNED SO VEHICLES CAN SAFELY TRAVEL THROUGH THE WORK ZONE WITH A SPEED LIMIT REDUCTION OF NO MORE THAN 10 MPH UNLESS OTHERWISE NOTED IN THE PLANS.
C. WORK ZONE SPEED LIMITS SHOWN ARE TYPICAL APPLICATIONS ONLY AND ARE NOT TO BE ASSUMED AS THE SPEED LIMITS REQUIRED FOR THE WORK.
D. EXISTING SPEED LIMIT SIGNS SHALL BE REMOVED OR COVERED WHEN A REDUCED WORK ZONE SPEED LIMIT IS IN EFFECT IN THE SAME AREA.
E. WORK ZONE SPEED LIMIT SIGNS SHALL BE INSTALLED EVERY MILE THROUGH THE WORK AREA WHEN SPEED ZONE IS REDUCED.
F. A SPEED LIMIT SIGN ENDING THE REDUCED SPEED ZONE SHALL BE INSTALLED AT THE END OF EACH ZONE.
G. DOUBLE FINES AND REDUCED SPEED ZONE SIGNING ARE NOT REQUIRED FOR SHORT-DURATION WORK LESS THAN 12 HOURS.

TAPER FORMULA

L = S x W FOR SPEEDS OF 45 MPH OR MORE.

L = $\frac{WS^2}{60}$ FOR SPEEDS OF 40 MPH OR LESS.

WHERE:

L = MINIMUM LENGTH OF TAPER.

S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK.

W = WIDTH OF OFFSET (LANE WIDTH).

LEGEND

- TYPE III BARRICADE
- REFLECTORIZED PLASTIC DRUM
- REFLECTORIZED PLASTIC DRUM OR 42" CONE
- PORTABLE DYNAMIC MESSAGE SIGN

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R7	JAN 18	NDOR BORDER TO NDOT BORDER
R6	JUN 14	2009 MUTCD UPDATE
R5	OCT 98	REVISE CHANNELIZATION DEVICES, TAPER

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 920-R7

TRAFFIC CONTROL, CONSTRUCTION AND MAINTENANCE

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
DANIEL J. WADDLE
E-6289
STATE OF NEBRASKA

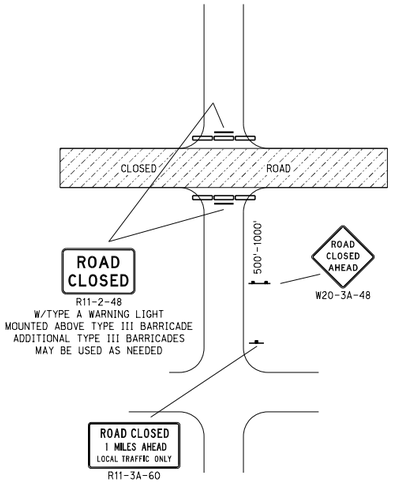
DATE

ORIGINAL: OCTOBER 1998
DATE

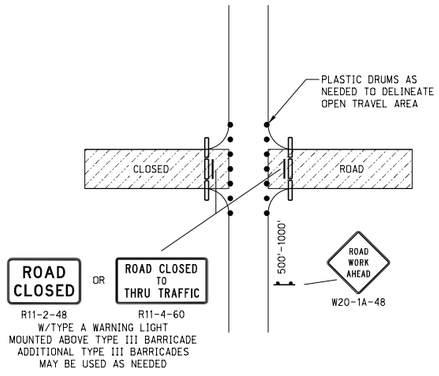
3/3

Computer: NDOTDESIGN134
Date: 29-JUN-2021 09:21
File: 92000e07.dgn

CROSS ROAD INTERSECTING CLOSED ROAD

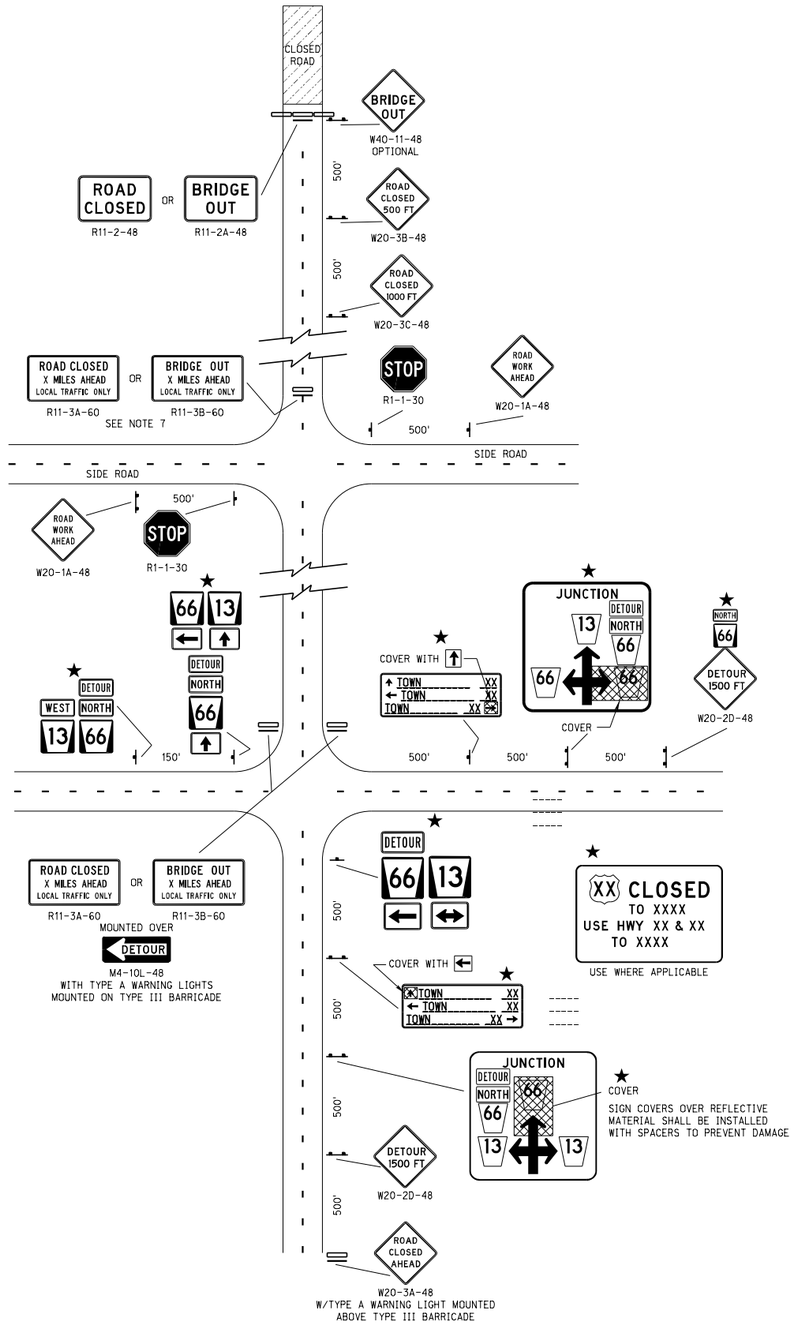


TRAFFIC NOT ALLOWED TO CROSS CLOSED ROAD



TRAFFIC ALLOWED TO CROSS CLOSED ROAD

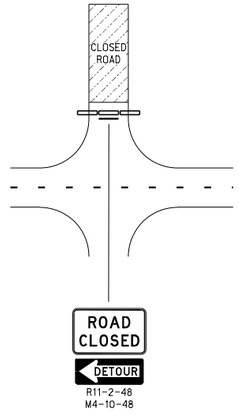
ROAD CLOSED BEYOND JUNCTION



NOTES

1. SIGNS SHOWN ARE USUALLY FOR ONE DIRECTION OF TRAVEL ONLY.
2. THE CONTRACTOR SHALL INSTALL, MAINTAIN, AND REMOVE ALL SIGNS IN ACCORDANCE WITH THE DETAILS OF AND AT THE LOCATIONS SHOWN IN THE PLANS. SIGNS INSTALLED BY THE DEPARTMENT OR OTHER GOVERNMENT AGENCY SHALL BE MAINTAINED AND REMOVED BY THEIR FORCES.
3. WHEN MESSAGE IS NOT PERTINENT, SIGNS SHALL BE TAKEN DOWN, COVERED OR FOLDED. TAPE IS NOT PERMITTED ON THE FACE OF THE SIGN.
4. VEHICLES OR EQUIPMENT SHALL NOT BE PARKED SO AS TO OBSCURE OR DISTRACT FROM TRAFFIC CONTROL DEVICES.
5. FLAGS MAY BE USED TO CALL ATTENTION TO WARNING SIGNS.
6. WHEN APPROPRIATE THE SIGN R11-2B "BRIDGE OUT" MAY BE USED INSTEAD OF R11-2 "ROAD CLOSED".
7. BARRICADE AND SIGN MAY BE PLACED ALONG EDGE OF ROAD IF NEEDED FOR LOCAL TRAFFIC.
8. REFER TO STANDARD PLAN 920 FOR GENERAL INFORMATION NOT SHOWN.

ROAD CLOSED AT JUNCTION



LEGEND

- TYPE III BARRICADE
- REFLECTORIZED PLASTIC DRUM
- SINGLE POSTED SIGN
- DOUBLE POSTED SIGN
- ★ INSTALLED BY OTHERS

TAPER FORMULA

L = S x W FOR SPEEDS OF 45 MPH OR MORE.

L = $\frac{WS^2}{60}$ FOR SPEEDS OF 40 MPH OR LESS.

WHERE:

L = MINIMUM LENGTH OF TAPER.

S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK.

W = WIDTH OF OFFSET (LANE WIDTH).

REV. NO.	DATE	DESCRIPTION OF REVISION
R2	JAN 18	NDOR BORDER TO NDOT BORDER
R1	JUN 14	2009 MUTCD UPDATES

NEBRASKA DEPARTMENT OF TRANSPORTATION

STANDARD PLAN NO. 923-R2

TRAFFIC CONTROL ROAD CLOSURE

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

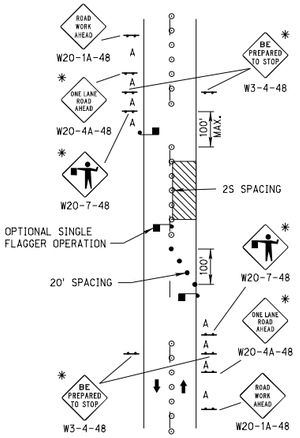
PROFESSIONAL CIVIL ENGINEER
DANIEL J. WADDLE
E-6289
STATE OF NEBRASKA

DATE

ORIGINAL: AUGUST 1998
DATE

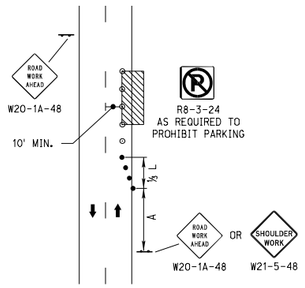
1/1

File: 923l0e02.dgn
Date: 29-JUN-2021 09:21
Computer: NDOTDESIGN134

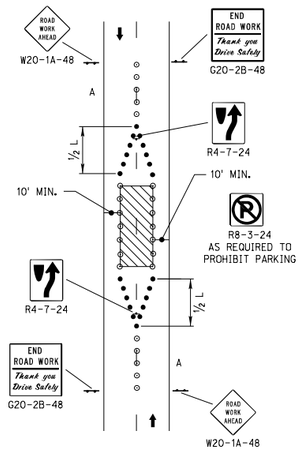


ONE LANE CLOSED
WITH FLAGGER

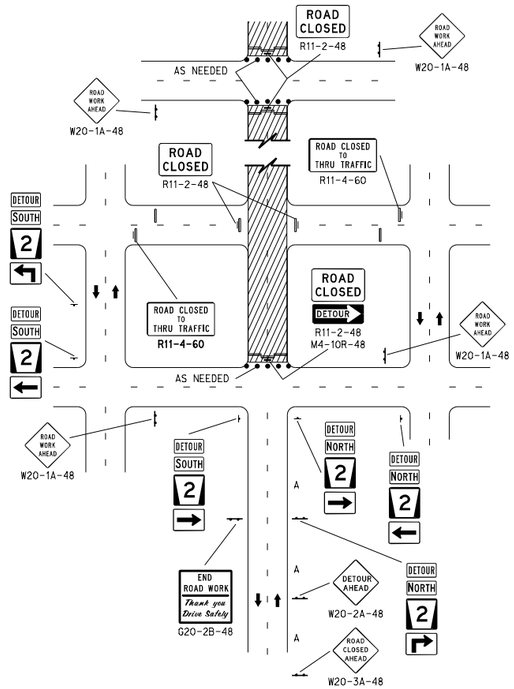
✱ SIGNS AND CONES ARE SUBSIDIARY TO THE FLAGGING OPERATION.



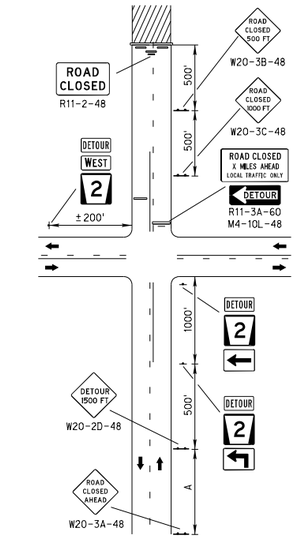
SHOULDER OR PARKING
LANE CLOSED



WORK IN CENTER OF
ROAD WITH LOW
TRAFFIC VOLUMES



ROAD CLOSED AT DETOUR



ROAD CLOSED BEYOND DETOUR

LEGEND

- FLASHING ARROW PANEL
- TYPE III BARRICADE
- REFLECTORIZED PLASTIC DRUM
- TUBULAR POST
- REFLECTORIZED PLASTIC DRUM OR 42" CONE
- SINGLE POSTED SIGN
- DOUBLE POSTED SIGN
- FLAGGER
- xxxx PAVEMENT MARKING REMOVAL

TAPER FORMULA

L = S x W FOR SPEEDS OF 45 MPH OR MORE.

$L = \frac{WS^2}{60}$ FOR SPEEDS OF 40 MPH OR LESS.

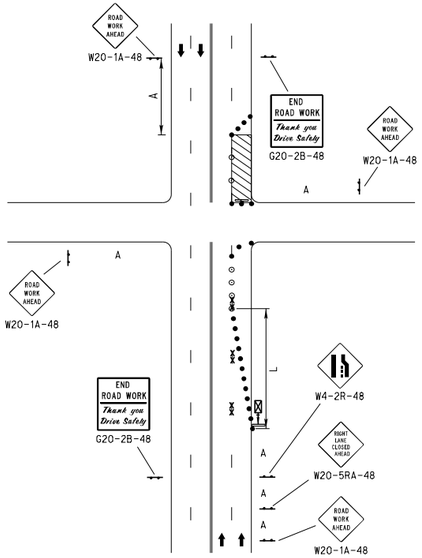
WHERE:
L = MINIMUM LENGTH OF TAPER.

S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK.

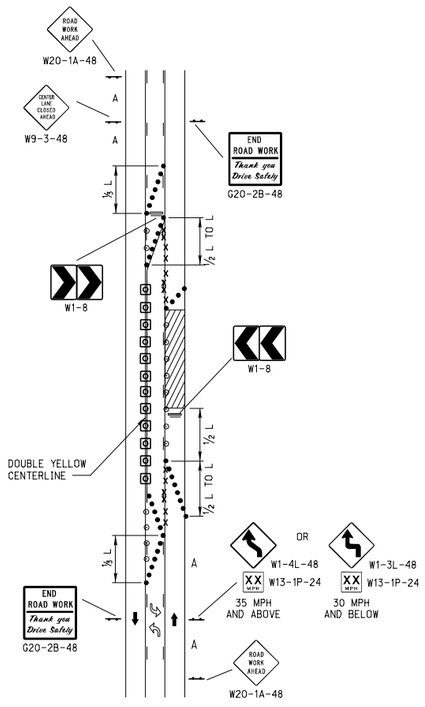
W = WIDTH OF OFFSET (LANE WIDTH).

NOTES

1. ALL BARRICADE AND SIGN LOCATIONS ON THIS PLAN ARE APPROXIMATE, AND MAY BE ADJUSTED TO FIT FIELD CONDITIONS. THE SIGNS SHALL BE INSTALLED SO AS NOT TO OBSCURE THE VIEW OF OTHER TRAFFIC CONTROL DEVICES.
2. MINIMUM WIDTH OF TRAVELLED LANE SHALL BE AS REQUIRED BY THE ENGINEER.
3. FLASHING ARROW PANEL REQUIRED ON ALL ROADWAYS WITH POSTED SPEED LIMIT 45 MPH OR HIGHER. THE USE OF A FLASHING ARROW PANEL IS OPTIONAL ON ROADWAYS WITH A POSTED SPEED OF 40 MPH OR LOWER.
4. LONG-TERM FLASHING ARROW PANELS IN URBAN RESIDENTIAL AREAS WHERE DIESEL ENGINE NOISE WILL BE DISRUPTIVE TO RESIDENTS, MAY BE REQUIRED TO OPERATE BY 120 VAC, OR IF SIGHT DISTANCE ALLOWS, A SOLAR POWERED ARROW PANEL MAY BE USED.
5. FOR SHORT-TERM WORK (LESS THAN 24 HOURS) SIGN G20-2B-48 (END ROAD WORK, THANK YOU, DRIVE SAFELY) MAY BE OMITTED.
6. THE MAXIMUM SPACING BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD BE APPROXIMATELY EQUAL IN FEET TO THE SPEED LIMIT (S). WHERE CHANNELIZING DEVICES ARE USED ALONG THE WORK AREA, THE SPACING MAY BE INCREASED TO THE DISTANCE IN FEET EQUAL TO THE SPEED LIMIT, DOUBLED (2 × S). SEE "TAPER FORMULA" TABLE FOR MORE INFORMATION.
7. FOR LANE CLOSURES OVER 72 HOURS, ALL CONFLICTING PAVEMENT MARKINGS SHALL BE REMOVED. ON ASPHALT SURFACES, DURABLE PAVEMENT MARKINGS MAY BE COVERED WITH APPROVED BLACK TEMPORARY PAVEMENT MARKING TAPE.
8. DESIGNATION OF SPEED SHOWN ON ADVISORY SPEED SIGNS W13-1P SHALL BE DETERMINED BY THE ENGINEER IN ACCORDANCE WITH MUTCD. THE SPEED DESIGNATION SHALL BE AS HIGH AS PRACTICAL AND FEASIBLE.

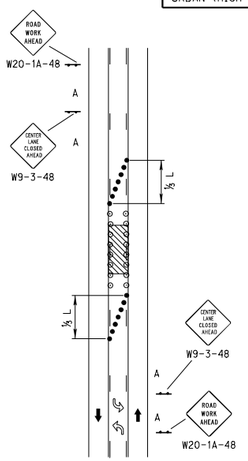


LANE CLOSED NEAR INTERSECTION
(RIGHT LANE CLOSED)

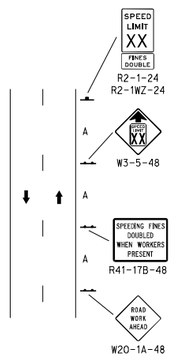


3-LANE ROADWAY
ONE LANE CLOSED

ROAD TYPE	MINIMUM DISTANCE BETWEEN SIGNS
	A
URBAN (LOW SPEED - 25 MPH TO 40 MPH)	100'
URBAN (HIGH SPEED - 45 MPH OR HIGHER)	350'



TWO-WAY LEFT TURN
LANE CLOSED



TYPICAL ADVANCED
SIGNING

REV. NO.	DATE	DESCRIPTION OF REVISION
R4	JUL 20	ADDED NOTE TO SHEET ONE
R3	JAN 19	TOOK OUT 1/2 L ON SHEET 2
R2	JAN 18	NDOR BORDER TO NDOT BORDER

NEBRASKA DEPARTMENT OF TRANSPORTATION
STANDARD PLAN NO. 924-R4

URBAN TRAFFIC CONTROL PLAN

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

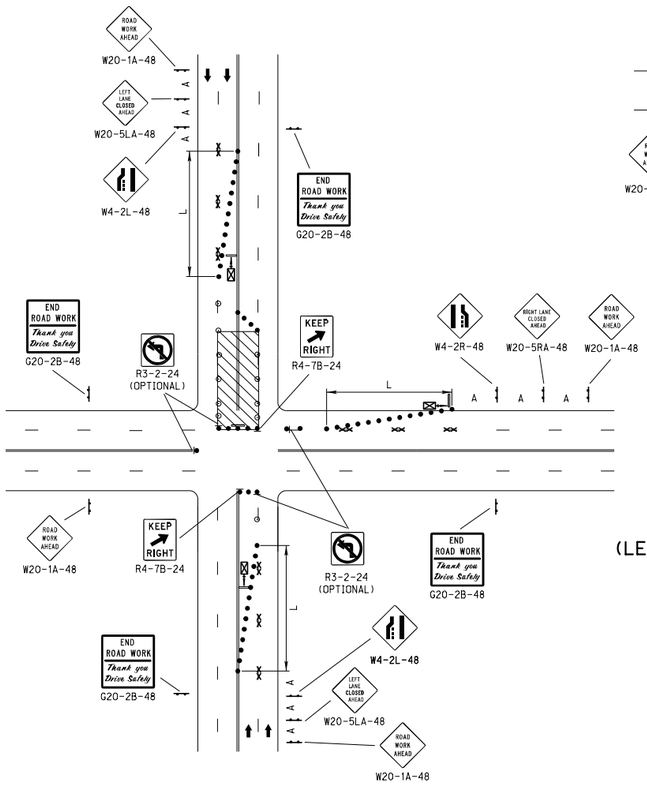
PROFESSIONAL CIVIL ENGINEER
DANIEL J. WADDLE
E-6289
STATE OF NEBRASKA

DATE

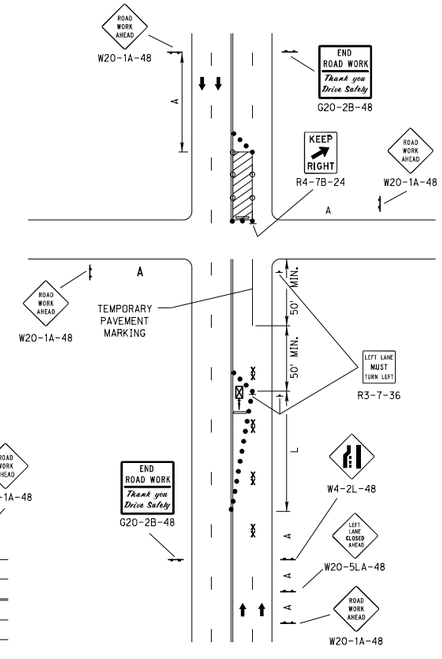
ORIGINAL:
FEBRUARY 1, 2010
DATE

1
3

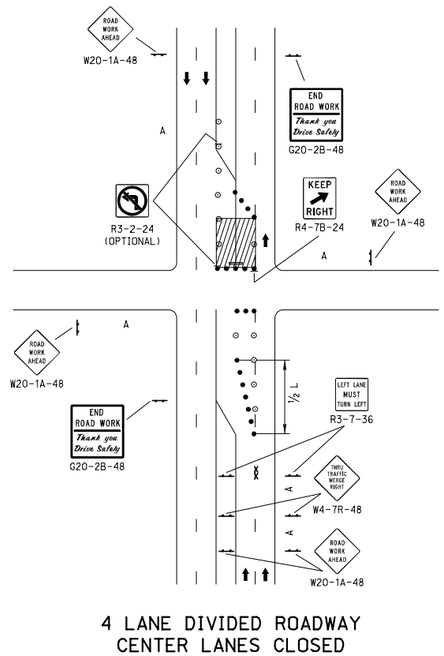
ROADWAY DESIGN DIVISION



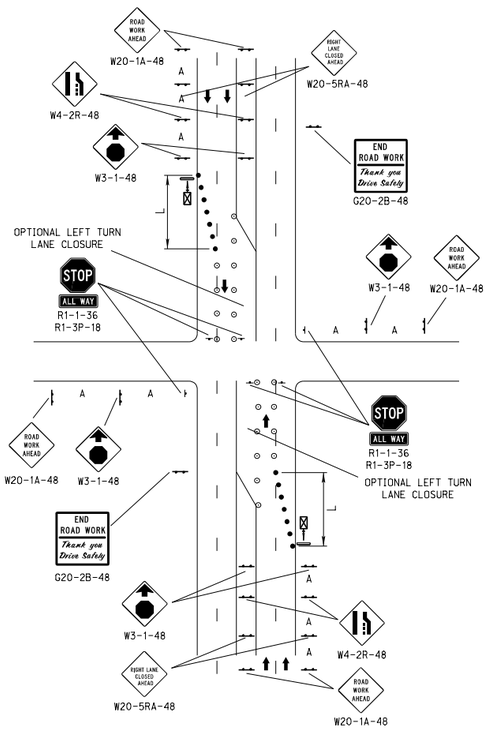
4 LANE UNDIVIDED ROADWAY
CENTER LANES CLOSED
NEAR INTERSECTION



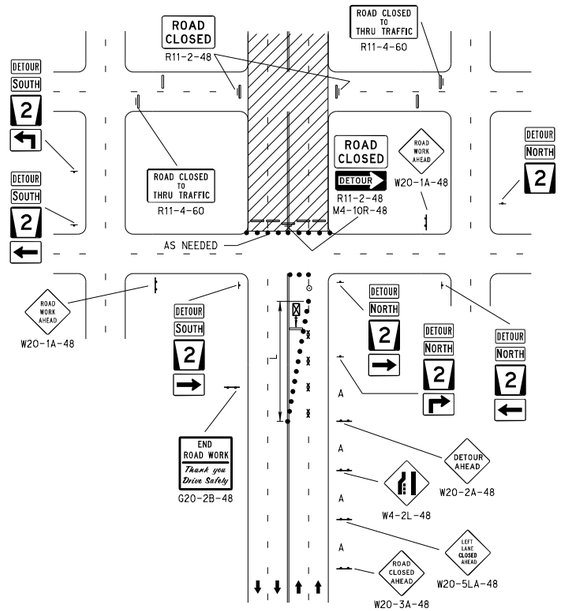
LANE CLOSED NEAR INTERSECTION
(LEFT LANE CLOSURE FORMING A TURNBAY)



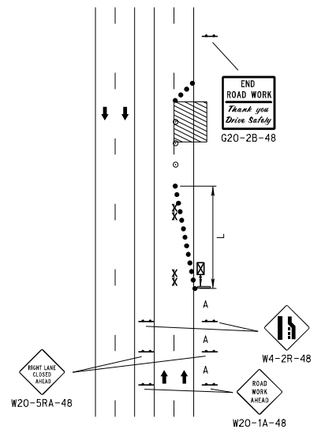
4 LANE DIVIDED ROADWAY
CENTER LANES CLOSED
NEAR INTERSECTION



TEMPORARY ALL-WAY STOP
FOR SIGNAL WORK



ROAD CLOSED AT DETOUR
(OPTIONAL LANE CLOSURE)



DIVIDED ROADWAY
ONE LANE CLOSED

ROAD TYPE	MINIMUM DISTANCE BETWEEN SIGNS
	A
URBAN (LOW SPEED - 25 MPH TO 40 MPH)	100'
URBAN (HIGH SPEED - 45 MPH OR HIGHER)	350'

LEGEND

- FLASHING ARROW PANEL
- TYPE III BARRICADE
- REFLECTORIZED PLASTIC DRUM
- TUBULAR POST
- REFLECTORIZED PLASTIC DRUM OR 42" CONE
- SINGLE POSTED SIGN
- DOUBLE POSTED SIGN
- FLAGGER
- xxxx PAVEMENT MARKING REMOVAL

TAPER FORMULA

L = S x W FOR SPEEDS OF 45 MPH OR MORE.

$L = \frac{WS^2}{60}$ FOR SPEEDS OF 40 MPH OR LESS.

WHERE:
L = MINIMUM LENGTH OF TAPER.

S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK.

W = WIDTH OF OFFSET (LANE WIDTH).

REV. NO.	DATE	DESCRIPTION OF REVISION
R4	JUL 20	ADDED NOTE TO SHEET ONE
R3	JAN 19	TOOK OUT 1/2 L ON SHEET 2
R2	JAN 18	NDOR BORDER TO NDOT BORDER

NEBRASKA DEPARTMENT OF TRANSPORTATION
STANDARD PLAN NO. 924-R4

URBAN TRAFFIC CONTROL PLAN

ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

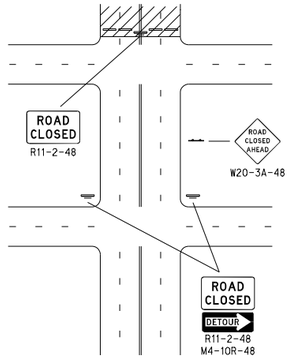
PROFESSIONAL CIVIL ENGINEER
DANIEL J. WADDLE
E-6289
STATE OF NEBRASKA

DATE

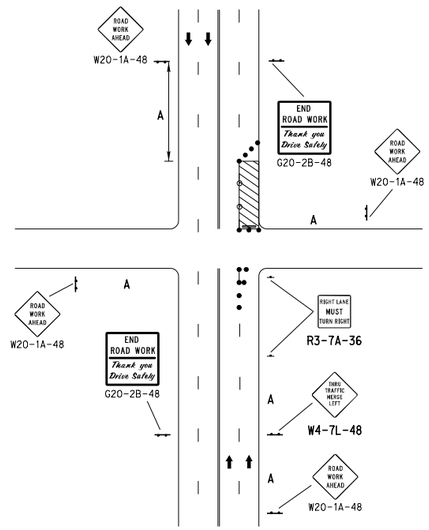
ORIGINAL:
FEBRUARY 1, 2010
DATE

File: 924006e04.dgn
Date: 29-JUN-2021 09:21
Computer: NDOTDESIGN134

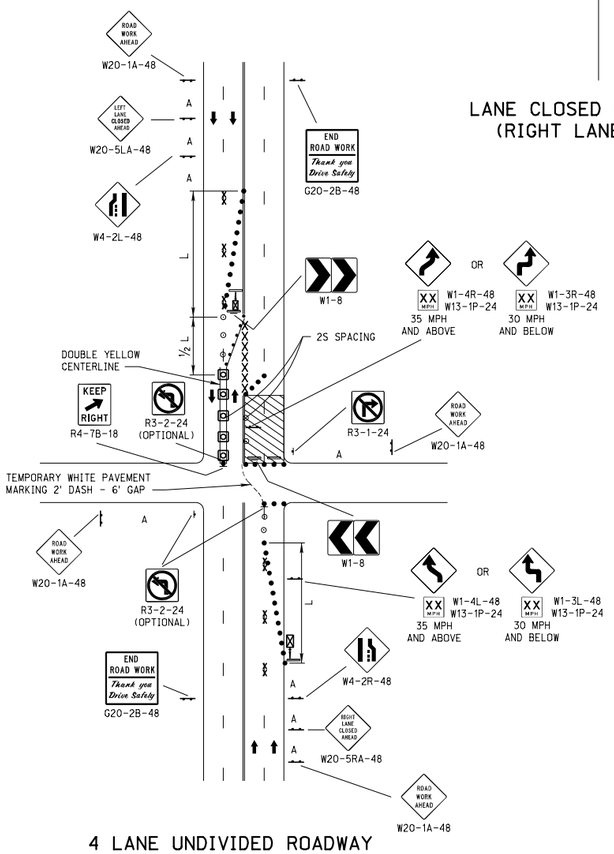
ROADWAY DESIGN DIVISION
Computer: NDOTDESIGN34
Date: 29-JUN-2021 09:21
File: 92400e04.dgn



ROAD CLOSED
BEYOND DETOUR



LANE CLOSED NEAR INTERSECTION
(RIGHT LANE REMAINS OPEN)



4 LANE UNDIVIDED ROADWAY
TWO LANES CLOSED NEAR INTERSECTION

LEGEND

- FLASHING ARROW PANEL
- TYPE III BARRICADE
- REFLECTORIZED PLASTIC DRUM
- TUBULAR POST
- REFLECTORIZED PLASTIC DRUM OR 42" CONE
- SINGLE POSTED SIGN
- DOUBLE POSTED SIGN
- FLAGGER
- XXXX PAVEMENT MARKING REMOVAL

TAPER FORMULA

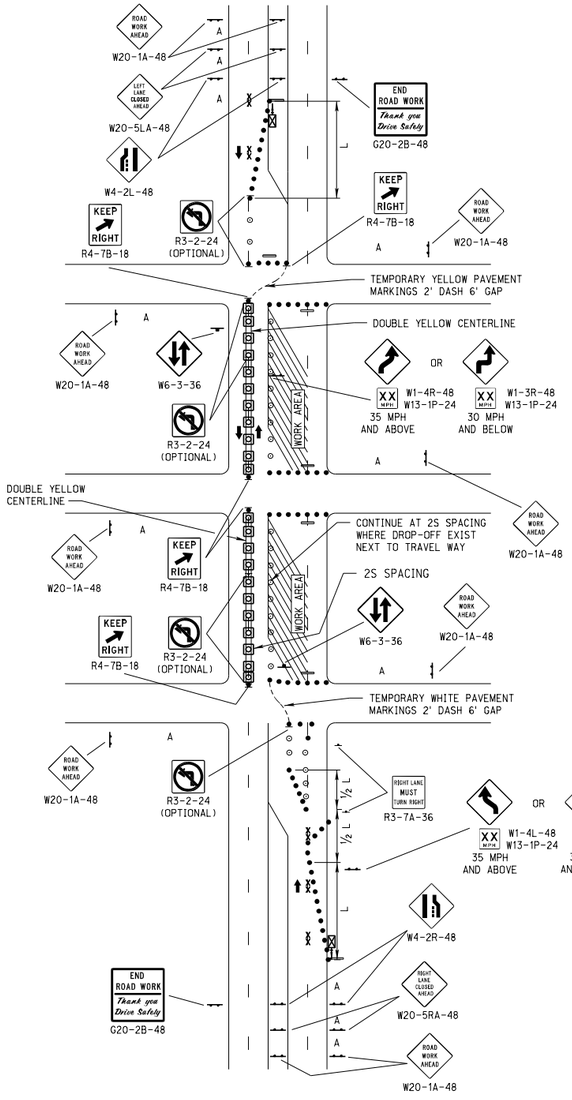
$L = S \times W$ FOR SPEEDS OF 45 MPH OR MORE.

$L = \frac{WS^2}{60}$ FOR SPEEDS OF 40 MPH OR LESS.

WHERE:
L = MINIMUM LENGTH OF TAPER.

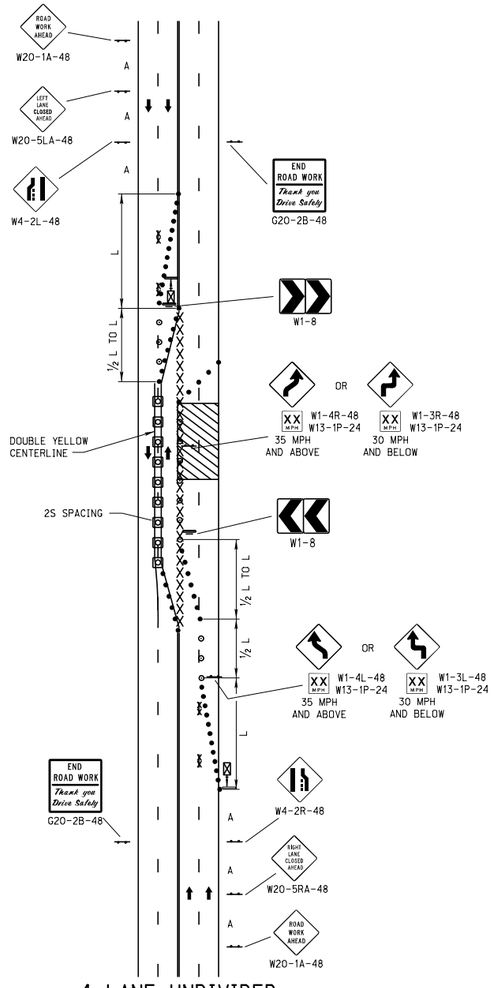
S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK.

W = WIDTH OF OFFSET (LANE WIDTH).



4-LANE DIVIDED
HALF CLOSED

ROAD TYPE	MINIMUM DISTANCE BETWEEN SIGNS
	A
URBAN (LOW SPEED - 25 MPH TO 40 MPH)	100'
URBAN (HIGH SPEED - 45 MPH OR HIGHER)	350'



4-LANE UNDIVIDED
2 LANES CLOSED

REV. NO.	DATE	DESCRIPTION OF REVISION
R4	JUL 20	ADDED NOTE TO SHEET ONE
R3	JAN 19	TOOK OUT 1/2 L ON SHEET 2
R2	JAN 18	NDOR BORDER TO NDOT BORDER

NEBRASKA DEPARTMENT OF TRANSPORTATION
STANDARD PLAN NO. 924-R4

URBAN TRAFFIC CONTROL PLAN

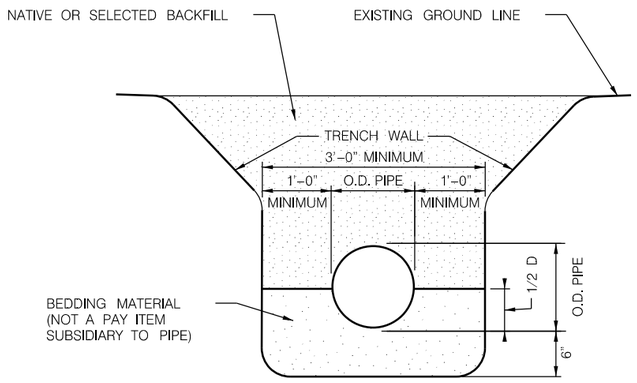
ACCEPTED BY FHWA FOR USE ON THE NATIONAL HIGHWAY SYSTEM:

PROFESSIONAL CIVIL ENGINEER
DANIEL J. WADDLE
E-6289
STATE OF NEBRASKA

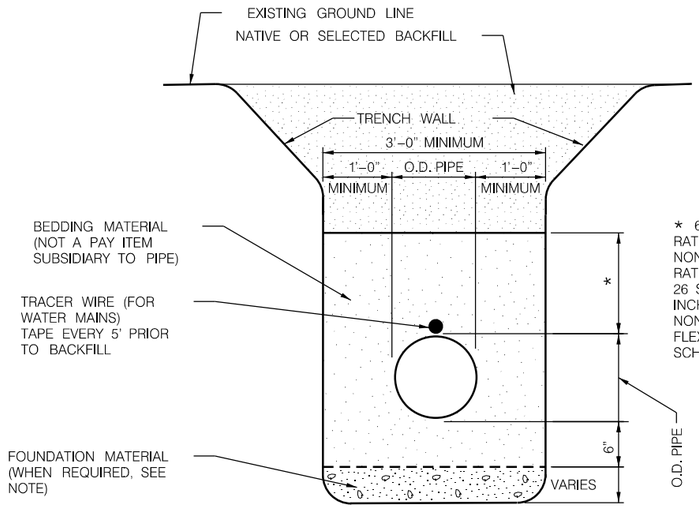
DATE

ORIGINAL:
FEBRUARY 1, 2010
DATE

LTU	PLAN NO.	SHEET NO.
	185	1
Date: 10/1/2022	Drawn:	JWH/CEA
Horz. Scale: NONE	Checked:	BAK
	Approved:	BAK

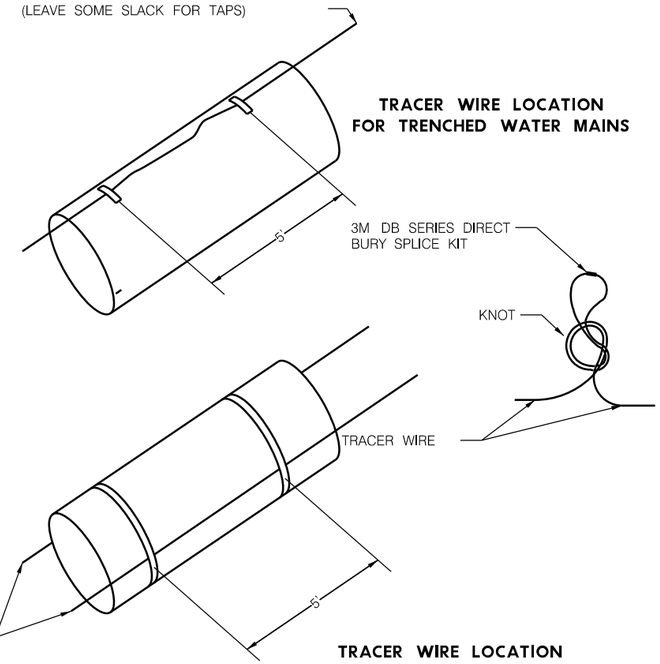


PIPE BEDDING FOR DUCTILE IRON, VITRIFIED CLAY AND REINFORCED CONCRETE PIPE 15" DIAMETER AND LARGER



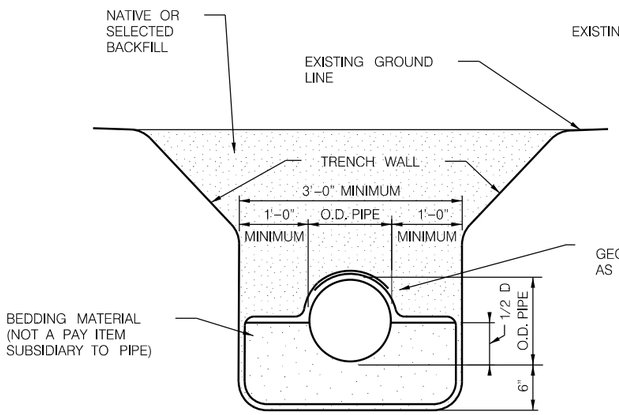
* 6 INCH MIN. FOR ALL PRESSURE RATED FLEXIBLE PIPES (C900) OR NON-PRESSURE RATED FLEXIBLE PIPES THAT ARE SDR 26 SCHEDULE 40 OR STRONGER. 18 INCHES ARE REQUIRED FOR NON-PRESSURE RATED FLEXIBLE PIPE LESS THAN SDR 26 SCHEDULE 40.

PIPE BEDDING AND FOUNDATION MATERIAL FOR ALL PIPE EXCEPT DUCTILE IRON, VITRIFIED CLAY, AND REINFORCED CONCRETE

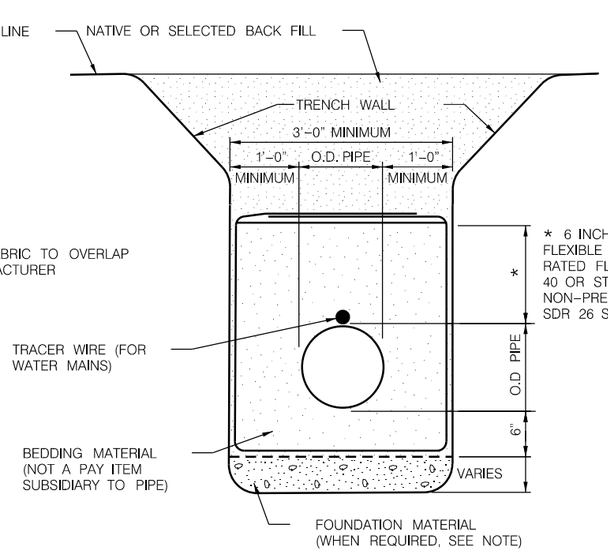


TRACER WIRE LOCATION FOR TRENCHED WATER MAINS

TRACER WIRE LOCATION FOR WATER MAIN BORED IN PLACE



PIPE BEDDING FOR DUCTILE IRON AND REINFORCED CONCRETE PIPE 15" DIAMETER AND LARGER WITH GEO-TEXTILE FABRIC



* 6 INCH MIN. FOR ALL PRESSURE RATED FLEXIBLE PIPES (C900) OR NON-PRESSURE RATED FLEXIBLE PIPES THAT ARE SDR 26 SCHEDULE 40 OR STRONGER. 18 INCHES ARE REQUIRED FOR NON-PRESSURE RATED FLEXIBLE PIPE LESS THAN SDR 26 SCHEDULE 40.

PIPE BEDDING AND FOUNDATION MATERIAL FOR ALL PIPE EXCEPT DUCTILE IRON AND REINFORCED CONCRETE WITH GEO-TEXTILE FABRIC

GENERAL NOTES:

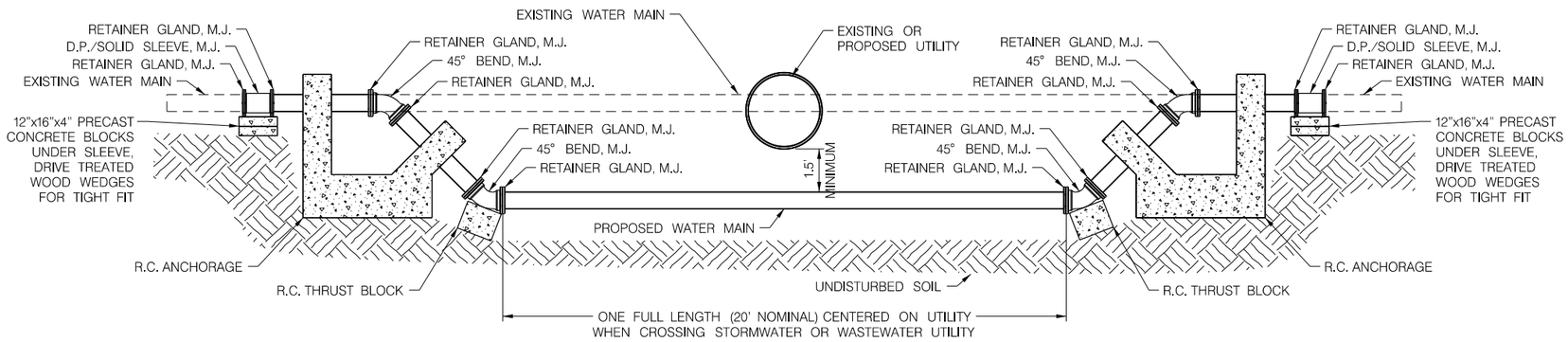
1. WHEN "FOUNDATION MATERIAL" IS REQUIRED/APPROVED BY THE CONTRACT ADMINISTRATOR, IT SHALL BE PAID AT AN AGREED UNIT PRICE OF $35 PER CUBIC YARD INSTALLED, BASED ON THE INCREASED DIMENSIONS OF THE MATERIAL ADDED TO STABILIZE THE TRENCH BOTTOM.
2. WHEN REQUIRED BY THE CITY'S PROJECT MANAGER, WATER SHALL BE ADDED TO THE MATERIAL EXCAVATED FROM THE TRENCH WHEN NECESSARY TO MEET SPECIFICATIONS, DURING COMPACTION, AT THE AGREED UNIT PRICE OF $50 PER 100 CUBIC FEET OF WATER APPLIED TO COMPLETE THE COMPACTION.
3. WIRE SPLICES SHALL BE 3M DBR CONNECTORS, SEALED WITH SILICONE SEALANT, OR EQUAL AND COVERED WITH SCOTCH #33 ELECTICAL TAPE.

PIPE BEDDING

LSP 185

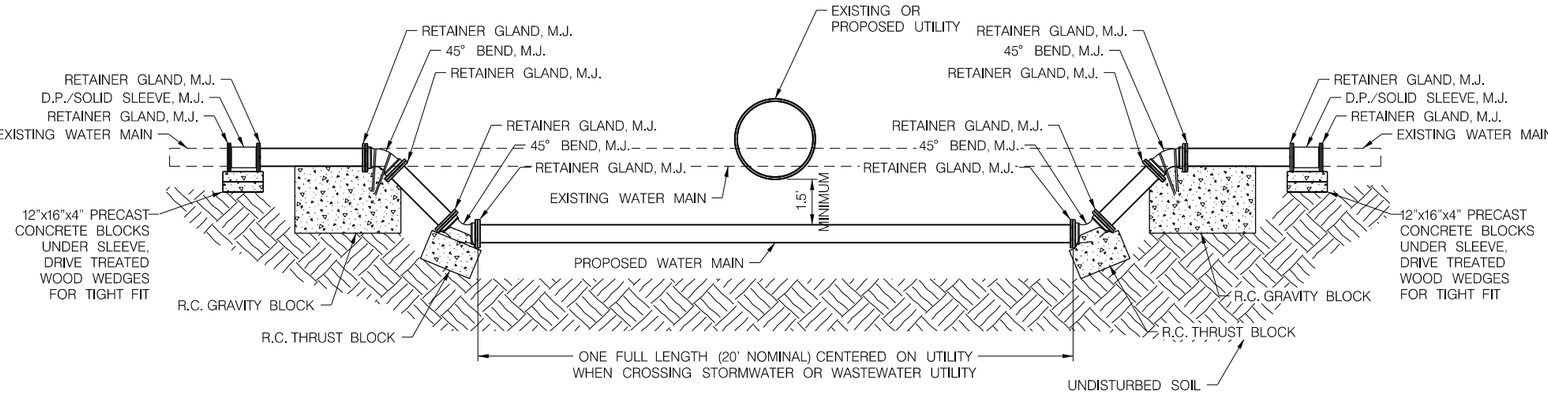
PROJ: No Project.cfg
PEN: ...\tables\pen\BW_PENTABLE.tbl
USER: SIERWL
DATE: 9/21/2022
DGN: ...\LSP DGN files\LSP_301.dgn

LTU	PLAN NO.	SHEET NO.
	301	1
	Date: 10/1/2022	Drawn: JWH/CAW
	Horz. Scale: N.T.S.	Checked: JML
		Approved: DJB



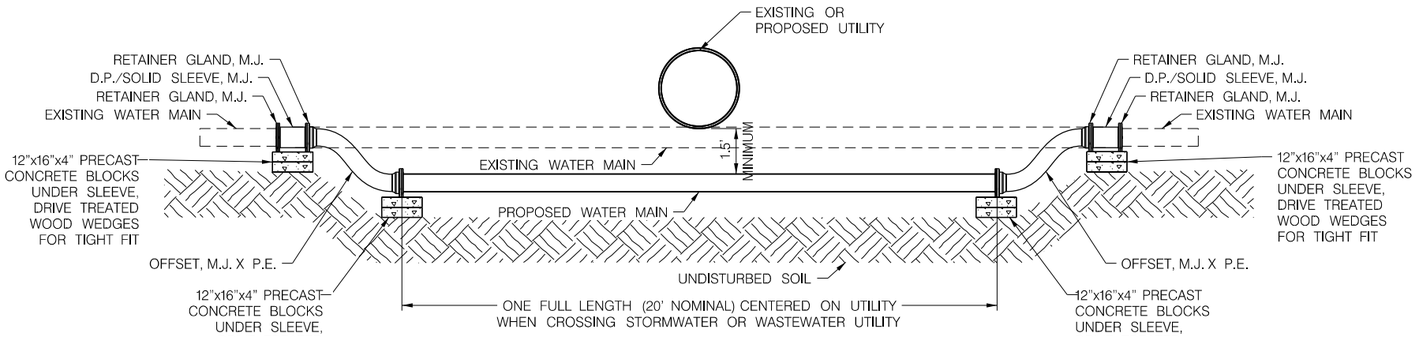
WATER MAIN RECONSTRUCTION
USING BENDS

QUANTITIES USED IN WATER MAIN RECONSTRUCTION USING BENDS	
SIZE OF PIPE X 45° BEND, M.J.	4 EA.
SIZE OF PIPE SOLID SLEEVE, M.J. (L=12")	2 EA.
SIZE OF PIPE D.P. SLEEVE, M.J. (TO BE USED WITH A.W.W.A PIPE)	2 EA.
SIZE OF PIPE GRAVITY BLOCK	2 EA.
SIZE OF PIPE R.C. THRUST BLOCK	2 EA.
SIZE OF PIPE WATER MAIN	VARIES L.F.
REMOVE SIZE OF PIPE WATER MAIN	VARIES L.F.
SIZE OF PIPE RETAINER GLANDS, M.J.	12 EA.



WATER MAIN RECONSTRUCTION
USING BENDS

QUANTITIES USED IN WATER MAIN RECONSTRUCTION USING BENDS	
SIZE OF PIPE x DROP, M.J. x P.E.	4 EA.
SIZE OF PIPE SOLID SLEEVE, M.J. (L=12")	2 EA.
SIZE OF PIPE D.P. SLEEVE, M.J. (TO BE USED WITH A.W.W.A PIPE)	2 EA.
SIZE OF PIPE WATER MAIN	VARIES L.F.
REMOVE SIZE OF PIPE WATER MAIN	VARIES L.F.
SIZE OF PIPE RETAINER GLANDS, M.J.	6 EA.



WATER MAIN RECONSTRUCTION
USING OFFSETS

NOTE:
NO ANCHORAGES OR THRUST BLOCKS NEEDED WITH OFFSETS

NOTE:

THE TOTAL LENGTH OF WATER RECONSTRUCTION IS TO BE POLYWRAPPED, IF DUCTILE IRON PIPE.
SEE STANDARD SPECIFICATIONS

WHEN PROPOSED UTILITY CROSSING IS 36" IN DIA. OR LARGER, CRUSHED ROCK FOUNDATION MATERIAL SHOULD BE USED AS BACKFILL UNDER PROPOSED UTILITY.

ALL CONCRETE SHALL BE L3500

ANY 4" WATER MAIN RECONSTRUCTION IS TO BE COMPLETED USING A MINIMUM OF 6" PIPE AND FITTINGS AND REDUCED TO MEET THE 4" MAIN AT EACH END OF THE RECONSTRUCTION.

WATER PIPE SHALL BE ENCASED WITH FLOWABLE FILL IN SCENARIOS WHERE IT IS RECONSTRUCTED BELOW AN EXISTING OR PROPOSED WASTEWATER LINE.

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STATE OF NEBRASKA

WATER MAIN RECONSTRUCTION

LSP 301

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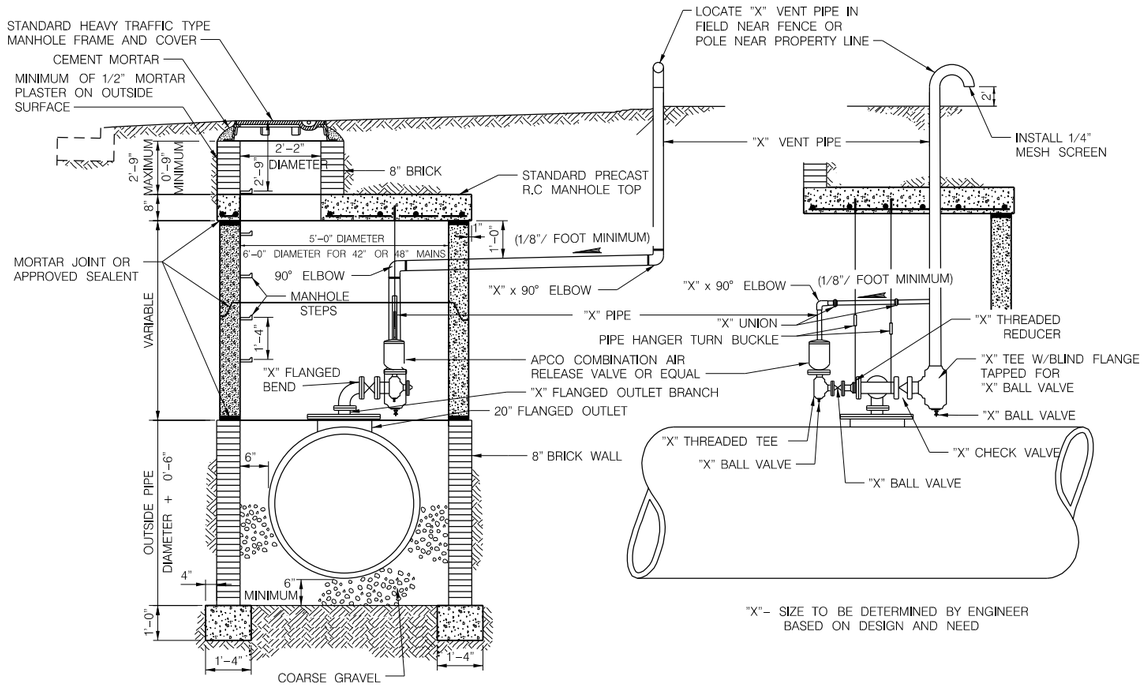
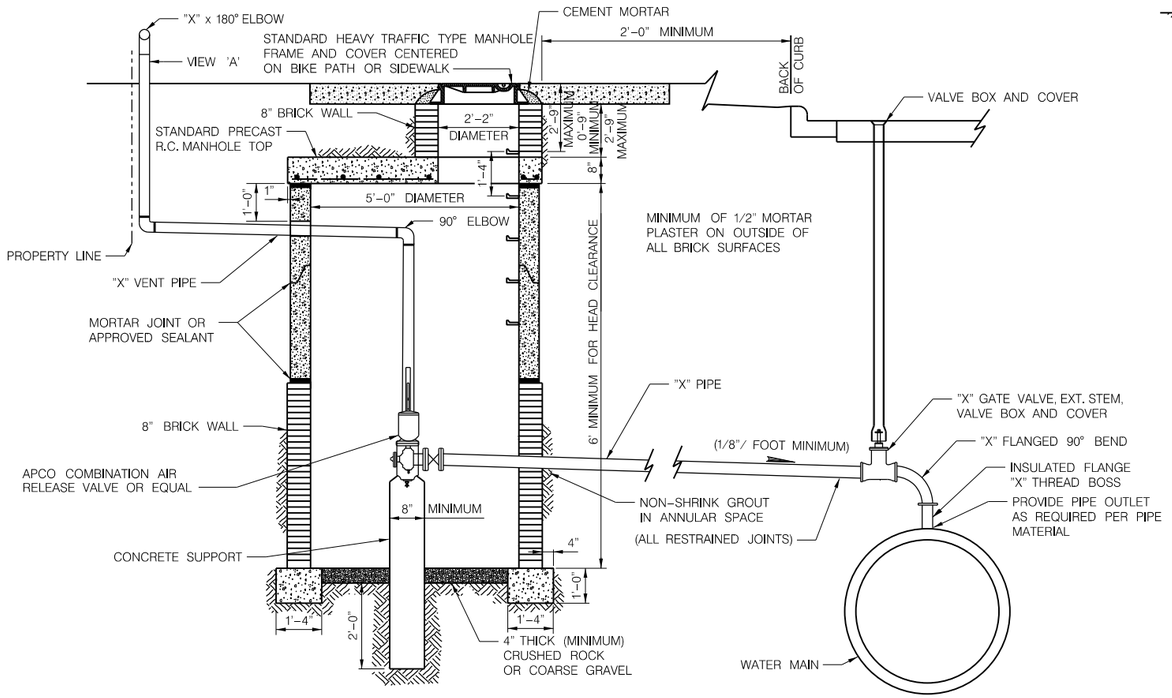
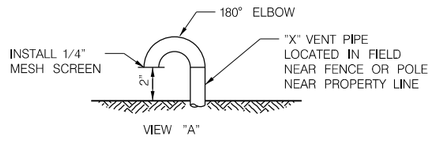
Horz. Scale:	Checked: JML
	Approved: DJB

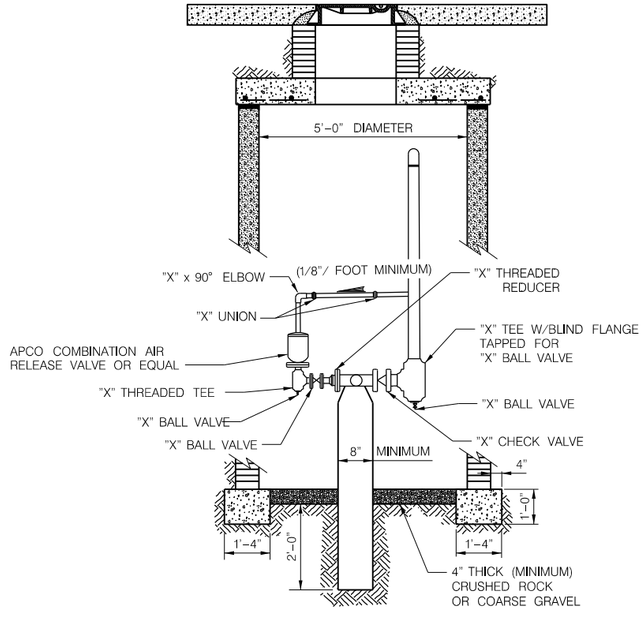


AUTOMATIC AIR RELIEF VAULT INSTALLATION



AUTOMATIC AIR RELIEF VAULT INSTALLATION FOR MAINS UNDER PAVING





WATER MAIN VALVE MANHOLES, AIR RELIEFS AND BLOW OFFS

NOTES:

SHUTOFF VALVES SHALL BE CARBON STEEL CONBRACO "APOLLO 88-100 SERIES", NELES-JAMESBURY "SERIES 5000, FIG 5150-11-2200TT", OR POWELL "FIG A224T" BALL VALVES.

DRAIN VALVES SHALL BE BRASS OR BRONZE CONBRACO "APOLLO 70-100 SERIES" OR STOCKHAM "S-216".

CHECK VALVES SHALL BE APCO "SERIES 9000 CLASS 150 DOUBLE DOOR CHECK VALVE" OR EQUAL.

COMBINATION AIR RELEASE VALVES SHALL BE APCO OR EQUAL.

THE CAST IRON MANHOLE RING SHALL SET IN A BED OF MORTAR, AND CAREFULLY ADJUSTED TO PROPOSED GRADE.

MANHOLE RING AND COVER SHALL BE CITY OF LINCOLN HEAVY TRAFFIC TYPE. (SEE LSP 162)

MANHOLE STEPS SHALL BE CITY OF LINCOLN STANDARD MANHOLE STEPS. (SEE LSP 162)

ALL REINFORCING STEEL SHALL BE EPOXY COATED.

ANY TAP LARGER THAN 1" SHALL BE INSTALLED BY FACTORY.

"X"- SIZE AND TYPE TO BE DETERMINED BY ENGINEER BASED ON DESIGN AND NEED

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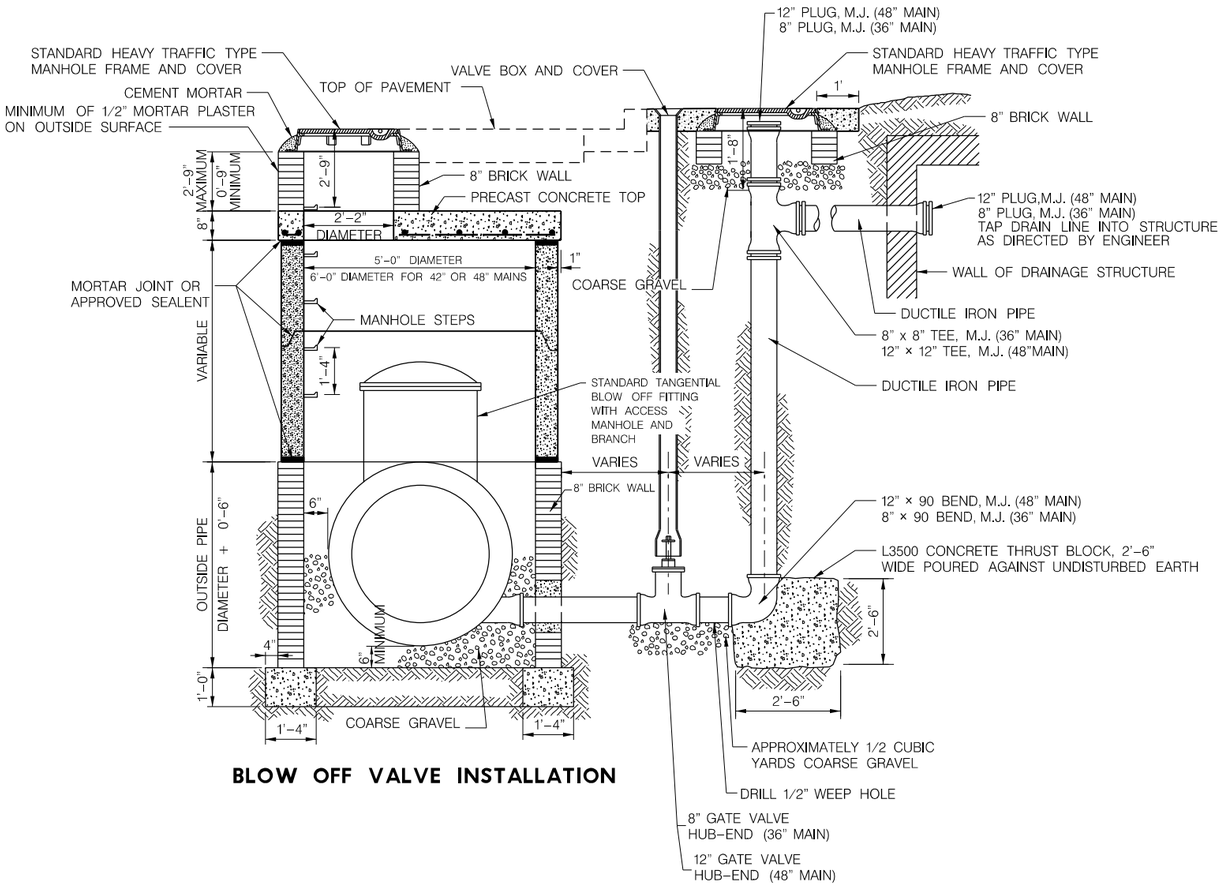
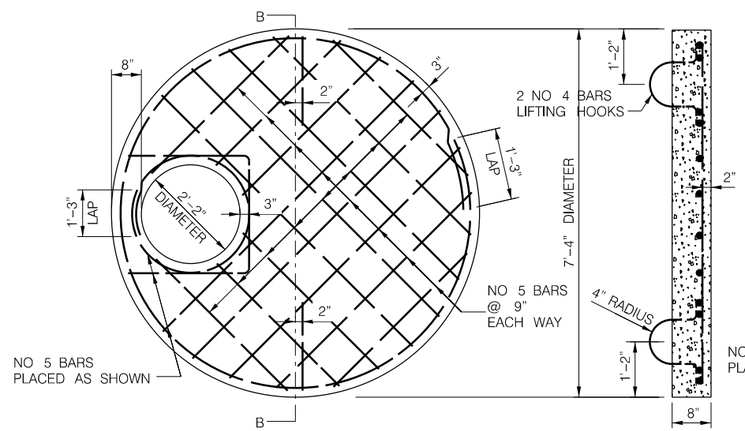
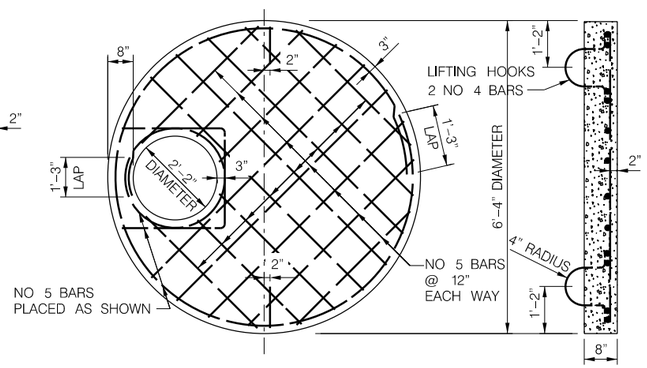


BLOW OFF VALVE INSTALLATION



PRECAST R.C. MANHOLE TOP FOR 6'-0" R.C. PIPE



PRECAST R.C. MANHOLE TOP FOR 5'-0" R.C. PIPE

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STATE OF NEBRASKA

WATER MAIN VALVE MANHOLES, AIR RELIEFS AND BLOW OFFS

PROJ: No Project.cfg
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LTU

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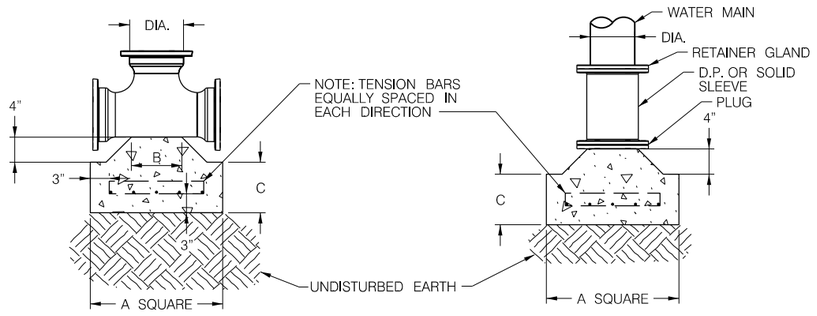
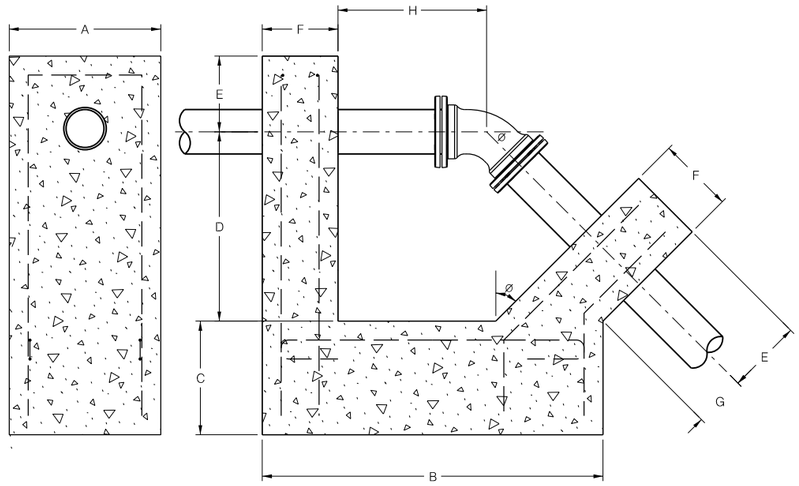
Date: 10/1/2022	Drawn: JWH
Horz. Scale:	Checked: JML
	Approved: DJB



REINFORCED CONCRETE TEE BLOCK REINFORCED CONCRETE PLUG BLOCK

REIN. CONC. TEE BLOCK AND PLUG BLOCK							
DIA.	A	B	C	BAR SIZE	NUMBER OF BARS EACH WAY	STEEL (LBS)	CONCRETE CUBIC YARDS
6	1'–9"	0'–8"	0'–8"	–	–	–	0.1
8	2'–3"	0'–9"	0'–9"	–	–	–	0.2
12	3'–4"	1'–0"	1'–0"	4	6	22.7	0.4
16	4'–6"	1'–3"	1'–3"	4	8	42.8	1.0
20	5'–8"	1'–6"	1'–6"	5	8	86.8	1.9
24	6'–9"	1'–9"	1'–9"	5	11	143.5	3.1
30	8'–6"	2'–6"	2'–0"	5	16	267	5.5
36	10'–0"	3'–0"	2'–6"	6	15	428	9.5
48	13'–6"	4'–0"	3'–0"	7	20	1063	21.2



REINFORCED CONCRETE ANCHORAGE

REINFORCED CONCRETE ANCHORAGE											
ø =45°											
DIA.	A	B	C	D	E	F	G	H	CONCRETE CUBIC YARDS	BAR SIZE	STEAL (LBS)
6&8	2'–0"	4'–6"	1'–6"	2'–6"	1'–0"	1'–0"	0'–8"	1'–11"	0.94	4	34
10	2'–6"	5'–0"	1'–6"	3'–0"	1'–3"	1'–0"	1'–0"	2'–4"	1.31	4	42
12	3'–0"	5'–0"	2'–0"	3'–6"	1'–6"	1'–0"	1'–6"	3'–1"	1.98	4	48
14	3'–0"	6'–0"	2'–6"	4'–0"	1'–6"	1'–0"	1'–6"	3'–1"	2.58	5	83
16	3'–6"	6'–6"	2'–9"	4'–6"	1'–6"	1'–0"	1'–9"	3'–5"	3.46	5	92
18	3'–6"	7'–0"	3'–6"	4'–6"	1'–6"	1'–0"	1'–8"	3'–10"	4.29	5	96
20	4'–0"	7'–6"	3'–6"	5'–0"	1'–6"	1'–0"	2'–0"	4'–4"	5.25	6	146
24	5'–0"	10'–0"	3'–0"	7'–0"	2'–0"	1'–0"	2'–10"	6'–0"	7.96	7	250

ø =22 1/2°											
DIA.	A	B	C	D	E	F	G	H	CONCRETE CUBIC YARDS	BAR SIZE	STEAL (LBS)
6&8	2'–0"	4'–6"	0'–9"	1'–6"	1'–0"	1'–0"	0'–8"	1'–7"	0.54	4	28
10	2'–6"	5'–0"	0'–9"	1'–9"	1'–3"	1'–0"	0'–9"	1'–8"	0.75	4	32
12	3'–0"	5'–0"	0'–9"	2'–0"	1'–6"	1'–0"	1'–0"	1'–9"	1.05	4	36
14	3'–0"	5'–6"	1'–3"	2'–3"	1'–6"	1'–0"	1'–3"	2'–3"	1.40	4	36
16	3'–0"	6'–6"	2'–0"	2'–9"	1'–6"	1'–0"	1'–6"	2'–9"	1.79	4	47
18	3'–6"	7'–0"	1'–9"	3'–0"	1'–6"	1'–0"	1'–8"	3'–1"	2.44	4	50
20	4'–0"	7'–0"	2'–0"	3'–0"	1'–6"	1'–0"	1'–8"	3'–1"	3.04	5	80
24	4'–6"	9'–0"	1'–9"	4'–0"	2'–0"	1'–0"	2'–3"	4'–2"	4.11	6	143

GENERAL NOTES:

All Reinforcing Steel Shall be Deformed Bars Conforming to A.S.T.M. Serial Designation A–305–507 and Shall Satisfy the Bend Test Requirements for Structural Grade Steel in Accordance with the Requirements

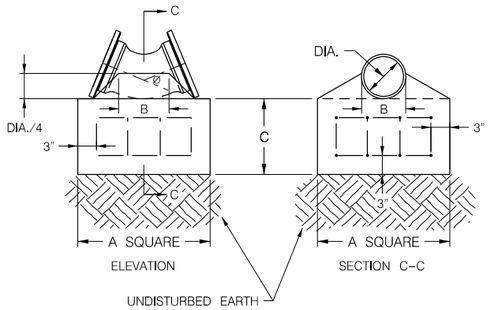
All Concrete Shall be L3500

Minimum Depth of Embedment For Reinforcing Steel to be as Noted.

All Reinforcing Steel Shall be Epoxy Coated.

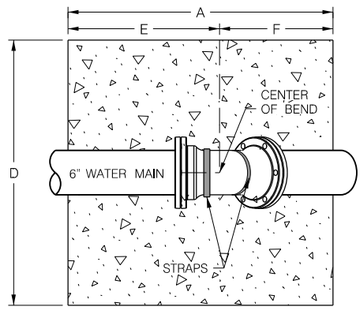
Poured in Place Thrust Blocking Shall be Properly Formed to the Stated Dimensions and Shall Not Encase the M.J. Bolts and Fasteners.

REINFORCED CONCRETE THRUST BLOCK																	
ø =11 1/4°									ø =22 1/2°								
DIA.	A	B	C	BAR SIZE	NUMBER OF BARS EACH WAY	STEEL (LBS)	CONCRETE CUBIC YARDS		DIA.	A	B	C	BAR SIZE	NUMBER OF BARS EACH WAY	STEEL (LBS)	CONCRETE CUBIC YARDS	
6	1'–3"	0'–9"	1'–0"	–	–	–	0.1		6	1'–6"	0'–9"	1'–0"	–	–	–	0.1	
8	1'–6"	1'–0"	1'–0"	–	–	–	0.1		8	1'–6"	1'–0"	1'–0"	–	–	–	0.1	
12	1'–6"	1'–0"	1'–0"	4	3	4.0	0.1		12	2'–3"	1'–0"	1'–0"	4	3	7.0	0.2	
16	2'–3"	1'–0"	1'–0"	4	3	7.0	0.2		16	3'–0"	1'–0"	1'–0"	4	5	16.7	0.4	
20	2'–9"	1'–3"	1'–0"	4	4	12.0	0.4		20	3'–9"	1'–3"	1'–0"	4	7	30.4	0.6	
24	3'–3"	1'–6"	1'–0"	4	6	22.0	0.5		24	4'–6"	1'–6"	1'–3"	5	6	50.1	1.1	
30	4'–0"	2'–0"	1'–3"	4	7	32.7	0.9		30	5'–6"	2'–0"	1'–6"	5	9	93.9	1.9	
36	4'–9"	2'–6"	1'–3"	5	7	62.0	1.3		36	6'–9"	2'–6"	1'–9"	5	12	169.5	3.3	
48	6'–6"	3'–3"	1'–6"	5	13	162.7	1.9		48	9'–0"	3'–3"	2'–0"	10	6	438.9	6.7	
ø =45°									ø =90°								
DIA.	A	B	C	BAR SIZE	NUMBER OF BARS EACH WAY	STEEL (LBS)	CONCRETE CUBIC YARDS		DIA.	A	B	C	BAR SIZE	NUMBER OF BARS EACH WAY	STEEL (LBS)	CONCRETE CUBIC YARDS	
6	1'–9"	1'–0"	1'–0"	–	–	–	0.2		6	2'–3"	1'–0"	1'–0"	–	–	–	0.2	
8	2'–3"	1'–0"	1'–0"	–	–	–	0.2		8	3'–0"	1'–0"	1'–0"	–	–	–	0.4	
12	3'–3"	1'–0"	1'–0"	4	6	22.0	0.4		12	4'–3"	1'–0"	1'–3"	5	6	47.0	0.9	
16	4'–3"	1'–0"	1'–3"	5	6	46.9	0.9		16	5'–9"	1'–0"	1'–6"	5	10	109.5	2.0	
20	5'–3"	1'–3"	1'–6"	5	8	79.3	1.6		20	7'–0"	1'–3"	1'–9"	5	15	203.4	3.3	
24	6'–3"	1'–6"	1'–6"	5	11	131.9	2.3		24	8'–6"	1'–6"	2'–0"	6	15	360.5	5.6	
30	7'–9"	2'–0"	1'–9"	7	9	266.7	4.1		30	10'–6"	2'–0"	2'–3"	9	10	680	9.5	
36	9'–3"	2'–6"	2'–0"	7	14	500.8	6.8		36	12"–6"	2'–6"	2'–9"	10	11	1136	16.3	
48	12'–3"	3'–3"	2'–6"	10	11	1112.3	14.8		48	16'–9"	3'–3"	3'–6"	11	16	2763	37.2	

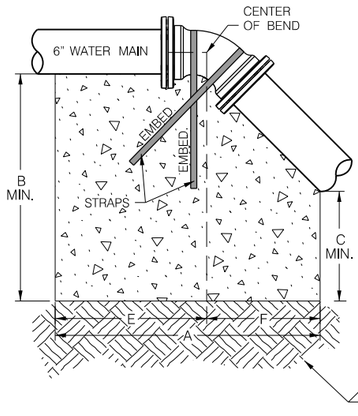


REINFORCED CONCRETE THRUST BLOCKS

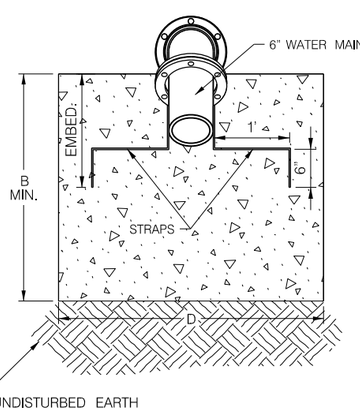
TOP VIEW TOP BEND



SIDE VIEW TOP BEND GRAVITY BLOCK

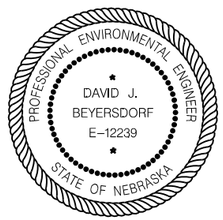


STRAP EMBEDMENT FRONT VIEW



CONCRETE GRAVITY BLOCK

CONCRETE GRAVITY BLOCK										
	DIMENSION							STRAPS		
BEND	A	B MIN.	C MIN.	D	E	F	CONC. CY	QTY.	SIZE	EMBED.
6"x45°	3'–6"	3'–0"	1'–6"	3'–6"	2'–0"	1'–6"	1.43	2	1"x 1/4"	18"
8"x45°	4'–0"	4'–0"	2'–0"	4'–6"	2'–0"	2'–0"	2.33	2	1"x 1/4"	18"
12"x45°	6'–0"	5'–0"	2'–0"	5'–0"	3'–0"	3'–0"	4.72	2	2"x 1/4"	24"
16"x45°	6'–0"	6'–0"	3'–0"	7'–0"	3'–0"	3'–0"	9.33	2	2"x 3/8"	30"
6"x22.5°	2'–0"	3'–3"	3'–0"	3'–0"	1'–3"	0'–9"	0.72	2	1"x 1/4"	18"
8"x22.5°	3'–0"	4'–0"	3'–6"	3'–0"	1'–6"	1'–6"	1.33	2	1"x 1/4"	18"
12"x22.5°	4'–6"	5'–0"	4'–2"	3'–6"	2'–6"	2'–0"	2.88	2	2"x 1/4"	24"
16"x22.5°	5'–6"	5'–6"	4'–6"	4'–6"	3'–0"	2'–6"	5.13	2	2"x 3/8"	30"
6"x11.25°	2'–0"	2'–0"	1'–9"	2'–8"	1'–0"	1'–0"	0.40	2	1"x 1/4"	18"
8"x11.25°	3'–0"	2'–0"	1'–9"	3'–0"	2'–0"	1'–0"	0.56	2	1"x 1/4"	18"
12"x11.25°	3'–0"	3'–0"	2'–9"	3'–6"	2'–0"	1'–0"	1.17	2	2"x 1/4"	24"
16"x11.25°	4'–0"	4'–0"	3'–6"	4'–0"	2'–0"	2'–0"	2.37	2	2"x 3/8"	30"



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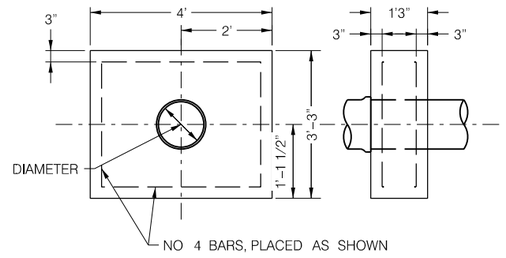
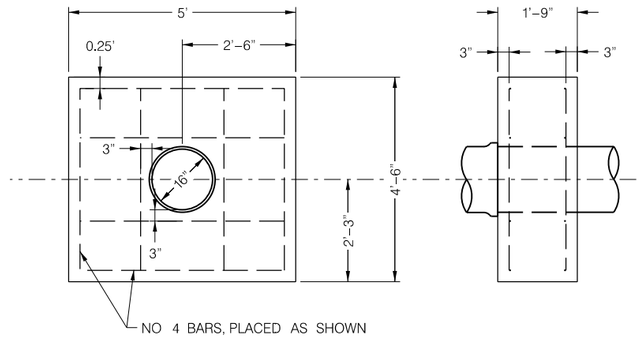


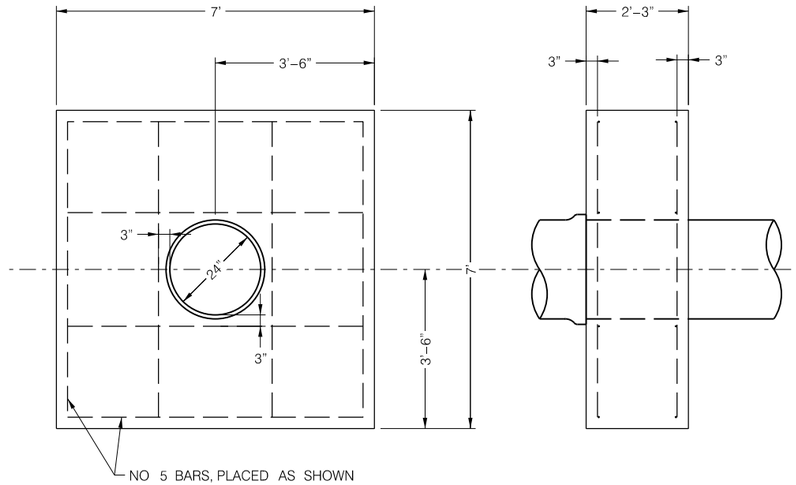
CONCRETE 0.6 CUBIC YARDS
STEEL 16.7 POUNDS

12" OR SMALLER WATER MAIN



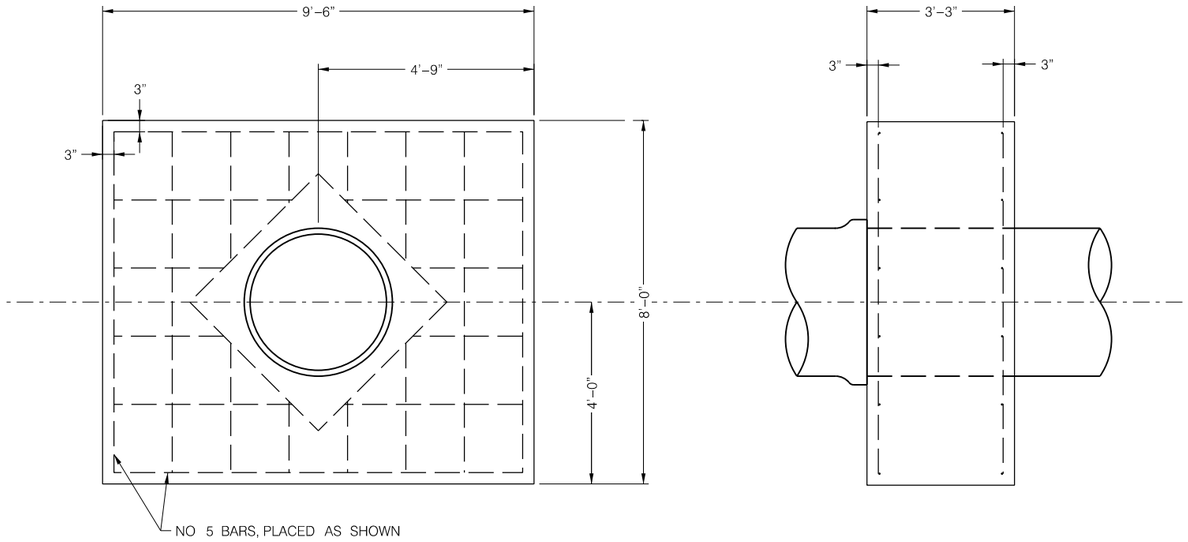
CONCRETE 1.4 CUBIC YARDS
STEEL 45.4 POUNDS

16" WATER MAIN



CONCRETE 3.8 CUBIC YARDS
STEEL 108.5 POUNDS

24" WATER MAINS



CONCRETE 8.6 CUBIC YARDS
STEEL 241.3 POUNDS

30" WATER MAINS

REINFORCED CONCRETE COLLARS

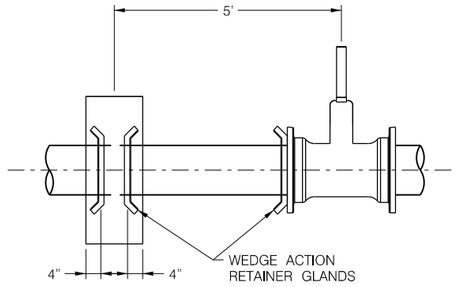
NOTE:

ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO A.S.T.M. SERIAL DESIGNATION A-305-507 AND SHALL SATISFY THE BEND TEST REQUIREMENTS FOR STRUCTURAL GRADE STEEL IN ACCORDANCE WITH THE REQUIREMENTS.

ALL REINFORCING STEEL SHALL BE EPOXY COATED.

ALL CONCRETE SJHALL BE L3500.

ALL CONCRETE COLLARS SHALL BE CONSTRUCTED SUCH THAT THEY ARE ANCHORED AGAINST UNDISTURBED SOIL.



THRUST COLLAR FOR PVC PIPE

WHENEVER PVC PIPE IS USED FOR WATER MAIN MATERIAL, A THRUST COLLAR SHALL BE INSTALLED 5' FROM EACH LINE VALVE OR REDUCER. TWO WEDGE ACTION RETAINER GLANDS SHALL BE EMBEDDED IN THE THRUST COLLAR, WITH THE GRIPPING WEDGES FACING OPPOSITE DIRECTIONS, TO PROVIDE THRUST RESTRAINT FROM EITHER DIRECTION. A SINGLE WEDGE ACTION RETAINER GLAND SHALL BE INSTALLED ON THE MECHANICAL JOINT ON THE SIDE OF THE VALVE OR REDUCER NEAREST THE THRUST COLLAR. SEE L.S.P. 320 FOR CONCRETE AND REINFORCING STEEL DETAILS.

R.C. THRUST COLLARS FOR REDUCERS SHALL BE INSTALLED ON THE SMALL PIPE SIDE OF A REDUCER, HOWEVER THE SIZE SHALL BE BASED OFF OF THE LARGER DIAMETER PIPE.

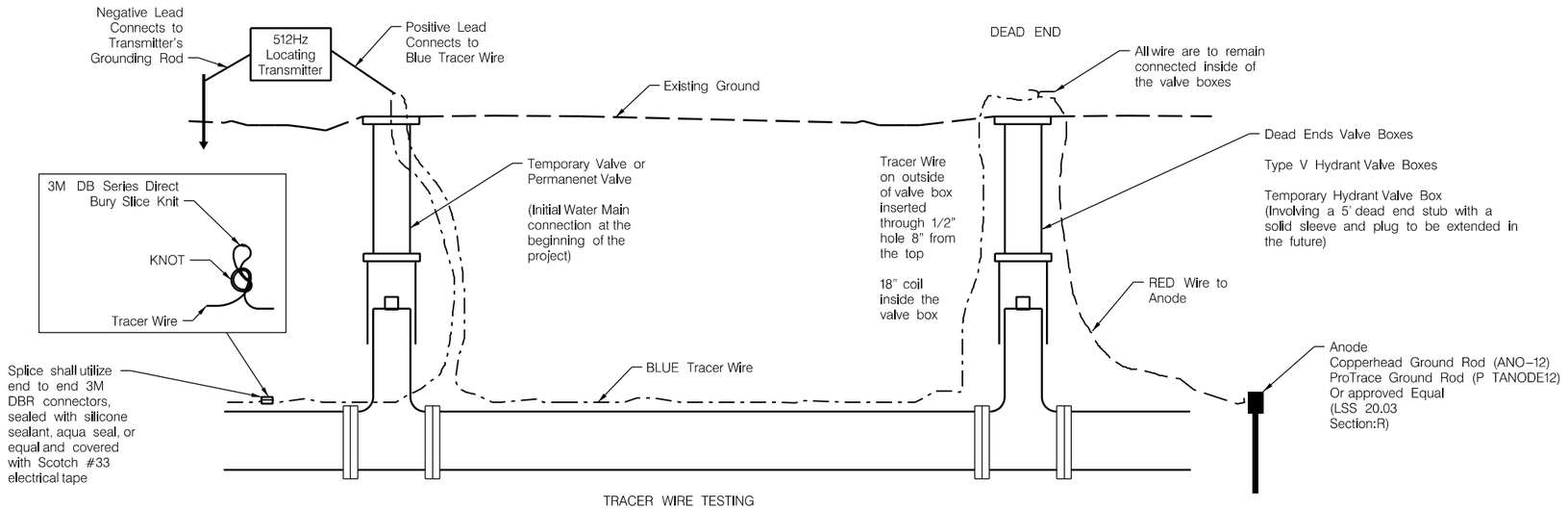
R.C. THRUST COLLARS TO BE BUILT ADJACENT TO VALVES, AT THE SPIGOT SIDE OF LAST PIPE CONNECTION OR ADJACENT TO THE SMALLER DIAMETER SIDE OF M.J. REDUCERS.

R.C. COLLARS

LSP 320

PROJ: No Project.cfg
PEN: ...\tables\pen\BW_PENTABLE.tbl
USER: SIERWL
DATE: 9/21/2022
DGN: ...\LSP DGN files\LSP_325.dgn

LTU
PLAN NO. 325 | SHEET NO. 1
Date: 10/1/2022 | Drawn: JWH
Horz. Scale: N.T.S. | Checked: JML
Approved: DJB



TRACER WIRE TESTING

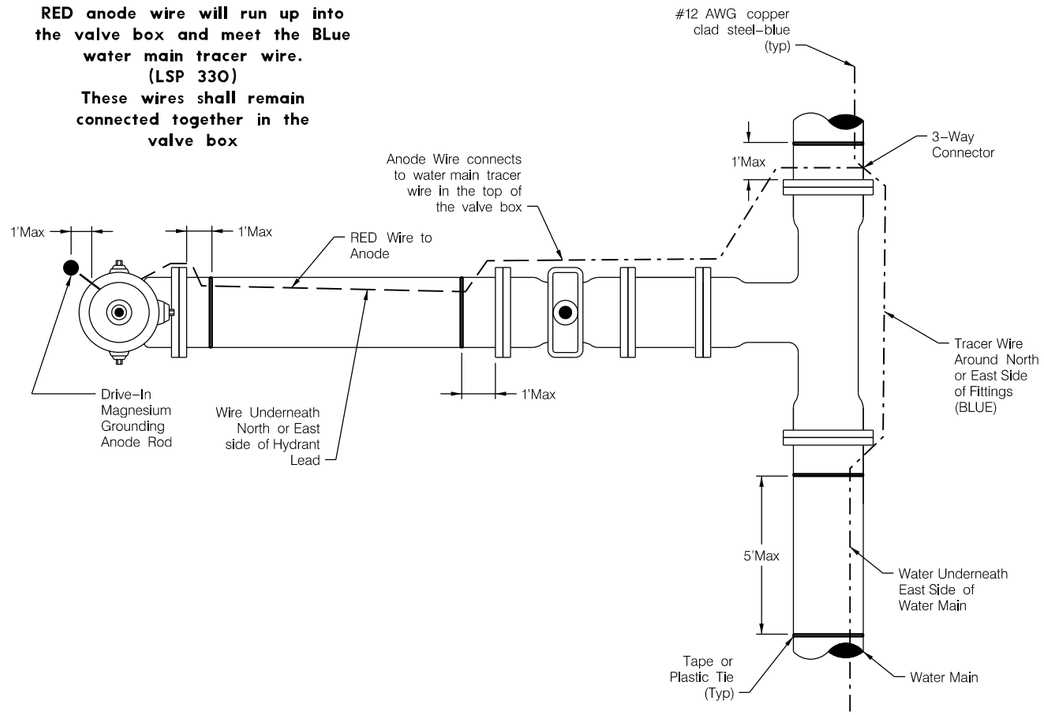
CONNECT 512Hz TRANSMITTING DEVICE TO TRACER WIRE AT THE PERMANENT OR TEMPORARY VALVE BOX POSITIONED AT THE INITIAL CONNECTION TO THE WATER MAIN PROJECT

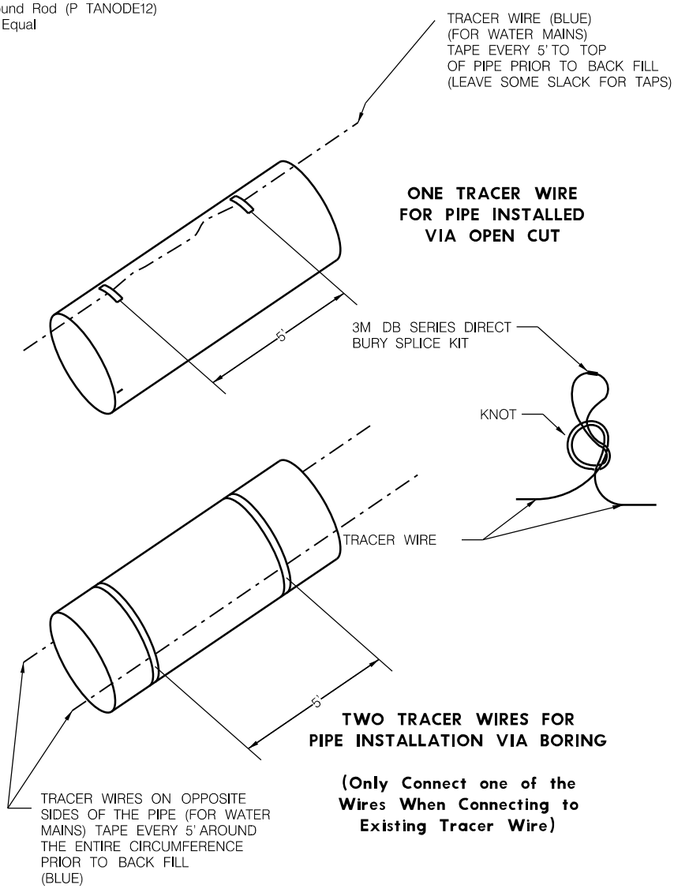
SUCCESSFUL TESTING ACCEPTED WHEN ENTIRE PROJECT IS LOCATED WITH THE TRANSMITTER CONNECTED AT THIS LOCATION WITHOUT MOVING THE TRANSMITTER

BLUE Wire

RED Wire

TRACER WIRE ANODE EXAMPLE
RED anode wire will run up into the valve box and meet the BLue water main tracer wire.
(LSP 330)
These wires shall remain connected together in the valve box





ONE TRACER WIRE FOR PIPE INSTALLED VIA OPEN CUT

TWO TRACER WIRES FOR PIPE INSTALLATION VIA BORING

(Only Connect one of the Wires When Connecting to Existing Tracer Wire)

PROFESSIONAL ENVIRONMENTAL ENGINEER
DAVID J. BEYERSDORF
E–12239
STATE OF NEBRASKA

TRACER WIRE INSTALLATIONS

PROJ: No Project.cfg
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LTU

PLAN NO.	SHEET NO.
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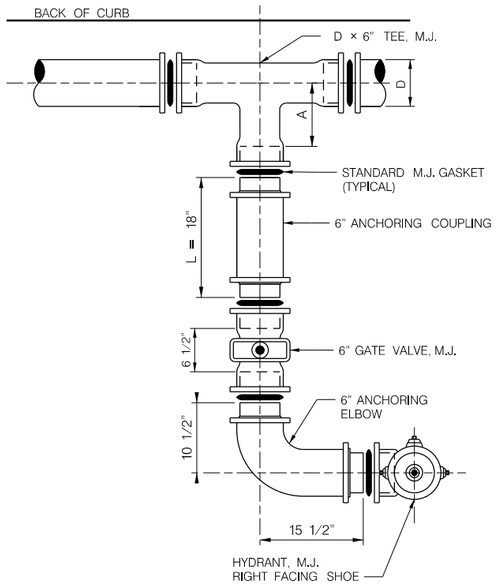
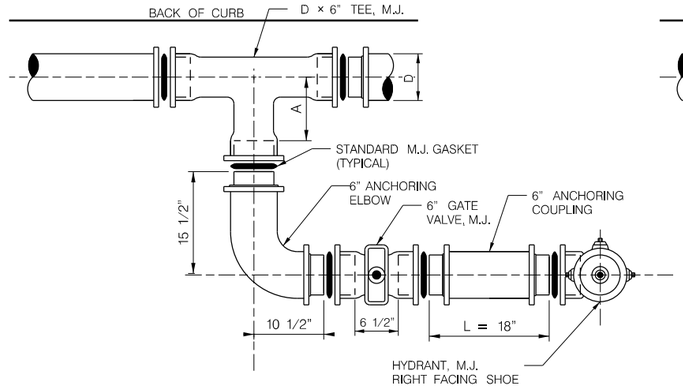
Date: 10/1/2022	Drawn: JWH/CEA
Horz. Scale: N.T.S.	Checked: JML
	Approved: DJB



TYPE I



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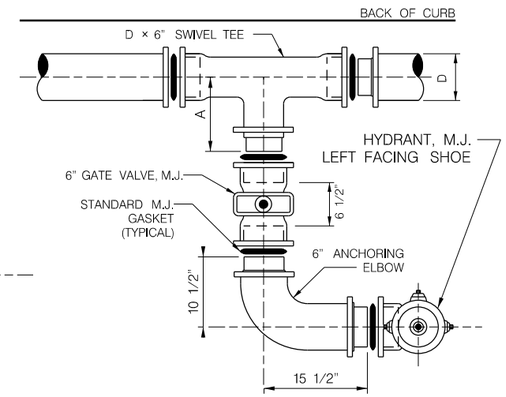
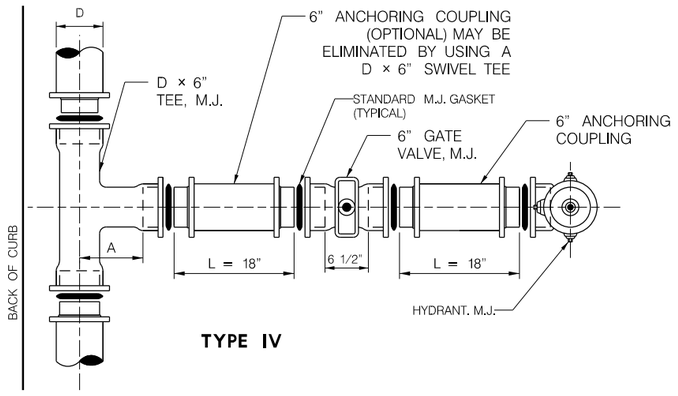
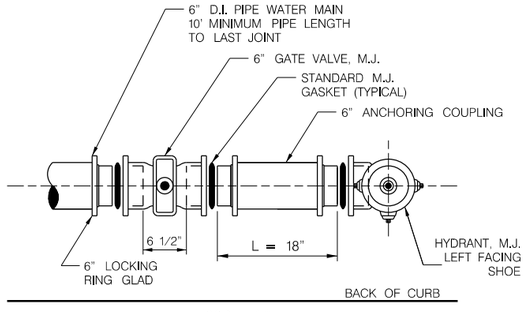


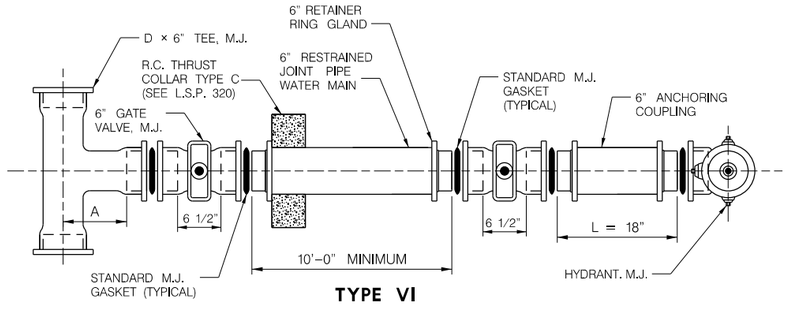
TYPE III



TYPE IV



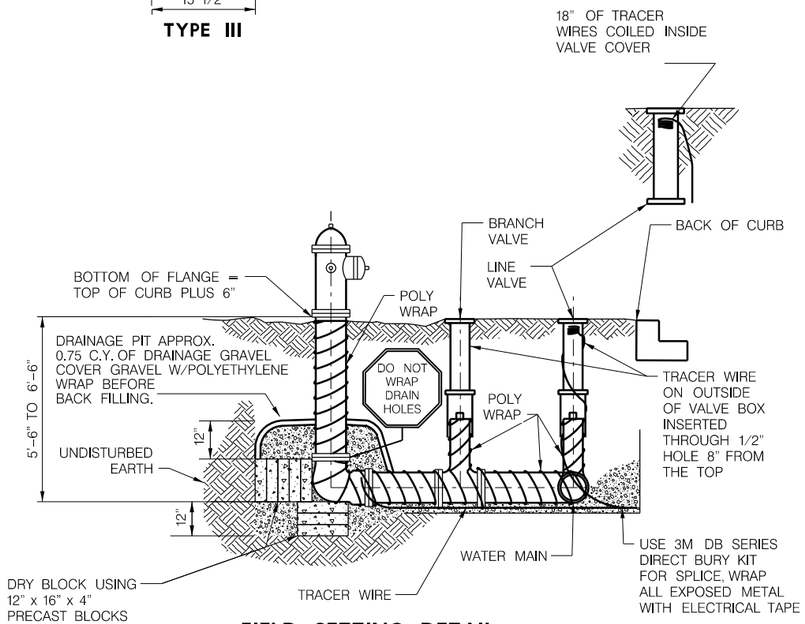
TYPE V



TYPE VI

TEE CONNECTION DIMENSIONS			
MAIN RUN SIZE D	SIZE BRANCH	BRANCH LENGTH SWIVEL TEE A	BRANCH LENGH A
6"	6"	10.5"	8"
8"	6"	11.5"	9"
12"	6"	14.5"	12"
16"	6"	17.5"	15"
24"	6"	21.5"	19"
30"	6"	24.5"	23"

	NUMBER OF FITTINGS REQUIRED						
HYDRANT ASSEMBLY	5 1/4" PUMPER HYDRANT	6" GATE VALVE, M.J.	6" ANCHORING COUPLING, M.J.	ELBOW, M.J. 6" ANCHORING	D X 6" TEE, M.J.	D X 6" SWIVEL TEE, M.J.	R.C. THRUST COLLAR (TYPE C)
TYPE I	1	1	1	1	1		
TYPE II	1	1	1	1	1		
TYPE III	1	1		1		1	
TYPE IV	1	1	2		1		
TYPE V	1	1	1				
TYPE VI	1	2	1		1		1



FIELD SETTING DETAIL

NOTES:

ALL ANCHORING COUPLINGS SHALL BE 18" IN LENGTH UNLESS PLANS SHOW OTHERWISE

ALL ANCHORING COUPLINGS AND ANCHORING ELBOWS SHALL BE CAST WITH AN INTEGRAL M.J. GLAND ON ONE END AND A DUCTILE IRON ROTATABLE M.J. GLAND ON THE OTHER END.

A LOCKING RING FOR A STANDARD ANCHORING COUPLING SHALL BE SUBSTITUTED FOR ONE OF THE STANDARD GLANDS ON THE 6" GATE VALVE FOR THE TYPE V AND TYPE VI INSTALLATIONS.

BACKFILL OF HYDRANTS AND VALVES SHALL BE COMPACTED BY HAND WITH SUITABLE MECHANICAL EQUIPMENT.

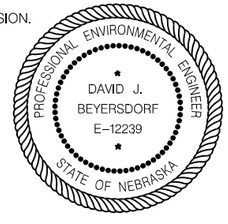
THERE SHALL BE NO MORE THAN ONE HYDRANT EXTENSION.

HYDRANT SHALL DRAIN FREELY AFTER INSTALLATION, DRAIN MATERIAL SHALL BE DRAINAGE GRAVEL ONLY, NO LIMESTONE MATERIAL

THE HYDRANT SHOE SHALL BE DRY BLOCKED, NO POUR IN PLACE BLOCKING

HYDRANT LINES LONGER THAN TEN (10) FEET SHALL HAVE RESTRAINED JOINT PIPE AND TWO VALVES. VALVE #1 SHALL BE ANCHORED TO THE TEE AND VALVE #2 SHALL BE ANCHORED TO THE HYDRANT.

HYDRANT BRANCH VALVES SHALL BE OPENED PRIOR TO PRESSURE TESTING WATER MAIN.



HYDRANT INSTALLATIONS

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DATE: 9/21/2022
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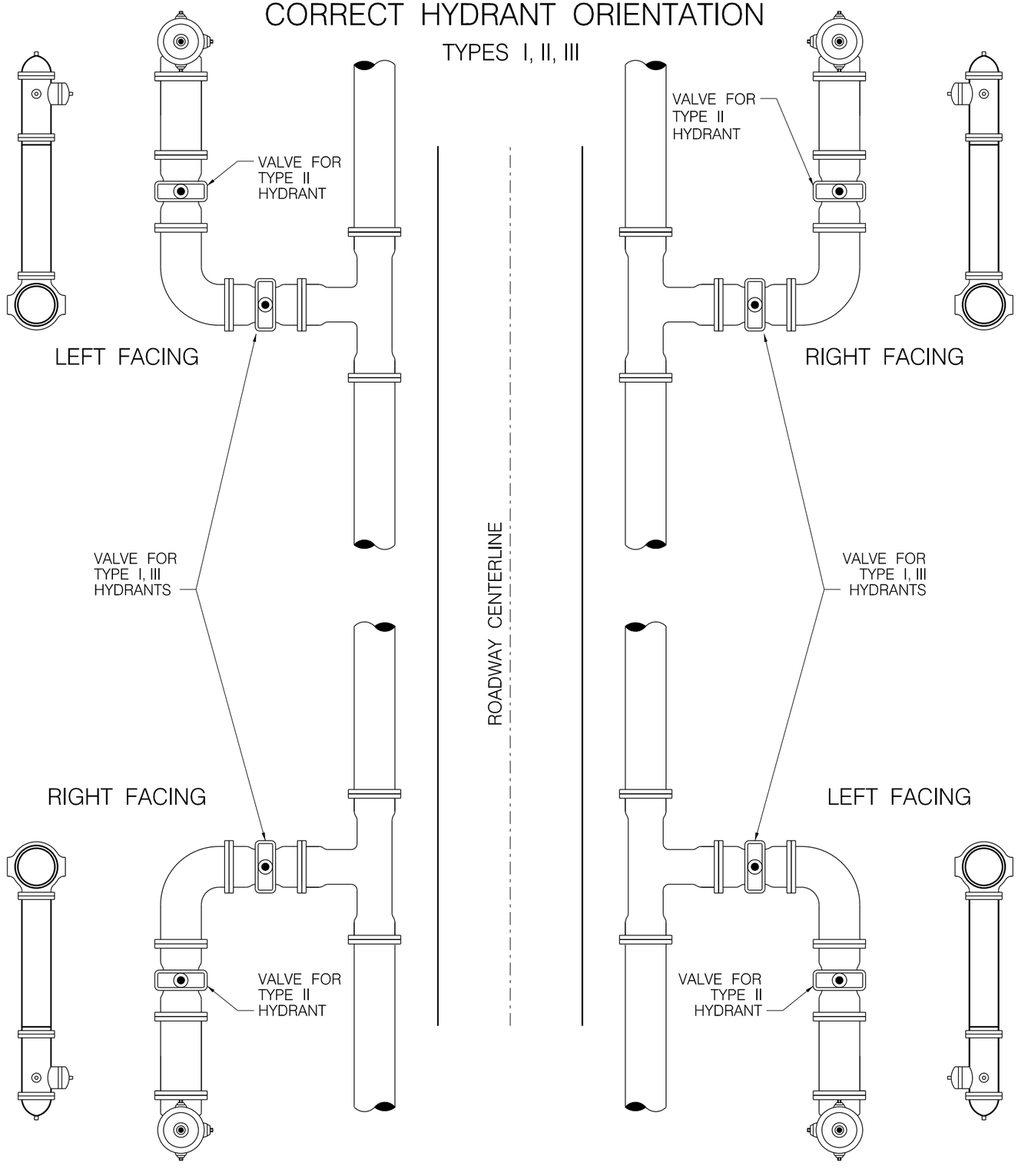
LTU	PLAN NO.	SHEET NO.
	330	2
Date: 10/1/2022	Drawn:	JWH/CEA
Horz. Scale: N.T.S.	Checked:	JML
	Approved:	DJB

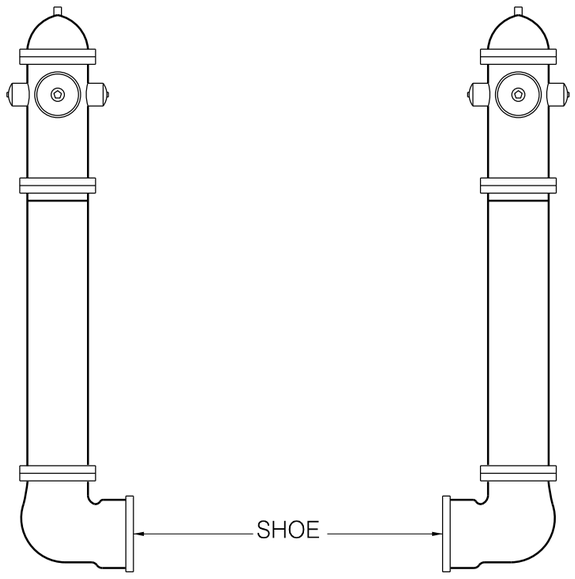
CORRECT HYDRANT ORIENTATION

TYPES I, II, III



HYDRANT CONFIGURATION

RIGHT FACING SHOE



WHEN FACING THE LARGE STEAMER NOZZLE, THE HYDRANT SHOE POINTS RIGHT

LEFT FACING SHOE

WHEN FACING THE LARGE STEAMER NOZZLE, THE HYDRANT SHOE POINTS LEFT

NOTE:
THE CONTRACTOR SHALL ORIENT THE LARGE STEAMER NOZZLE OF THE HYDRANT TO FACE THE ROADWAY.

PROFESSIONAL ENVIRONMENTAL ENGINEER
DAVID J. BEYERSDORF
E-12239
STATE OF NEBRASKA

HYDRANT INSTALLATIONS

LSP 330

PROJ: No Project.cfg
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LTU

PLAN NO.	SHEET NO.
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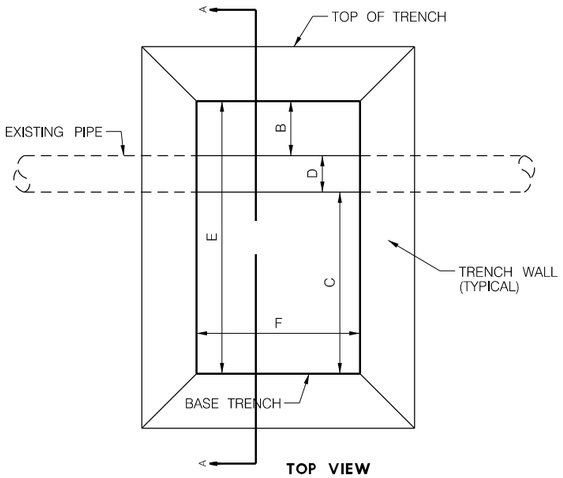
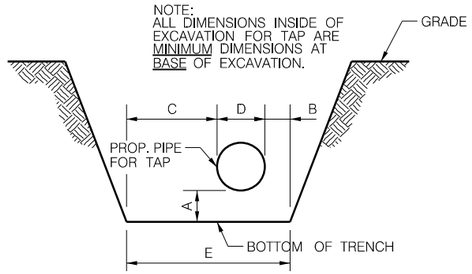
Date: 10/1/2022	Drawn: CAW/CEA
Horz. Scale: N.T.S.	Checked: JML
	Approved: DJB



TOP VIEW

NO SCALE

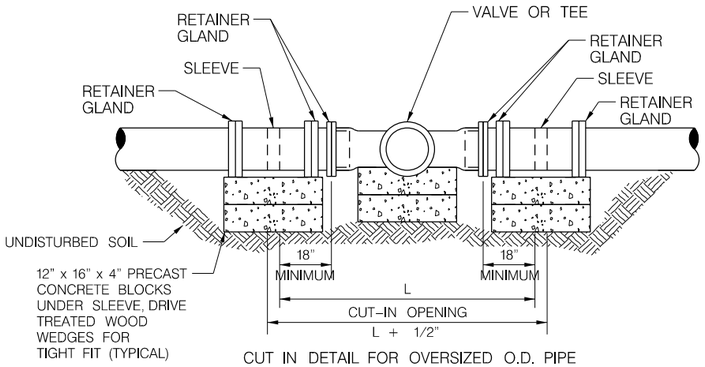


REQUIREMENT:
SLOPE OF TRENCH WALLS AND/OR TRENCH PROTECTION MUST MEET O.S.H.A. STANDARDS, NO EXCEPTIONS

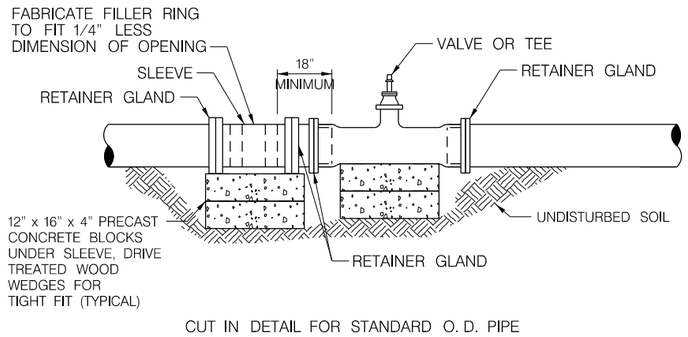
SECTION A-A

NO SCALE

WATER TAPPING EXCAVATION PIT						
	A	B	C	D	E	F
TAPPING SLEEVE AND VALVE	12"	12"	6'–0"	10" OR LESS	8' MINIMUM	4'–0"
			7'–0"	12" OR LESS	9' MINIMUM	
WATER SERVICE TAP	6"	12"	3' MINIMUM	16" OR LESS	5'–0"	3'–0"
WASTEWATER SERVICE TAP	6"	12"	3' MINIMUM	15" OR LESS	5'–0"	3'–0"

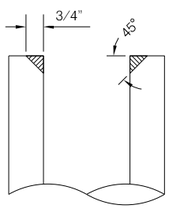


CUT IN DETAIL FOR OVERSIZED O.D. PIPE

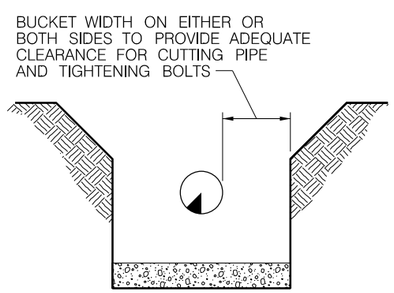


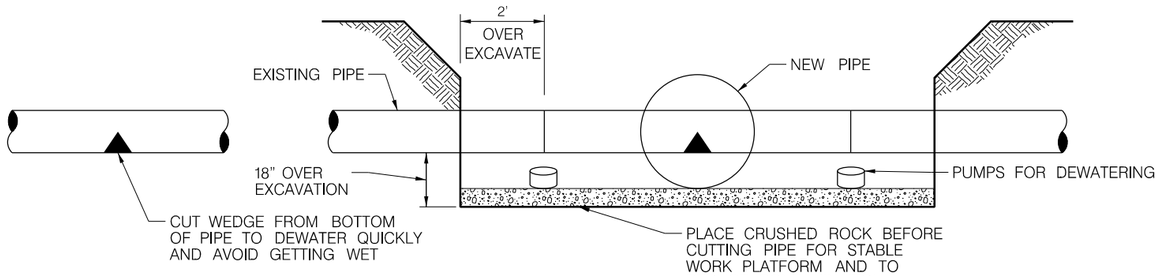
CUT IN DETAIL FOR STANDARD O. D. PIPE

CUT IN FOR VALVES OR FITTINGS



CHAMFER FOR 12" PVC BUTTERFLY VALVE





EXCAVATING AND DEWATER IN FOR TIE-INS
LINCOLN WATER SYSTEM

PROFESSIONAL ENVIRONMENTAL ENGINEER
DAVID J. BEYERSDORF
E-12239
STATE OF NEBRASKA

WATER TAPPING EXCAVATION PIT, BUTTERFLY VALVE AND CUT IN DETAIL

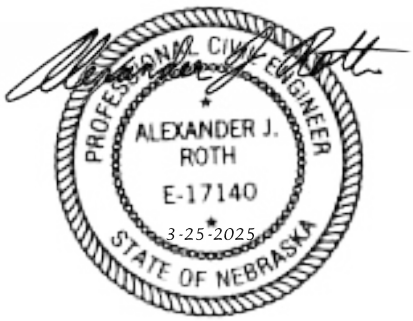
LSP 340

CONTRACT DOCUMENTS

CITY OF SEWARD, NE
WORTHMAN BOULEVARD WATER MAIN
PHASE II
SCHEMMER PROJECT NO. 09336.001-B

SCHEMMER

Design with Purpose. Build with Confidence.



MARCH 2025

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NOTICE TO CONTRACTORS

CITY OF SEWARD, WORTHMAN BOULEVARD WATERMAIN PHASE II

Sealed proposals will be received by the CITY CLERK, CITY OF SEWARD – CITY HALL, 537 Main Street, P.O. Box 38, SEWARD, NE 68434 until 10:00 a.m. on the 29th day of April 2025, for furnishing all labor, tools, materials, and equipment required to complete all work designated as WORTHMAN BOULEVARD WATER MAIN PHASE II as per plans and specifications for such work now on file with the A&D Technical Supply website. An optional paper set of project documents is available for a non-refundable price through A&D Technical Supply. If you have any questions, contact Michael Oneby, P.E. at 402-643-4000 extension number 203. To bid the project, the contract documents must be issued directly by A&D Technical Supply.

The project consists of:

Constructing new public watermain west of the intersection of Worthman Boulevard and Pine Street. The watermain sizes vary from 12" to 16" totaling approximately 3,395 feet. Site restoration includes minor grading and paving around new water valves.

This project utilizes Community Development Block Grant (CDBG) funding, which includes Federal Labor Standards Provisions and Build America, Buy America (BABA) Requirements. The Contractor is required to follow all conditions set forth in the Bid Package Requirements.

Proposals will be taken for said construction work described above by unit prices, as an aggregate bid for the entire project. A general Davis-Bacon wage determination is attached to the Bid Package Requirements and will be updated via addenda 10 days prior to bid opening.

All proposals for said construction work must be made on blanks furnished by the Engineer and must be accompanied by Bid Security of not less than 5% of the amount bid. Bid Security to be made payable to the City of Seward as liquidated damages in case the bid is accepted and the bidder neglects or refuses, to enter into contract and furnish bond in accordance herewith.

No bidder may withdraw the submitted proposal for a period of forty-five (45) days after the date set for the opening of bids. The City of Seward reserves the right to reject any or all bids received and to waive informalities.

MICHAEL ONEBY, P.E.
PROJECT COORDINATOR/CITY ENGINEER
City of Seward, Nebraska – City Hall
537 Main Street
P.O. Box 38
Seward, NE 68434

Published: Seward County Independent, April 9th, April 16th, April 23rd, 2025

Defined Terms

1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:

A. *Issuing Office* – The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

2.01 Complete sets of the Bidding Documents in the number and for the deposit sum, if any, stated in the advertisement or invitation to bid may be obtained from the Issuing Office.

2.02 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.03 Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not authorize or confer a license for any other use.

ARTICLE 3 – QUALIFICATIONS OF BIDDERS

3.01 To demonstrate Bidder's qualifications to perform the Work, within 5 days of Owner's request, Bidder shall submit written evidence such as financial data, previous experience or present commitments.

3.02 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

ARTICLE 4 – EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA, AND SITE

4.01 *Subsurface and Physical Conditions*

A. The Supplementary Conditions identify:

1. Those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site.

2. Those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).

B. Copies of reports and drawings referenced in Paragraph 4.01.A will be made available by Owner to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which Bidder is entitled to rely as provided in Paragraph 4.02 of the General Conditions has been identified and established in Paragraph 4.02 of the Supplementary Conditions. Bidder is responsible for any interpretation

or conclusion Bidder draws from any "technical data" or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

4.02 *Underground Facilities*

A. Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site is based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.

4.03 *Hazardous Environmental Condition*

A. The Supplementary Conditions identify any reports and drawings known to Owner relating to a Hazardous Environmental Condition identified at the Site.

B. Copies of reports and drawings referenced in Paragraph 4.03.A will be made available by Owner to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which Bidder is entitled to rely as provided in Paragraph 4.06 of the General Conditions has been identified and established in Paragraph 4.06 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any "technical data" or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

4.04 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated subsurface or physical conditions appear in Paragraphs 4.02, 4.03, and 4.04 of the General Conditions.

4.05 On request, Owner will provide Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies as Bidder deems necessary for submission of a Bid. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies. Bidder shall comply with all applicable Laws and Regulations relative to excavation and utility locates.

4.06 A. Reference is made to Article 7 of the Supplementary Conditions for the identification of the general nature of other work that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) that relates to the Work contemplated by these Bidding Documents. On request, Owner will provide to each Bidder for examination access to or copies of contract documents (other than portions thereof related to price) for such other work.

B. Paragraph 6.13.C of the General Conditions indicates that if an Owner safety program exists, it will be noted in the Supplementary Conditions.

4.07 It is the responsibility of each Bidder before submitting a Bid to:

A. examine and carefully study the Bidding Documents, and the other related data identified in the Bidding Documents;

B. visit the Site and become familiar with and satisfy Bidder as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;

C. become familiar with and satisfy Bidder as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work;

D. carefully study all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) that have been identified in Paragraph 4.02 of the Supplementary Conditions as containing reliable "technical data,"

E. consider the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Bidder's safety precautions and programs;

F. agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price(s) bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;

G. become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;

H. promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder; and

I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

4.08 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying any specific means, methods, techniques, sequences, and procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that Bidder has given Engineer written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents and the written resolutions thereof by Engineer are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

ARTICLE 5 – PRE-BID CONFERENCE

5.01 A pre-Bid conference will not be held for this project

ARTICLE 6 – SITE AND OTHER AREAS

6.01 The Site is identified in the Bidding Documents. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by Owner unless otherwise provided in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by Contractor.

ARTICLE 7 – INTERPRETATIONS AND ADDENDA

7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by Engineer as having received the Bidding Documents. Questions received less than ten days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

7.02 Addenda may be issued to clarify, correct, or change the Bidding Documents as deemed advisable by Owner or Engineer.

ARTICLE 8 – BID SECURITY

8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of 5 percent of Bidder's maximum Bid price and in the form of a certified check, bank money order, or a Bid bond (on the form attached) issued by a surety meeting the requirements of Paragraphs 5.01 and 5.02 of the General Conditions.

8.02 The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract Documents, furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults. The Bid security of other Bidders whom Owner believes to

have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Agreement or 46 days after the Bid opening, whereupon Bid security furnished by such Bidders will be returned.

8.03 Bid security of other Bidders whom Owner believes do not have a reasonable chance of receiving the award will be returned within seven days after the Bid opening.

ARTICLE 9 – CONTRACT TIMES

9.01 The number of days within which, or the dates by which, [Milestones are to be achieved and] the Work is to be substantially completed and ready for final payment are set forth in the Agreement.

ARTICLE 10 – LIQUIDATED DAMAGES

10.01 Provisions for liquidated damages, if any, are set forth in the Agreement.

ARTICLE 11 – SUBSTITUTE AND "OR-EQUAL" ITEMS

11.01 The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration of possible substitute or "or-equal" items. Whenever it is specified or described in the Bidding Documents that a substitute or "or-equal" item of material or equipment may be furnished or used by Contractor if acceptable to Engineer, application for such acceptance will not be considered by Engineer until after the Effective Date of the Agreement.

ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS AND OTHERS

12.01 If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, individuals, or entities to be submitted to Owner in advance of a specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner a list of all such Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, individual, or entity if requested by Owner. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit a substitute, *without an increase in the Bid.*

12.02 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, individuals, or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to revocation of such acceptance after the Effective Date of the Agreement as provided in Paragraph 6.06 of the General Conditions.

12.03 Contractor shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom Contractor has reasonable objection.

ARTICLE 13 – PREPARATION OF BID

13.01 The Bid Form is included with the Bidding Documents. Additional copies may be obtained from Engineer.

13.02 All blanks on the Bid Form shall be completed in ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each [section, Bid item, alternative, adjustment unit price item, and unit price item] listed therein. In the case of optional alternatives the words "No Bid," "No Change," or "Not Applicable" may be entered.

13.03 A Bid by a corporation shall be executed in the corporate name by the president or a vice-president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown.

13.04 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be shown.

13.05 A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown.

13.06 A Bid by an individual shall show the Bidder's name and official address.

13.07 A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid Form. The official address of the joint venture shall be shown.

13.08 All names shall be printed in ink below the signatures**.**

13.09 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.

13.10 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.

13.11 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder's state contractor license number, if any, shall also be shown on the Bid Form.

ARTICLE 14 – BASIS OF BID; COMPARISON OF BIDS

14.01 *Unit Price*

A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the Bid schedule.

B. The total of all estimated prices will be the sum of the products of the estimated quantity of each item and the corresponding unit price. The final quantities and Contract Price will be determined in accordance with Paragraph 11.03 of the General Conditions.

C. Discrepancies between the multiplications of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

ARTICLE 15 – SUBMITTAL OF BID

15.01 With each copy of the Bidding Documents, a Bidder is furnished one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the following documents:

15.02 A Bid shall be submitted no later than the date and time prescribed and at the place indicated in the advertisement or invitation to bid and shall be enclosed in a plainly marked package with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid shall be addressed to CITY OF SEWARD, 142 N. 7TH STREET, SEWARD, NE 68434.

ARTICLE 16 – MODIFICATION AND WITHDRAWAL OF BID

16.01 A Bid may be modified or withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids.

16.02 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

ARTICLE 17 – OPENING OF BIDS

17.01 Bids will be opened at the time and place indicated in the Advertisement or Invitation to Bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 18 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE

18.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT

19.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to not be responsible. Owner may also reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project to make an award to that Bidder. Owner also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder.

19.02 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.

19.03 In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.

19.04 In evaluating Bidders, Owner will consider the qualifications of Bidders and may consider the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the Supplementary Conditions.

19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work in accordance with the Contract Documents.

19.06 If the Contract is to be awarded, Owner will award the Contract to the Bidder whose Bid is in the best interests of the Project.

ARTICLE 20 – CONTRACT SECURITY AND INSURANCE

20.01 Article 5 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to performance and payment bonds and insurance. When the

Successful Bidder delivers the executed Agreement to Owner, it shall be accompanied by such bonds.

ARTICLE 21 – SIGNING OF AGREEMENT

21.01 When Owner issues a Notice of Award to the Successful Bidder, it shall be accompanied by the required number of unsigned counterparts of the Agreement along with the other Contract Documents which are identified in the Agreement as attached thereto. Within 15 days thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to Owner. Within ten days thereafter, Owner shall deliver one fully signed counterpart to Successful Bidder with a complete set of the Drawings with appropriate identification.

ARTICLE 22 – SALES AND USE TAXES

22.01 Owner is exempt from state sales and use taxes on materials and equipment to be incorporated in the Work. Refer to Paragraph 6.10 of the Supplementary Conditions for additional information.

ARTICLE 23 – RETAINAGE

23.01 Provisions concerning Contractor's rights to deposit securities in lieu of retainage are set forth in the Agreement.

BID PACKAGE REQUIREMENTS

ATTACHMENT 1:
BONDING AND INSURANCE REQUIREMENTS

2 C.F.R § 200.326 Bonding Requirements.

Community Development Block Grant Regulations

For construction or facility improvement contracts or subcontracts exceeding the Simplified Acquisition Threshold[29], the Federal awarding agency or pass-through entity may accept the bonding policy and requirements of the non-Federal entity provided that the Federal awarding agency or pass-through entity has made a determination that the Federal interest is adequately protected. If such a determination has not been made, the minimum requirements must be as follows:

(a) A bid guarantee from each bidder equivalent to five percent of the bid price. The "bid guarantee" must consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of the bid, execute such contractual documents as may be required within the time specified.

(b) A performance bond on the part of the contractor for 100 percent of the contract price. A "performance bond" is one executed in connection with a contract to secure fulfillment of all the contractor's requirements under such contract.

(c) A payment bond on the part of the contractor for 100 percent of the contract price. A "payment bond" is one executed in connection with a contract to assure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contract.

[29] 41 U.S.C.A. § 134 indicates the simplified acquisition threshold at $250,000.

ATTACHMENT 2:
CIVIL RIGHTS AND EQUAL OPPORTUNITY PROVISIONS

Public Law 88-352, Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000(d), et. seq.) (24 CFR part 1).
The law provides that, "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

Section 109 of the Housing and Community Development Act of 1974, As Amended.
The law requires that, "[n]o person in the United States shall on the ground of race, color, national origin, religion, or sex be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity funded in whole or in part with funds made available under this chapter. Any prohibition against discrimination on the basis of age under the Age Discrimination Act of 1975 [42 U.S.C. 6101 et seq.] or with respect to an otherwise qualified handicapped individual as provided in section 794 of Title 29 also shall apply to any such program or activity."

Age Discrimination Act of 1975, As Amended (42 U.S.C. 6101, Et, seq.).
The law provides that, "no person in the United States shall, on the basis of age, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under, any program or activity receiving Federal financial assistance."

Section 504 of the Rehabilitation Act of 1973, As Amended (29 U.S.C. 794).
"Section 504 provides that no otherwise qualified individual with a disability shall, solely by reason of his or her disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

Section 3 of the Housing and Urban Development Act of 1968, As Amended (12 U.S.C. 170lu).
The law provides that, "to the greatest extent feasible, recipients of HUD funds (and their contractors and subcontractors) provide jobs and other economic opportunities to low-income persons, particularly public housing residents. Section 3 helps create employment for low-income persons and contracting opportunities for businesses that are owned by low-income people or that provide employment to low-income people."

ATTACHMENT 3A:
CERTIFICATION OF BIDDER REGARDING SECTION 3 AND SEGREGATED FACILITIES

Name of Prime Contractor	Project Name and Number

The undersigned herby certifies that:

(a) Section 3 provisions are included in the contract.

(b) A written Section 3 plan was prepared and submitted as part of the bidding proceedings (if bid equals or exceeds $100,000).

(c) No segregated facilities will be maintained.

Name & Title of Signer (Print or Type)

Signature	Date

ATTACHMENT 3B: CONTRACTOR

Section 3 Plan

_____ agrees to implement the following specific affirmative action steps directed at increasing the utilization of lowest income residents and businesses within the Village/City/County of _____.

A. To ascertain from the locality's CDBG program official the exact boundaries of the Section 3 covered project area and where advantageous, seek the assistance of local officials in preparing and implementing the affirmative action plan.

B. To attempt to recruit from within the city the necessary number of lower income residents through local advertising media; signs placed at the proposed site for the project; and community organizations and public or private institutions operating within or serving the project area, such as Service Employment and Redevelopment (SER), Opportunities Industrialization Center (OIC), Urban League, Concentrated Employment Program, Hometown Plan, or the U.S. Employment Service.

C. To maintain a list of all lower income residents who have applied either on their own or on referral from any source, and to employ such persons, if otherwise eligible and if a vacancy exists.

D. *To insert this Section 3 plan in all bid documents, and to require all bidders and subcontracts to submit a Section 3 affirmative action plan that includes utilization goals and the specific steps planned to accomplish these goals.

E. *To ensure that subcontracts (typically let on a negotiated rather than bid basis in areas other than Section 3 covered project areas), also are let on a negotiated basis, where feasible, when let in a Section 3 covered project area.

F. To formally contact unions, subcontractors and trade associations to secure their cooperation for this program.

G. To ensure that all appropriated project area business concerns are notified of pending sub contractual opportunities.

H. To maintain records, including copies of correspondence, memoranda, etc., that document all above affirmative action steps have been taken.

I. To appoint or recruit an executive official of the company or agency as Equal Opportunity Officer to coordinate the implementation of the Section 3 plan.

*Loans, grants, contracts and subsidies for less than $100,000 will be exempt.

ATTACHMENT 4:
SPECIAL EQUAL OPPORTUNITY PROVISIONS

A. Activities and Contracts Not Subject to Executive Order 11246, As Amended
(Applicable to Federally assisted construction contracts and related subcontracts $10,000 and under)
During the performance of this contract.

(1) The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor shall take affirmative action to ensure that applicants for employment are employed, and that employees are treated during employment, without regard to their race, color, religion, or national origin. Such action shall include, but not be limited to: employment upgrade, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay, or other forms of compensation; and selection for training, including apprenticeship.

(2) The contractor shall post in conspicuous places, available to employees and applicants for employment, notices to be provided by contracting officer setting forth the provisions of the nondiscrimination clause. The contractor shall state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(3) Contractors shall incorporate foregoing requirements in all subcontracts.

B. Executive Order 11246 (contract/subcontracts above $10,000)

1. SEC. 202. Except in contracts exempted in accordance with Section 204 of this order, all Government contracting agencies shall include in every government contract hereafter entered into the following:
During the performance of this contract:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to: employment upgrade, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay, or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of the nondiscrimination clause.

(2) The contractor will, in all solicitations or advancements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining contract or other contract or understanding, a notice, to be provided by the [Contract Compliance Officer], advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order No. 11246 of Sept. 24, 1965, and the rules, regulations, and relevant orders of the U.S. Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to their books, records, and accounts by the [Department] and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract, or with any of such rules, regulations, or orders, this contract may be cancelled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further government contracts in accordance with procedures authorized in Executive Order No. 11246 of Sept. 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor *will* take such action with respect to any subcontract or purchase order as may be directed by the [Department and the] Secretary of Labor as a means of enforcing such provisions, including sanctions for noncompliance: Provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction [by DED Department], the contractor may request the United States to enter into such litigation to protect the interests of the United States [italics added]."

ATTACHMENT 5:
ACCESS TO AND MAINTENANCE OF RECORDS

The Consultant/Contractor agrees to maintain such records and follow such procedures as may be required under HUD Community Planning and Development (CPD) subpart J, 570.502 (paragraph a. 16.) and 2 CFR 200.318(i) and any such procedures that DED may prescribe. In general, such records will include information pertaining to the contract, obligations and unobligated balances, assets and liabilities, outlays, equal opportunity, labor standards (as appropriate), and performance.

All such records and all other records pertinent to this contract and work undertaken under this contract shall be retained by the Consultant/Contractor or Subrecipient for a period of three years after the final audit of the Subrecipient's CDBG project, unless a longer period is required to resolve audit findings or litigation. In such cases, the Subrecipient shall request a longer period for record retention.

The Subrecipient, DED and duly authorized officials of the state and federal government shall have full access and the right to examine any pertinent documents, papers, records and books of the Consultant/Contractor involving transactions to this local program and contract.

Conflict of Interest
From 2 CFR 200.318(c)(1)., no officer, employee or agent of the Subrecipient who will participate in the selection, the award, or the administration of this grant, may obtain a personal or financial interest or benefit from the activity or have an interest in any contract, subcontract or contract with respect thereto, or the proceeds thereunder either for themselves or those with whom they have family or business ties, during their tenure or for one year thereafter. It is further required that this stipulation be included in all subcontracts to this contract. Upon written request, exceptions may be granted on a case-by-case basis when it is determined that such an exception will serve to further the purposes of the Act and the effective and efficient administration of the recipient's program or project. These exceptions are granted by the Department.

ATTACHMENT 6:
CLEAN AIR AND WATER ACTS – REQUIRED CLAUSES

This clause is required in all third-party contracts involving projects subject to the Clean Air Act (42 U.S.C. s/s 7401 et seq. (1970)), the Federal Water Pollution Control Act (33 U.S.C. 1251 et. seq.), and the regulation of the Environmental Protection Agency with respect to 40 CFR32 as amended. It also should be mentioned in the bid document.

During the performance of this contract:

(1) The CONTRACTOR will certify that any facility to be utilized in the performance of any nonexempt contract or subcontract is not listed on the List of Violating Facilities issued by the Environmental Protection Agency pursuant to 48 CFR 9.40 and 40CFR32.20.

(2) The CONTRACTOR agrees to comply with all the requirements of Section 114 of the Clean Air Act, as amended, (42 U.S.C. 7414) and Section 308 of the Clean Water Act, as amended (33 U.S.C. 1318) relating to inspection, monitoring, entry, reports, and information, as well as all other requirements specified in said Section 114 and Section 308, and all regulations and guidelines issued thereunder.

(3) The CONTRACTOR agrees that as a condition for the award of the contract, prompt notice will be given of any notification received from the Director, Office of Federal Activities, and Environmental Protection Agency, indicating that a facility utilized, or to be utilized for the contract is under consideration to be listed on the Environmental Protection Agency List of Violating Facilities.

(4) The CONTRACTOR agrees that it will include or cause to be included the criteria and requirements in Paragraphs (1) through (4) of this section in every nonexempt subcontract and require every subcontractor to take such action as the government may direct as a means of enforcing such provisions.

A. APPLICABILITY

The Project or Program to which the construction work covered by this Contract pertains is being assisted by the United States of America, and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

1. Minimum wages and fringe benefits

i. All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of basic hourly wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. As provided in 29 CFR 5.5(d) and (e), the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act (40 U.S.C. 3141(2)(B)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (a)(1)(v) of these contract clauses; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided,* That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under 29 CFR 5.5(a)(1)(iii)) and the Davis-Bacon poster (WH-1321) must be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

ii. Frequently recurring classifications

A. In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in 29 CFR part 1, a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to 29 CFR 5.5(a)(1)(iii), provided that:

1. The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;
2. The classification is used in the area by the construction industry; and
3. The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

B. The Administrator will establish wage rates for such classifications in accordance with 29 CFR 5.5(a)(1)(iii)(A)(3). Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

iii. Conformance

A. The contracting officer must require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract be

classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:

1. The work to be performed by the classification requested is not performed by a classification in the wage determination; and
2. The classification is used in the area by the construction industry; and
3. The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

B. The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

C. If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the contracting officer by email to DBAconformance@dol.gov. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30–day period that additional time is necessary.

D. In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer will, by email to DBAconformance@dol.gov, refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30–day period that additional time is necessary.

E. The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division under 29 CFR 5.5 (a)(1)(iii)(C) and (D). The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to 29 CFR 5.5 (a)(1)(iii)(C) or (D) must be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

iv. Fringe benefits not expressed as an hourly rate

Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

v. Unfunded plans

If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided,* That the Secretary of Labor has found, upon the written request of the contractor, in accordance with the criteria set forth in 29 CFR 5.28, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

vi. Interest In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. **Withholding**

   i. **Withholding requirements**

   The U. S. Department of Housing and Urban Development may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in 29 CFR 5.5(a) for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in 29 CFR 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work (or otherwise working in construction or development of the project under a development statute) all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in 29 CFR 5.5(a)(3)(iv), HUD may on its own initiative and after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

   ii. **Priority to withheld funds**

   The Department has priority to funds withheld or to be withheld in accordance with 29 CFR 5.5(a)(2)(i) or (b)(3)(i), or both, over claims to those funds by:

   A. A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

   B. A contracting agency for its reprocurement costs;

   C. A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

   D. A contractor's assignee(s);

   E. A contractor's successor(s); or

   F. A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901-3907.

3. **Records and certified payrolls**

   i. **Basic record requirements**

   A. Length of record retention. All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

   B. Information required Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

   C. Additional records relating to fringe benefits. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(v) that the wages of any laborer or mechanic include the amount of any

costs reasonably anticipated in providing benefits under a plan or program described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act, the contractor must maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

D. **Additional records relating to apprenticeship** Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

ii. **Certified payroll requirements**

A. **Frequency and method of submission** The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to HUD if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the certified payrolls to the applicant, sponsor, owner, or other entity, as the case may be, that maintains such records, for transmission to HUD. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system

B. **Information required** The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i)(B), except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (*e.g.*, the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH-347 or in any other format desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/wh347.pdf or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the sponsoring government agency (or the applicant, sponsor, owner, or other entity, as the case may be, that maintains such records).

C. **Statement of Compliance** Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

1. That the certified payroll for the payroll period contains the information required to be provided under 29 CFR 5.5(a)(3)(ii), the appropriate information and basic records are being maintained under 29 CFR 5.5 (a)(3)(i), and such information and records are correct and complete;
2. That each laborer or mechanic (including each helper and apprentice) working on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly

from the full wages earned, other than permissible deductions as set forth in 29 CFR part 3; and

3. That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

D. **Use of Optional Form WH-347** The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 will satisfy the requirement for submission of the "Statement of Compliance" required by 29 CFR 5.5(a)(3)(ii)(C).

E. **Signature** The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

F. **Falsification** The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 3729.

G. **Length of certified payroll retention** The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

iii. **Contracts, subcontracts, and related documents** The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

iv **Required disclosures and access**

A. **Required record disclosures and access to workers** The contractor or subcontractor must make the records required under 29 CFR 5.5(a)(3)(i)–(iii), and any other documents that HUD or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by 29 CFR 5.1, available for inspection, copying, or transcription by authorized representatives of HUD or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

B. **Sanctions for non-compliance with records and worker access requirements** If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to 29 CFR 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under 29 CFR part 6 any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

C. **Required information disclosures** Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address of each covered worker, and must provide them upon request to HUD if the agency is a party to

the contract, or to the Wage and Hour Division of the Department of Labor. If the Federal agency is not such a party to the contract, the contractor, subcontractor, or both, must, upon request, provide the full Social Security number and last known address, telephone number, and email address of each covered worker to the applicant, sponsor, owner, or other entity, as the case may be, that maintains such records, for transmission to HUD, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity

i. Apprentices

A. Rate of pay Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

B. Fringe benefits Apprentices must be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.

C. Apprenticeship ratio The allowable ratio of apprentices to journeyworkers on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to 29 CFR 5.5(a)(4)(i)(D). Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in 29 CFR 5.5(a)(4)(i)(A), must be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

D. Reciprocity of ratios and wage rates Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

ii Equal employment opportunity The use of apprentices and journeyworkers under this part must be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

5 Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6 **Subcontracts.** The contractor or subcontractor must insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (11), along with the applicable wage determination(s) and such other clauses or contract modifications as the U.S. Department of Housing and
Urban Development may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate.

7 Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8 Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9 Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

i. By entering into this contract, the contractor certifies that neither it nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of 40 U.S.C. 3144(b) or 29 CFR 5.12(a).

ii. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of 40 U.S.C. 3144(b) or 29 CFR 5.12(a).

iii. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, 18 U.S.C. 1001.

11 **Anti-retaliation** It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

- **i.** Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, or 29 CFR parts 1, 3, or 5;
- **ii.** Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, or 29 CFR parts 1, 3, or 5;
- **iii.** Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, or 29 CFR parts 1, 3, or 5; or
- **iv.** Informing any other person about their rights under the DBA, Related Acts, or 29 CFR parts 1, 3, or 5.

B. Contract Work Hours and Safety Standards Act (CWHSSA)

The Agency Head must cause or require the contracting officer to insert the following clauses set forth in 29 CFR 5.5(b)(1), (2), (3), (4), and (5) in full, or (for contracts covered by the Federal Acquisition Regulation) by reference, in any contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses must

be inserted in addition to the clauses required by 29 CFR 5.5(a) or 4.6. As used in this paragraph, the terms "laborers and mechanics" include watchpersons and guards.

1. **Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
2. **Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in 29 CFR 5.5(b)(1) the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchpersons and guards, employed in violation of the clause set forth in 29 CFR 5.5(b)(1), in the sum of $31 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in 29 CFR 5.5(b)(1).
3. **Withholding for unpaid wages and liquidated damages**

i. **Withholding process** The U.S Department of Housing and Urban Development or the recipient of Federal assistance may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in 29 CFR 5.5(b) on this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act that is held by the same prime contractor (as defined in 29 CFR 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

ii **Priority to withheld funds** The Department has priority to funds withheld or to be withheld in accordance with 29 CFR 5.5(a)(2)(i) or (b)(3)(i), or both, over claims to those funds by:

- **A.** A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- **B.** A contracting agency for its reprocurement costs;
- **C.** A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- **D.** A contractor's assignee(s);
- **E.** A contractor's successor(s); or
- **F.** A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901-3907.

4. ***Subcontracts***. The contractor or subcontractor must insert in any subcontracts the clauses set forth in 29 CFR 5.5(b)(1) through (5) and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in 29 CFR 5.5(b)(1) through (5). In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss,

due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5 **Anti-retaliation** It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

- **i.** Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in 29 CFR part 5;
- **ii.** Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or 29 CFR part 5;
- **iii.** Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or 29 CFR part 5; or
- **iv.** Informing any other person about their rights under CWHSSA or 29 CFR part 5.

C. CWHSSA required records clause In addition to the clauses contained in 29 CFR 5.5(b), in any contract subject only to the Contract Work Hours and Safety Standards Act and not to any of the other laws referenced by 29 CFR 5.1, the Agency Head must cause or require the contracting officer to insert a clause requiring that the contractor or subcontractor must maintain regular payrolls and other basic records during the course of the work and must preserve them for a period of 3 years after all the work on the prime contract is completed for all laborers and mechanics, including guards and watchpersons, working on the contract. Such records must contain the name; last known address, telephone number, and email address; and social security number of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid; daily and weekly number of hours actually worked; deductions made and actual wages paid. Further, the Agency Head must cause or require the contracting officer to insert in any such contract a clause providing that the records to be maintained under this paragraph must be made available by the contractor or subcontractor for inspection, copying, or transcription by authorized representatives of the (write the name of agency) and the Department of Labor, and the contractor or subcontractor will permit such representatives to interview workers during working hours on the job.

D. Incorporation of contract clauses and wage determinations by reference Although agencies are required to insert the contract clauses set forth in this section, along with appropriate wage determinations, in full into covered contracts, and contractors and subcontractors are required to insert them in any lower-tier subcontracts, the incorporation by reference of the required contract clauses and appropriate wage determinations will be given the same force and effect as if they were inserted in full text.

E. Incorporation by operation of law The contract clauses set forth in this section (or their equivalent under the Federal Acquisition Regulation), along with the correct wage determinations, will be considered to be a part of every prime contract required by the applicable statutes referenced by 29 CFR 5.1 to include such clauses, and will be effective by operation of law, whether or not they are included or incorporated by reference into such contract, unless the Administrator grants a variance, tolerance, or exemption from the application of this paragraph. Where the clauses and applicable wage determinations are effective by operation of law under this paragraph, the prime contractor must be compensated for any resulting increase in wages in accordance with applicable law.

F. HEALTH AND SAFETY

The provisions of this paragraph (F) are applicable where the amount of the prime contract exceeds **$100,000**.

1. No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his or her health and safety, as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.
2. The contractor shall comply with all regulations issued by the Secretary of Labor pursuant to 29 CFR Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, (Public Law 91-54, 83 Stat 96), 40 U.S.C. § 3701 et seq.
3. The contractor shall include the provisions of this paragraph in every subcontract, so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontractor as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

XI. Subrecipient Compliance with BABA Requirements

"Pursuant to the Build America, Buy America Act (BABA), enacted as part of the Infrastructure Investment and Jobs Act (IIJA). Pub. L. 117-58, 41 U.S.C. § 8301 note, the Federal Financial Assistance used to fund this infrastructure project is required to apply a domestic content procurement preference (the "Buy America Preference" or "BAP") for all construction, alteration, maintenance, or repair of infrastructure, including buildings and real property, unless application of the BAP has been waived by HUD. Additional details on fulfilling the BABA requirements can be found at https://www.hud.gov/baba."

BUY AMERICA, BUILD AMERICA (BABA) SELF-CERTIFICATION

Nebraska Department of Economic Development (DED)

[*Please refer to DED's Build America Buy America Policy Guidance when completing this form.*]

NEBRASKA
DEPT. OF ECONOMIC DEVELOPMENT

SELF-CERTIFICATION FORM

Project: _____

Location: _____

DED Award No. _____

For NEBRASKA DEPARTMENT OF ECONOMIC DEVELOPMENT (DED) programs, including HOME, HTF, and CDBG (not including CDBG-DR, CDBG-CV or HOME-ARP), subject to The Build America Buy America Act (BABA), subrecipients, developers, contractors, subcontractors and vendors, must complete and submit this Self-Certification to the next tier (e.g., subcontractor/vendor to contractor; contractor to subrecipient; subrecipient to non-federal entity, etc.) for each bid or offer relating to an "infrastructure project".

The undersigned understands and agrees that it must comply with the requirements of BABA, and any applicable regulations and notices, as amended from time to time, regarding funds obligated by the U.S. Department of Housing and Urban Development (HUD).

Under BABA, all "iron, steel, manufactured products, and construction materials" used for federally funded public "infrastructure projects" must be produced in the United States, unless subject to a waiver.

With respect to the above project, the undersigned hereby certifies to the best of his/her/its knowledge and belief after due inquiry, that [check one]:

☐ All iron, steel, manufactured products, and construction materials used in the project were produced in the United States; or

☐ Some or all iron, steel, manufactured products, and construction materials used in the project were not produced in the United States.

GENERAL WAIVERS. For iron, steel, manufactured products, and construction materials ***not produced in the United States***, the undersigned maintains documentation confirming its determination that a **General Waiver(s)** is applicable [check one or more, AND attach purchase order, contract, or brief description and cost of item(s) subject to waiver]:

☐ De Minimis Waiver – the total cost of the iron, steel, manufactured products, and construction materials not produced in the United States is equal to or less than 5% of the total project cost of iron, steel, manufactured products, and construction materials, up to $1 million;

☐ Small Grants Waiver - total project cost is equal to or less than $250,000;

☐ Exigent Circumstances - an urgent need existed by grantee to immediately complete the project because of a threat to life, safety, or property of residents and the community; or

☐ Tribal Consultations – regarding Tribal recipients.

SPECIFIC WAIVERS. For iron, steel, manufactured products, and construction materials ***not produced in the United States***, the undersigned intends to or has applied for a project or product **Specific Waiver** on the **BABA Specific Waiver Submission Site** [check one or more, if applicable, and insert application date and approval status]:

☐ Public Interest, Application Date _____, Approved Yes/No/Pending _____
Requiring the use of the USA made product would be inconsistent with the public interest;

☐ Nonavailability, Application Date _____, Approved Yes/No/Pending _____
Product needed is not produced in the USA in sufficient quantities or of a satisfactory quality; or

☐ Unreasonable Cost, Application Date _____, Approved Yes/No/Pending _____
Inclusion of the product produced in the USA will increase the cost of the overall project by more than 25%.

The undersigned certifies and affirms the truthfulness and accuracy of each statement contained herein. In addition, the undersigned understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification.

_____
Legal Name of Entity or Sole Proprietorship

_____
Signature of Authorized Individual or Official

_____
Printed Name and Title of Authorized Official

_____
Signature Date

"General Decision Number: NE20250053 03/14/2025

Superseded General Decision Number: NE20240053

State: Nebraska

Construction Type: Heavy

County: Seward County in Nebraska.

HEAVY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least $17.75 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least $13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2025.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at http://www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/03/2025
1	03/14/2025

* ELEC0265-006 03/03/2025

	Rates	Fringes
Electricians:		
Zone 1	$ 33.50	18.20
Zone 2	$ 33.80	18.24
Zone 3	$ 34.10	18.27
Zone 4	$ 34.50	18.31

ZONE DEFINITIONS [Mileage from main Post Office in Lincoln]
Zone 1: 0 to 35 miles
Zone 2: 36 to 50 miles
Zone 3: 51 to 75 miles
Zone 4: 76 miles and over

FOOTNOTE:
Work on scaffolds, hanging scaffolds, boatswains chairs or ladders, etc., in any area where the worker is in a position to fall 40 ft. or more, or where objects above the worker can fall 40 ft. or more: to be paid one and one-half times the straight- time rate of pay.

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* SUNE2011-020 08/31/2011

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 16.72 **	0.00
FORM WORKER	$ 17.59 **	5.74
LABORER: Common or General	$ 13.11 **	3.23
LABORER: Pipelayer	$ 16.33 **	5.60
OPERATOR: Backhoe/Excavator	$ 19.43	3.59
OPERATOR: Crane	$ 24.00	5.56
OPERATOR: Loader	$ 17.67 **	2.98
TRUCK DRIVER, Includes Dump and Tandem Truck	$ 13.62 **	2.60
TRUCK DRIVER: Lowboy Truck	$ 21.49	7.40

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

==========

** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 ($17.75) or 13658 ($13.30). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this

contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to

reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

a) a survey underlying a wage determination
b) an existing published wage determination
c) an initial WHD letter setting forth a position on a wage determination matter
d) an initial conformance (additional classification and rate) determination

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Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

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Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

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END OF GENERAL DECISION"

"General Decision Number: NE20250027 03/14/2025

Superseded General Decision Number: NE20240027

State: Nebraska

Construction Type: Highway

Counties: Lancaster, Saunders and Seward Counties in Nebraska.

HIGHWAY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least $17.75 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least $13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2025.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at http://www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/03/2025
1	03/14/2025

ELEC0022-018 06/01/2024

Saunders County - East of Highway 109 and North of Alternate Highway 30)

	Rates	Fringes
ELECTRICIAN	$ 44.50	19.69

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* ELEC0265-005 03/03/2025

REMAINDER OF SAUNDERS COUNTY

	Rates	Fringes
Electricians:		
Zone 1	$ 33.50	18.20
Zone 2	$ 33.80	18.24
Zone 3	$ 34.10	18.27
Zone 4	$ 34.50	18.31

ZONE DEFINITIONS [Mileage from main Post Office in Lincoln]
Zone 1: 0 to 35 miles
Zone 2: 36 to 50 miles
Zone 3: 51 to 75 miles
Zone 4: 76 miles and over

FOOTNOTE:
Work on scaffolds, hanging scaffolds, boatswains chairs or ladders, etc., in any area where the worker is in a position to fall 40 ft. or more, or where objects above the worker can fall 40 ft. or more: to be paid one and one-half times the straight- time rate of pay.

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* SUNE2011-023 08/29/2011

	Rates	Fringes
CARPENTER (Includes Form Work)	$ 18.51	
CEMENT MASON/CONCRETE FINISHER		
Lancaster County	$ 18.48	5.86
Seward, Saunders Counties	$ 18.17	5.86
ELECTRICIAN, Includes Installation of Traffic Signals		
Lancaster, Seward Counties	$ 28.83	
HIGHWAY/PARKING LOT STRIPING:		
Laborer		
Lancaster County	$ 11.82 **	
Saunders County	$ 12.37 **	
Seward County	$ 11.27 **	
IRONWORKER, REINFORCING	$ 19.35	
LABORER (COMMON OR GENERAL)		
Lancaster County	$ 12.58 **	
Saunders County	$ 12.55 **	
Seward County	$ 12.20 **	
LABORER: Concrete Saw (Hand		

Held/Walk Behind).....$ 16.07 ** 6.55

LABORER: Mason Tender
(Cement/Concrete).....$ 10.44 **

LABORER: Traffic Control -
Flagger and Cone/Barrel Setter
Lancaster County.....$ 11.87 **
Seward County.....$ 9.00 **

Operating Engineers: (Skid
Loader)
Lancaster County.....$ 10.56 **
Saunders County.....$ 12.51 **
Seward County.....$ 14.85 **

OPERATOR: Asphalt Spreader.....$ 18.74

OPERATOR: Backhoe Loader
Combo.....$ 15.94 **

OPERATOR: Backhoe/Excavator
Lancaster County.....$ 19.91 6.07
Saunders County.....$ 19.47 6.07
Seward County.....$ 16.15 **

OPERATOR: Broom/Sweeper.....$ 11.43 **

OPERATOR: Bulldozer
Lancaster County.....$ 16.78 **
Seward, Saunders Counties...$ 16.34 **

OPERATOR: Compactor.....$ 13.36 **

OPERATOR: Concrete Saw
Lancaster, Seward Counties..$ 20.87

OPERATOR: Crane.....$ 22.38

OPERATOR: Hydrohammer.....$ 17.03 **

OPERATOR: Loader
Lancaster County.....$ 17.44 **
Saunders County.....$ 17.19 **
Seward County.....$ 16.04 **

OPERATOR: Mechanic.....$ 19.58

OPERATOR: Milling Machine.....$ 12.80 **

OPERATOR: Oiler.....$ 16.21 **

OPERATOR: Paver (Asphalt,
Aggregate, and Concrete)
Lancaster County.....$ 14.79 **
Seward, Saunders Counties...$ 16.13 **

OPERATOR: Roller
Lancaster County.....$ 13.00 **
Saunders County.....$ 13.45 **
Seward County.....$ 14.04 **

OPERATOR: Scraper
Lancaster County.....$ 14.80 **
Seward, Saunders Counties...$ 14.83 **

OPERATOR: Tractor
Lancaster County.....$ 9.50 **
Seward, Saunders Counties...$ 10.65 **

OPERATOR: Grader/Blade
Lancaster County.....$ 16.09 **
Seward, Saunders Counties...$ 16.04 **

TRUCK DRIVER, Includes Dump
and Tandem Truck
Lancaster County.....$ 14.51 **
Saunders County.....$ 14.47 **
Seward County.....$ 14.16 **

TRUCK DRIVER: Lowboy Truck.....$ 15.93 **

TRUCK DRIVER: Semi-Trailer
Truck
Lancaster County.....$ 13.48 **
Seward, Saunders Counties...$ 14.09 **

TRUCK DRIVER: Water Truck.....$ 18.00 6.40

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

==========

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($13.30). Please see the Note at the top of the wage
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solicitation was issued) on or after January 1, 2017. If this
contract is covered by the EO, the contractor must provide
employees with 1 hour of paid sick leave for every 30 hours
they work, up to 56 hours of paid sick leave each year.
Employees must be permitted to use paid sick leave for their
own illness, injury or other health-related needs, including
preventive care; to assist a family member (or person who is
like family to the employee) who is ill, injured, or has other
health-related needs, including preventive care; or for reasons
resulting from, or to assist a family member (or person who is
like family to the employee) who is a victim of, domestic
violence, sexual assault, or stalking. Additional information
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Unlisted classifications needed for work not included within
the scope of the classifications listed may be added after
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A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

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Washington, DC 20210.

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END OF GENERAL DECISION"

BID FORM

Project Identification:

CITY OF SEWARD, WORTHMAN BOULEVARD WATERMAIN PHASE II

Contract Identification and Number:

Schemmer Project No. 09336.001-B

ARTICLE 1-BID RECIPIENT

1.01 This Bid is submitted to:

City of Seward, Nebraska – City Hall
Attn. Michael Oneby, P.E.
537 Main Street
P.O. Box 38
Seward, NE 68434

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 45 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

Addendum No.	Addendum Date
_____	_____
_____	_____
_____	_____

B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) that have been identified in SC-4.02 as containing reliable "technical data,"

E. Bidder has considered the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Bidder's safety precautions and programs.

F. Based on the information and observations referred to in Paragraph 3.01.E above, Bidder does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer is acceptable to Bidder.

1. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

Worthman Boulevard Watermain – Phase II					
Item	Description	Estimate Quantity	Unit	Bid Unit Price	Bid Price
1	TRAFFIC CONTROL	1	LS	$	$
2	MOBILIZATION	1	LS	$	$
3	GENERAL CLEARING AND GRUBBING	1	LS	$	$
4	EARTHWORK MEASURED IN EMBANKMENT (ESTABLISHED QUANTITY)	602	C.Y.	$	$
5	STABILIZED CONSTRUCTION EXIT	1	EA	$	$
6	8" CONCRETE PAVEMENT, CLASS 47B-3500	106	SY	$	$
7	SEEDING, TYPE B	2.42	AC	$	$
8	EROSION CONTROL, CLASS 1A	1,121	SY	$	$
9	SWPPP SIGN	1	EA	$	$
10	REMOVE 12" PLUG	1	EA	$	$
11	16" WATER MAIN PIPE	1,607	LF	$	$
12	12" WATER MAIN PIPE	1,788	LF	$	$
13	6" GATE VALVE AND BOX	7	EA	$	$
14	12" GATE VALVE AND BOX	6	EA	$	$
15	16" BUTTERFLY VALVE	4	EA	$	$
16	6" FIRE HYDRANT	8	EA	$	$
17	6" ANCHORING COUPLING, 18"	9	EA	$	$
18	16" ANCHORING COUPLING, 18”	1	EA	$	$
19	16" RETAINER GLAND	28	EA	$	$
20	12" RETAINER GLAND	41	EA	$	$
21	6" RETAINER GLAND	10	EA	$	$

22	16"x12" REDUCER, M.J.	1	EA	$	$
23	16"x6" REDUCER, M.J.	1	EA	$	$
24	16" PLUG, M.J.	1	EA	$	$
25	12" PLUG, M.J.	3	EA	$	$
26	16"x12" CROSS, M.J.	1	EA	$	$
27	12"X6" TEE	3	EA	$	$
28	12"X12" TEE	1	EA	$	$
29	16"X6" TEE	4	EA	$	$
30	16"X16" TEE	1	EA	$	$
31	12"X11.25 DEG BEND	2	EA	$	$
32	12"X45 DEG BEND	4	EA	$	$
33	16"X90 DEG BEND	2	EA	$	$
34	CONC FOR PLUGS AND COLLARS	2.2	C.Y.	$	$
35	STEEL FOR PLUGS AND COLLARS	110.9	LBS	$	$
36	CONC FOR THRUST BLOCKS AND ANCHORAGES	11.2	C.Y.	$	$
37	STEEL FOR THRUST BLOCKS AND ANCHORAGES	436.5	LBS	$	$
				TOTAL BID	$

Unit Prices have been computed in accordance with Paragraph 11.03.B of the General Conditions.

Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid security in the form of _____;

Defined Terms

7.02 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 8 – BID SUBMITTAL

9.01 This Bid is submitted by:

If Bidder is:

An Individual

Name (typed or printed): _____

By: _____
(Individual's signature)

Doing business as: _____

A Partnership

Partnership Name: _____

By: _____
(Signature of general partner -- attach evidence of authority to sign)

Name (typed or printed): _____

A Corporation

Corporation Name: _____
(SEAL)

State of Incorporation: _____
Type (General Business, Professional, Service, Limited Liability):_____

By: _____
(Signature -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____
(CORPORATE SEAL)

Attest _____

Date of Qualification to do business in *[State where Project is located]* is ____/____/____.

A Joint Venture

Name of Joint Venture: _____

First Joint Venturer Name: _____
(SEAL)

By: _____
(Signature of first joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Second Joint Venturer Name: _____
_____(SEAL)

By: _____
(Signature of second joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

Bidder's Business Address _____

_____

Phone No. _____ Fax No. _____

E-mail _____

SUBMITTED on _____, 20____.

State Contractor License No. _____. *[If applicable]*

BID BOND

Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

BIDDER *(Name and Address)*:

SURETY *(Name and Address of Principal Place of Business)*:

OWNER *(Name and Address)*:

BID

Bid Due Date:

Description *(Project Name and Include Location)*:

BOND

Bond Number:

Date *(Not earlier than Bid due date)*:

Penal sum _____ $ _____

(Words) (Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER	**SURETY**
_____ (Seal)	_____ (Seal)
Bidder's Name and Corporate Seal	Surety's Name and Corporate Seal
By: _____	By: _____
Signature	Signature (Attach Power of Attorney)
_____	_____
Print Name	Print Name
_____	_____
Title	Title
Attest: _____	Attest: _____
Signature	Signature
_____	_____
Title	Title

Note: Above addresses are to be used for giving any required notice. Provide execution by any additional parties, such as joint venturers, if necessary.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.

2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.

3. This obligation shall be null and void if:

3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or

3.2 All Bids are rejected by Owner, or

3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).

4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.

5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from Bid due date without Surety's written consent.

6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after Bid due date.

7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.

8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.

9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.

10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

SUGGESTED FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

THIS AGREEMENT is by and between City of Seward, Nebraska ("Owner") and

("Contractor").

Owner and Contractor hereby agree as follows:

ARTICLE 1 – WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

Furnish all labor, materials and equipment for WORTHMAN BOULEVARD WATERMAIN PHASE II. Work, per the plans and specifications, shall include clearing and grubbing, earthwork, water main construction, seeding, and all incidental work necessary to complete the Project as required by the plans and specifications.

ARTICLE 2 – THE PROJECT

2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

CITY OF SEWARD
WORTHMAN BOULEVARD WATERMAIN PHASE II
SCHEMMER PROJECT NO. 09336.001-B

ARTICLE 3 – ENGINEER

3.01 The Project has been designed by the Schemmer Associates (Engineer), which is to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 – CONTRACT TIMES

4.01 *Time of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Days to Achieve Substantial Completion and Final Payment*

A. The Work will be completed per the CONTRACT TIME section of the special provisions after the date when the Contract Times commence to run as provided in Paragraph 2.03 of the General Conditions for WORTHMAN BOULEVARD WATERMAIN PHASE II.

4.03 *Liquidated Damages*

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial loss if the Work is not completed within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay Owner $500.00 for each day that expires after the time specified in Paragraph 4.02 above for Substantial Completion until the Work is substantially complete. After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by Owner, Contractor shall pay Owner $250.00 for each day that expires after the time specified in Paragraph 4.02 above for completion and readiness for final payment until the Work is completed and ready for final payment.

ARTICLE 5 – CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to Paragraphs 5.01.A below:

A. For all Unit Price Work, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the actual quantity of that item:

UNIT PRICE WORK

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
	"UNIT PRICE" AND "BID PRICE" AS DEVELOPED ON BID TAB				

Total of all Bid Prices (Unit Price Work) $

The Bid prices for Unit Price Work set forth as of the Effective Date of the Agreement are based on estimated quantities. As provided in Paragraph 11.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer as provided in Paragraph 9.07 of the General Conditions.

ARTICLE 6 – PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

A. Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the 20th day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below. All such payments will be measured by the schedule of values established as provided in Paragraph 2.07.A of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Engineer may determine or Owner may withhold, including but not limited to liquidated damages, in accordance with Paragraph 14.02 of the General Conditions.

a. 95 percent of Work completed (with the balance being retainage). If the Work has been 50 percent completed as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and

b. 95 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 99 percent of the Work completed, less such amounts as Engineer shall determine in accordance with Paragraph 14.02.B.5 of the General Conditions

6.03 *Final Payment*

A. Upon final completion and acceptance of the Work in accordance with Paragraph 14.07 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 14.07.

ARTICLE 7 – INTEREST

7.01 All moneys not paid when due as provided in Article 14 of the General Conditions shall bear interest at the rate of 8 percent per annum.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

8.01 In order to induce Owner to enter into this Agreement, Contractor makes the following representations:

A. Contractor has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.

B. Contractor has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Contractor is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities), if any, that have been identified in Paragraph SC-4.02 of the Supplementary Conditions as containing reliable "technical data,"

E. Contractor has considered the information known to Contractor; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Contract Documents; and (3) Contractor's safety precautions and programs.

F. Based on the information and observations referred to in Paragraph 8.01.E above, Contractor does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.

G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.

H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 *Contents*

A. The Contract Documents consist of the following:

1. Cover Page
2. Table of Contents
3. Notice to Contractors (page NC-1)
4. Instructions to Bidders (pages 200-1: 200-9)
5. Bid Form (pages 410-1: 410-8)
6. Bid Bond (pages 430-1: 430-2)
7. This Agreement (pages 520-1 to 520-8, inclusive).
8. Performance bond (pages 610-1 to 610-3, inclusive).
9. Payment bond (pages 615-1 to 615-3, inclusive).
10. Other bonds (pages – to --, inclusive).
    a. _____ (pages _____ to _____, inclusive).
    b. _____ (pages _____ to _____, inclusive).
    c. _____ (pages _____ to _____, inclusive).
11. General Conditions (pages 700-1 to 700-62, inclusive).
12. Supplementary Conditions (pages 800-1 to 800-9, inclusive).
13. Special Provisions (pages 1 to 122).
14. Drawings consisting of the Drawings listed on attached sheet index.
15. Addenda (numbers _____ to _____, inclusive).
16. Exhibits to this Agreement (enumerated as follows):
    a. Contractor's Bid (pages _____ to _____, inclusive).

b. Documentation submitted by Contractor prior to Notice of Award (pages _____ to _____, inclusive).

17. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:

a. Notice of Award (pages 1 to 1, inclusive).

b. Notice to Proceed (pages 1 to 1, inclusive).

c. Work Change Directives.

d. Change Orders.

B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 9.

D. The Contract Documents may only be amended, modified, or supplemented as provided in Paragraph 3.04 of the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 *Terms*

A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

10.02 *Assignment of Contract*

A. No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 *Successors and Assigns*

A. Owner and Contractor each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

10.04 *Severability*

A. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

10.05 *Contractor's Certifications*

A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process or in the Contract execution;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

10.06 *Other Provisions*

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement. Counterparts have been delivered to Owner and Contractor. All portions of the Contract Documents have been signed or have been identified by Owner and Contractor or on their behalf.

This Agreement will be effective on _____ (which is the Effective Date of the Agreement).

OWNER:	CONTRACTOR
City of Seward, Nebraska	_____
By: _____	By: _____
Title: _____	Title: _____
	(If Contractor is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)
Attest: _____	Attest: _____
Title: _____	Title: _____
Address for giving notices:	Address for giving notices:
_____	_____
_____	_____
_____	_____
	License No.: _____ (Where applicable)
(If Owner is a corporation, attach evidence of authority to sign. If Owner is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)	*NOTE TO USER: Use in those states or other jurisdictions where applicable or required.*
	Agent for service of process:
	_____

PERFORMANCE BOND

Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

CONTRACTOR (*Name and Address*):

SURETY (*Name, and Address of Principal Place of Business*):

OWNER (*Name and Address*):

CONTRACT

Effective Date of Agreement:
Amount:
Description (*Name and Location*):

BOND

Bond Number:
Date (*Not earlier than Effective Date of Agreement*):
Amount:
Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL	**SURETY**
_____ (Seal)	_____ (Seal)
Contractor's Name and Corporate Seal	Surety's Name and Corporate Seal
By: _____	By: _____
Signature	Signature (Attach Power of Attorney)
_____	_____
Print Name	Print Name
_____	_____
Title	Title
Attest: _____	Attest: _____
Signature	Signature
_____	_____
Title	Title

Note: Provide execution by additional parties, such as joint venturers, if necessary.

Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner for the performance of the Contract, which is incorporated herein by reference.

1. If Contractor performs the Contract, Surety and Contractor have no obligation under this Bond, except to participate in conferences as provided in Paragraph 2.1.

2. If there is no Owner Default, Surety's obligation under this Bond shall arise after:
   2.1 Owner has notified Contractor and Surety, at the addresses described in Paragraph 9 below, that Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with Contractor and Surety to be held not later than 15 days after receipt of such notice to discuss methods of performing the Contract. If Owner, Contractor, and Surety agree, Contractor shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive Owner's right, if any, subsequently to declare a Contractor Default; and
   2.2 Owner has declared a Contractor Default and formally terminated Contractor's right to complete the Contract. Such Contractor Default shall not be declared earlier than 20 days after Contractor and Surety have received notice as provided in Paragraph 2.1; and
   2.3 Owner has agreed to pay the Balance of the Contract Price to:
      1. Surety in accordance with the terms of the Contract; or
      2. Another contractor selected pursuant to Paragraph 3.3 to perform the Contract.

3. When Owner has satisfied the conditions of Paragraph 2, Surety shall promptly, and at Surety's expense, take one of the following actions:

   3.1 Arrange for Contractor, with consent of Owner, to perform and complete the Contract; or
   3.2 Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or
   3.3 Obtain bids or negotiated proposals from qualified contractors acceptable to Owner for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by Owner and contractor selected with Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Contract, and pay to Owner the amount of damages as described in Paragraph 5 in excess of the Balance of the Contract Price incurred by Owner resulting from Contractor Default; or
   3.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:
      1. After investigation, determine the amount for which it may be liable to Owner and, as soon as practicable after the amount is determined, tender payment therefor to Owner; or
      2. Deny liability in whole or in part and notify Owner citing reasons therefor.

4. If Surety does not proceed as provided in Paragraph 3 with reasonable promptness, Surety shall be deemed to be in default on this Bond 15 days after receipt of an additional written notice from Owner to Surety demanding that Surety perform its obligations under this Bond, and Owner shall be entitled to enforce any remedy available to Owner. If Surety proceeds as provided in Paragraph 3.4, and Owner refuses the payment tendered or Surety has denied liability, in whole or in part, without further notice Owner shall be entitled to enforce any remedy available to Owner.

5. After Owner has terminated Contractor's right to complete the Contract, and if Surety elects to act under Paragraph 3.1, 3.2, or 3.3 above, then the responsibilities of Surety to Owner shall not be greater than those of Contractor under the Contract, and the responsibilities of Owner to Surety shall not be greater than those of Owner under the Contract. To the limit of the amount of this Bond, but subject to commitment by Owner of the Balance of the Contract Price to mitigation of costs and damages on the Contract, Surety is obligated without duplication for:

5.1 The responsibilities of Contractor for correction of defective Work and completion of the Contract;
5.2 Additional legal, design professional, and delay costs resulting from Contractor's Default, and resulting from the actions of or failure to act of Surety under Paragraph 3; and
5.3 Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of Contractor.

6. Surety shall not be liable to Owner or others for obligations of Contractor that are unrelated to the Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than Owner or its heirs, executors, administrators, or successors.

7. Surety hereby waives notice of any change, including changes of time, to Contract or to related subcontracts, purchase orders, and other obligations.

8. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located, and shall be instituted within two years after Contractor Default or within two years after Contractor ceased working or within two years after Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

9. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the address shown on the signature page.

10. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

11. Definitions.

11.1 Balance of the Contract Price: The total amount payable by Owner to Contractor under the Contract after all proper adjustments have been made, including allowance to Contractor of any amounts received or to be received by Owner in settlement of insurance or other Claims for damages to which Contractor is entitled, reduced by all valid and proper payments made to or on behalf of Contractor under the Contract.
11.2 Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.
11.3 Contractor Default: Failure of Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.
11.4 Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract or to perform and complete or otherwise comply with the other terms thereof.

FOR INFORMATION ONLY – (*Name, Address and Telephone*) Surety Agency or Broker: Owner's Representative (*Engineer or other party*):

PAYMENT BOND

Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

CONTRACTOR (*Name and Address*):

SURETY (*Name, and Address of Principal Place of Business*):

OWNER (*Name and Address*):

CONTRACT

Effective Date of Agreement:
Amount:
Description *(Name and Location)*:

BOND

Bond Number:
Date (*Not earlier than Effective Date of Agreement*):
Amount:
Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL	**SURETY**
_____ (Seal)	_____ (Seal)
Contractor's Name and Corporate Seal	Surety's Name and Corporate Seal
By: _____	By: _____
Signature	Signature (Attach Power of Attorney)
_____	_____
Print Name	Print Name
_____	_____
Title	Title
Attest: _____	Attest: _____
Signature	Signature
_____	_____
Title	Title

Note: Provide execution by additional parties, such as joint venturers, if necessary.

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner to pay for labor, materials, and equipment furnished by Claimants for use in the performance of the Contract, which is incorporated herein by reference.

2. With respect to Owner, this obligation shall be null and void if Contractor:

2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants, and

2.2 Defends, indemnifies, and holds harmless Owner from all claims, demands, liens, or suits alleging non-payment by Contractor by any person or entity who furnished labor, materials, or equipment for use in the performance of the Contract, provided Owner has promptly notified Contractor and Surety (at the addresses described in Paragraph 12) of any claims, demands, liens, or suits and tendered defense of such claims, demands, liens, or suits to Contractor and Surety, and provided there is no Owner Default.

3. With respect to Claimants, this obligation shall be null and void if Contractor promptly makes payment, directly or indirectly, for all sums due.

4. Surety shall have no obligation to Claimants under this Bond until:

4.1 Claimants who are employed by or have a direct contract with Contractor have given notice to Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.

4.2 Claimants who do not have a direct contract with Contractor:

1. Have furnished written notice to Contractor and sent a copy, or notice thereof, to Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials or equipment were furnished or supplied, or for whom the labor was done or performed; and
2. Have either received a rejection in whole or in part from Contractor, or not received within 30 days of furnishing the above notice any communication from Contractor by which Contractor had indicated the claim will be paid directly or indirectly; and
3. Not having been paid within the above 30 days, have sent a written notice to Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to Contractor.

5. If a notice by a Claimant required by Paragraph 4 is provided by Owner to Contractor or to Surety, that is sufficient compliance.

6. Reserved.

7. Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by Surety.

8. Amounts owed by Owner to Contractor under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any performance bond. By Contractor furnishing and Owner accepting this Bond, they agree that all funds earned by Contractor in the performance of the Contract are dedicated to satisfy obligations of Contractor and Surety under this Bond, subject to Owner's priority to use the funds for the completion of the Work.

9. Surety shall not be liable to Owner, Claimants, or others for obligations of Contractor that are unrelated to the Contract. Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

10. Surety hereby waives notice of any change, including changes of time, to the Contract or to related subcontracts, purchase orders, and other obligations.

11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Paragraph 4.1 or Paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, Owner, or Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

13. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory Bond and not as a common law bond.

14. Upon request of any person or entity appearing to be a potential beneficiary of this Bond, Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15. Definitions

15.1 Claimant: An individual or entity having a direct contract with Contractor, or with a first-tier subcontractor of Contractor, to furnish labor, materials, or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of Contractor and Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

15.2 Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.

15.3 Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract, or to perform and complete or otherwise comply with the other terms thereof.

FOR INFORMATION ONLY – (*Name, Address, and Telephone*) Surety Agency or Broker: Owner's Representative (*Engineer or other*):

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

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CONSTRUCTION SPECIFICATIONS INSTITUTE

These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor (EJCDC C-520 or C-525, 2007 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the Narrative Guide to the EJCDC Construction Documents (EJCDC C-001, 2007 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (EJCDC C-800, 2007 Edition).

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*—The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidder*—The individual or entity who submits a Bid directly to Owner.

7. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).

8. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and the Bid Form with any supplements.

9. *Change Order*—A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim*—A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*—The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

13. *Contract Price*—The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*—The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.

15. *Contractor*—The individual or entity with whom Owner has entered into the Agreement.

16. *Cost of the Work*—See Paragraph 11.01 for definition.

17. *Drawings*—That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

18. *Effective Date of the Agreement*—The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. *Engineer*—The individual or entity named as such in the Agreement.

20. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

21. *General Requirements*—Sections of Division 1 of the Specifications.

22. *Hazardous Environmental Condition*—The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.

23. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

24. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

26. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*—The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

28. *Notice to Proceed*—A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.

29. *Owner*—The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.

30. *PCBs*—Polychlorinated biphenyls.

31. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

32. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.

33. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

34. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

35. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

36. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.

37. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.

38. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.

39. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

40. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.

41. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

42. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.

43. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.

44. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.

45. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.

46. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.

47. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or Subcontractor.

48. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

49. *Unit Price Work*—Work to be paid for on the basis of unit prices.

50. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

51. *Work Change Directive*—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a

Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 *Terminology*

A. The words and terms discussed in Paragraph 1.02.B through F are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives:*

1. The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. *Day:*

1. The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective:*

1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

a. does not conform to the Contract Documents; or

b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

c. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. *Furnish, Install, Perform, Provide:*

1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.

4. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, "provide" is implied.

F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.

B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 *Starting the Work*

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 *Preconstruction Conference; Designation of Authorized Representatives*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.07 *Initial Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.

C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

A. Standards, Specifications, Codes, Laws, and Regulations

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard, specification, manual, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies:*

1. *Contractor's Review of Contract Documents Before Starting Work*: Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers, or has actual knowledge of, and shall obtain a written

interpretation or clarification from Engineer before proceeding with any Work affected thereby.

2. *Contractor's Review of Contract Documents During Performance of Work*: If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation , (b) any standard, specification, manual, or code, or (c) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

a. the provisions of any standard, specification, manual, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference in the Contract Documents); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.

B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:

1. A Field Order;

2. Engineer's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or

3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions; or

2. reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor, or by Contractor to Owner or Engineer, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and

Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and

2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or

2. is of such a nature as to require a change in the Contract Documents; or

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer's Review*: After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.

C. *Possible Price and Times Adjustments:*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

    a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and

    b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:

    a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or

    b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

    c. Contractor failed to give the written notice as required by Paragraph 4.03.A.

3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data provided by others; and

2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:

   a. reviewing and checking all such information and data;

   b. locating all Underground Facilities shown or indicated in the Contract Documents;

   c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and

   d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated:*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 *Hazardous Environmental Condition at Site*

A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.

D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to

permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 4.06.E.

E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.

F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 – BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed each bond.

C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

B. Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.

C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.

D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.

E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

5.04 *Contractor's Insurance*

A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable. Insurance requirements for work around railroad property are detailed in the special provision "Railroad Special Provision". Reference that document for additional insurance requirements.

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;

2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;

3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;

4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:

   a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or

   b. by any other person for any other reason;

5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting there from; and

6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or

entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;

3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;

4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and

6. include completed operations coverage:

    a. Such insurance shall remain in effect for two years after final payment.

    b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors,

members, partners, employees, agents, consultants, and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;

2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);

4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;

5. allow for partial utilization of the Work by Owner;

6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.

B. Owner shall purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.

C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.

D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under this Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or loss payees thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for:

1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.

C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.

B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 – CONTRACTOR'S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

6.02 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.

B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "Or-Equals"*

A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. *"Or-Equal" Items:* If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that:

1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole; and

3) it has a proven record of performance and availability of responsive service.

b. Contractor certifies that, if approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times; and

2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. *Substitute Items:*

   a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.

   b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.

   c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Engineer may decide is appropriate under the circumstances.

   d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:

      1) shall certify that the proposed substitute item will:

         a) perform adequately the functions and achieve the results called for by the general design,

         b) be similar in substance to that specified, and

         c) be suited to the same use as that specified;

      2) will state:

         a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,

         b) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and

         c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

      3) will identify:

         a) all variations of the proposed substitute item from that specified, and

         b) available engineering, sales, maintenance, repair, and replacement services; and

      4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.

B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.

C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.

D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

E. *Engineer's Cost Reimbursement*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

F. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 *Concerning Subcontractors, Suppliers, and Others*

A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or

entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:

1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity; nor

2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.

E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.

F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its

use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 *Permits*

A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner

and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *Taxes*

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas:*

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.

2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.

3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 *Record Documents*

A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 *Safety and Protection*

A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.

D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts

any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

F. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*

a. Submit number of copies specified in the General Requirements.

b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

2. *Samples:*

a. Submit number of Samples specified in the Specifications.

b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Submittal Procedures:*

1. Before submitting each Shop Drawing or Sample, Contractor shall have:

a. reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;

b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;

c. determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.

3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. *Engineer's Review:*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the

Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. *Resubmittal Procedures:*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 *Continuing the Work*

A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 *Contractor's General Warranty and Guarantee*

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on representation of Contractor's warranty and guarantee.

B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

1. observations by Engineer;

2. recommendation by Engineer or payment by Owner of any progress or final payment;

3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. use or occupancy of the Work or any part thereof by Owner;

5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;

6. any inspection, test, or approval by others; or

7. any correction of defective Work by Owner.

6.20 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .

B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:

1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or

2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.

B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.

D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 *Related Work at Site*

A. Owner may perform other work related to the Project at the Site with Owner's employees, or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:

1. written notice thereof will be given to Contractor prior to starting any such other work; and

2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.

B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner, and Owner, if Owner is performing other work with Owner's employees, proper and safe

access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;

2. the specific matters to be covered by such authority and responsibility will be itemized; and

3. the extent of such authority and responsibilities will be provided.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.

B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's wrongful actions or inactions.

C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's wrongful action or inactions.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 *Replacement of Engineer*

A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

A. Owner's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

8.06 *Insurance*

A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws

and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents.

8.12 *Compliance with Safety Program*

A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed pursuant to Paragraph 6.13.D.

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents.

9.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative*

A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.

B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.

C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.

D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations

on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.

B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.

D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of,

and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Engineer has been informed pursuant to Paragraph 6.13.D.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.D.

10.03 *Execution of Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;

2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and

3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of

executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 *Claims*

A. *Engineer's Decision Required*: All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.

B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).

C. *Engineer's Action*: Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:

1. deny the Claim in whole or in part;

2. approve the Claim; or

3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.

E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 11.01.B, and shall include only the following items:

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.

5. Supplemental costs including the following:

    a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

    b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

    c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

    d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.

    e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

    f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

    g. The cost of utilities, fuel, and sanitary facilities at the Site.

    h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, express and courier services, and similar petty cash items in connection with the Work.

    i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.

2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A.

C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 *Allowances*

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. *Cash Allowances:*

1. Contractor agrees that:

a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in

the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

C. *Contingency Allowance:*

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 *Unit Price Work*

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

2. there is no corresponding adjustment with respect to any other item of Work; and

3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or

2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or

3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or

2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

   a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;

   b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;

   c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

   d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

   e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and

   f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.

B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.

D. Owner, Engineer, and their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 *Notice of Defects*

A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. Defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

13.03 *Tests and Inspections*

A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.

B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:

1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;

2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and

3. as otherwise specifically provided in the Contract Documents.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation.

F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.

B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.

C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

D. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or

2. correct such defective Work; or

3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and

4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and for the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct, or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. *Applications for Payments:*

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. *Review of Applications:*

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's

review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

a. the Work has progressed to the point indicated;

b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and any other qualifications stated in the recommendation); and

c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or

b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

a. to supervise, direct, or control the Work, or

b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or

c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or

d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or

e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:

a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;

b. the Contract Price has been reduced by Change Orders;

c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or

d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. *Payment Becomes Due:*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. *Reduction in Payment:*

1. Owner may refuse to make payment of the full amount recommended by Engineer because:

a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;

b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;

c. there are other items entitling Owner to a set-off against the amount recommended; or

d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.

2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor remedies the reasons for such action.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

14.03 *Contractor's Warranty of Title*

A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 *Substantial Completion*

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.

B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the tentative certificate to Owner, notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will, within said 14 days, execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the tentative list.

14.05 *Partial Utilization*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 14.04.A through D for that part of the Work.

2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *Final Payment*

A. *Application for Payment:*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:

   a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.6;

   b. consent of the surety, if any, to final payment;

   c. a list of all Claims against Owner that Contractor believes are unsettled; and

d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. *Engineer's Review of Application and Acceptance:*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. *Payment Becomes Due:*

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and

2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);

2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;

3. Contractor's repeated disregard of the authority of Engineer; or

4. Contractor's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:

1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);

2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere; and

3. complete the Work as Owner may deem expedient.

C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.

F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B and 15.02.C.

15.03 *Owner May Terminate For Convenience*

A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other

dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and

4. reasonable expenses directly attributable to termination.

B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 – DISPUTE RESOLUTION

16.01 *Methods and Procedures*

A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.

B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:

1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions; or

2. agrees with the other party to submit the Claim to another dispute resolution process; or

3. gives written notice to the other party of the intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 – MISCELLANEOUS

17.01 *Giving Notice*

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or

2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

Supplementary Conditions

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract, EJCDC C-700 (2007 Edition). All provisions which are not so amended or supplemented remain in full force and effect.

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added thereto.

SC-2.02 *Copies of Documents*

SC-2.02 Delete Paragraph 2.02.A in its entirety and insert the following in its place:

A. Owner shall furnish to Contractor up to 5 printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

SC-4.02 *Subsurface and Physical Conditions*

SC-4.02 Add the following new paragraphs immediately after Paragraph 4.02.

B: Not Used

SC-4.06 *Hazardous Environmental Conditions*

SC-4.06 Delete Paragraphs 4.06.A and 4.06.B in their entirety and insert the following:

A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.

B. Not Used.

SC-5.04 *Contractor's Liability Insurance*

SC-5.04 Add the following new paragraph immediately after Paragraph 5.04.B:

C The limits of liability for the insurance required by Paragraph 5.04 of the General Conditions shall provide coverage for not less than

the following amounts or greater where required by Laws and Regulations:

1. Workers' Compensation, and related coverages under Paragraphs 5.04.A.1 and A.2 of the General Conditions:

a. State:	**Statutory**
b. Applicable Federal (e.g., Longshoreman's):	**Statutory**
c. Employer's Liability:	
Each Accident	**$1,000,000**

2. Contractor's General Liability under Paragraphs 5.04.A.3 through A.6 of the General Conditions which shall include completed operations and product liability coverages and eliminate the exclusion with respect to property under the care, custody and control of Contractor:

a. General Aggregate	**$2,000,000**
b. Products - Completed Operations Aggregate	**$2,000,000**
c. Personal and Advertising Injury	**$1,000,000**
d. Each Occurrence (Bodily Injury and Property Damage)	**$1,000,000**
e. Fire Damage Limit	**$50,000 any one fire**
f. Medical Damage Limit	**$5,000 any one person**
g. Excess or Umbrella Liability	
□ General Aggregate	**$3,000,000**

3. Automobile Liability under Paragraph 5.04.A.6 of the General Conditions:

a. Combined Single Limit of	**$1,000,000**

SC-5.06 *Property Insurance*

SC-5.06.A. Delete Paragraph 5.06.A in its entirety and insert the following in its place:

A. Contractor shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof. Contractor shall be responsible for any deductible or self-insured retention. This insurance shall:

1. **include the interests of Owner, Contractor, Subcontractors, Engineer, and the officers, directors, partners, employees, agents and other consultants and subcontractors of any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or loss payee;**

2. **be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss and damage to the Work, temporary buildings, falsework, and materials and equipment in transit and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by these Supplementary Conditions.**

3. **include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);**

4. **cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;**

5. **allow for partial utilization of the Work by Owner;**

6. **include testing and startup;**

7. **be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued; and**

8. **comply with the requirements of Paragraph 5.06.C of the General Conditions.**

SC-SC-6.08 *Permits*

SC-6.08 Add the following paragraph 6.08 B. after Paragraph 6.08 A:

B. Contractor is responsible for complying with the requirements of permits for the project that Owner has obtained, or is in the process of obtaining (per Paragraph 6.08 A, Contractor is responsible for obtaining all other permits necessary for the project.)

1. Section 404 authorization: None required.

2. Floodplain Permit: None required.

3. . Construction Storm Water Notice of Intent (SWPPP): Contractor shall take all necessary management measures, and conduct its work to comply with the requirements and regulations of NPDES that Owner is in the process of obtaining from the Nebraska Department of Environmental Quality also in compliance with Lower Platte River Natural Resources District.

4. Construction Permit for Public Water Systems: Contractor shall familiarize himself with adherence to the permit requirements.

5. Contractor shall familiarize himself with the requirements and provisions of all necessary project permits and shall be solely responsible for implementing and maintaining all measures of these permits. To the fullest extent allowed by Laws and Regulations, the Contractor shall indemnify and hold harmless the Owner, Engineer and Engineer's Consultants, and the officers, directors, partners, employees, agents, other consultants, and subcontractors of each and any of them from and against all claims, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court, arbitration, or other dispute resolution costs) arising out of or relating to the Contractor's failure to comply with the conditions and requirements of these permits.

SC-6.20 *Indemnification*

SC-6.20 Delete Article 6.20.C.2 in its entirety.

SC-9.03 *Project Representative*

SC-9.03 Add the following new paragraphs immediately after Paragraph 9.03.A:

B. The Resident Project Representative (RPR) will be Engineer's employee or agent at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions. RPR's dealings in matters pertaining to the Work in general shall be with Engineer and Contractor. RPR's dealings with Subcontractors shall be through or with the full knowledge and approval of Contractor. The RPR shall:

1. *Schedules:* Review the progress schedule, schedule of Shop Drawing and Sample submittals, and schedule of values prepared by Contractor and consult with Engineer concerning acceptability.

2. *Conferences and Meetings:* Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences and other project-related meetings, and prepare and circulate copies of minutes thereof.

3. *Liaison*:

a. Serve as Engineer's liaison with Contractor, working principally through Contractor's authorized representative, assist in providing information regarding the intent of the Contract Documents.

b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.

c. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.

4. *Interpretation of Contract Documents:* Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.

5. *Shop Drawings and Samples:*

a. Record date of receipt of Samples and approved Shop Drawings.

b. Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.

6. ***Modifications:*** **Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.**

7. ***Review of Work and Rejection of Defective Work*:**

    a. **Conduct on-Site observations of Contractor's work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.**

    b. **Report to Engineer whenever RPR believes that any part of Contractor's work in progress will not produce a completed Project that conforms generally to the Contract Documents or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.**

8. ***Inspections, Tests, and System Startups:***

    a. **Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.**

    b. **Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.**

9. ***Records:***

    a. **Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.**

    b. **Maintain records for use in preparing Project documentation.**

10. ***Reports:***

a. Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the progress schedule and schedule of Shop Drawing and Sample submittals.

b. Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.

c. Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, damage to property by fire or other causes, or the discovery of any Hazardous Environmental Condition.

11. *Payment Requests:* Review Applications for Payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the schedule of values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.

12. *Certificates, Operation and Maintenance Manuals:* During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Specifications to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.

13. *Completion*:

a. Participate in a Substantial Completion inspection, assist in the determination of Substantial Completion and the preparation of lists of items to be completed or corrected.

b. Participate in a final inspection in the company of Engineer, Owner, and Contractor and prepare a final list of items to be completed and deficiencies to be remedied.

c. Observe whether all items on the final list have been completed or corrected and make recommendations to Engineer concerning acceptance and issuance of the Notice of Acceptability of the Work.

C. The RPR shall not:

1. **Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).**

2. **Exceed limitations of Engineer's authority as set forth in the Contract Documents.**

3. **Undertake any of the responsibilities of Contractor, Subcontractors, Suppliers, or Contractor's superintendent.**

4. **Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of Contractor's work unless such advice or directions are specifically required by the Contract Documents.**

5. **Advise on, issue directions regarding, or assume control over safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.**

6. **Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.**

7. **Accept Shop Drawing or Sample submittals from anyone other than Contractor.**

8. **Authorize Owner to occupy the Project in whole or in part.**

SC-11.03 *Unit Price Work*

SC-11.03.D Delete Paragraph 11.03.D in its entirety and insert the following in its place:

1304. The unit price of an item of Unit Price Work shall be subject to reevaluation and adjustment under the following conditions:

1. **if the Bid price of a particular item of Unit Price Work amounts to <u>10</u> percent or more of the Contract Price and the variation in the quantity of that particular item of Unit Price Work performed by Contractor differs by more than <u>25</u> percent from the estimated quantity of such item indicated in the Agreement; and**

2. **if there is no corresponding adjustment with respect to any other item of Work; and**

3. **if Contractor believes that Contractor has incurred additional expense as a result thereof or if Owner believes that the quantity variation entitles Owner to an adjustment in the unit price, either Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Article 10 if the parties are unable to agree as to the effect of any such variations in the quantity of Unit Price Work performed.**

SPECIAL PROVISIONS

CITY OF SEWARD (2025)
WORTHMAN BOULEVARD WATERMAIN
PHASE II
SCHEMMER PROJECT NO. 09336.001-B

SCHEMMER

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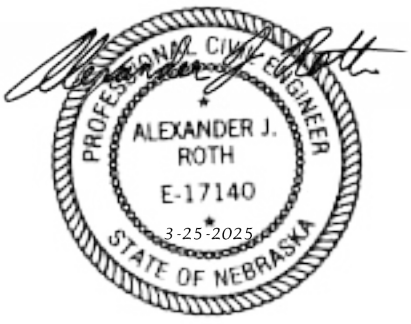

MARCH 2025

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GENERAL CONTRACT REQUIREMENTS

This project utilizes Community Development Block Grant (CDBG) funding, which includes Federal Labor Standards Provisions and Build America, Buy America (BABA) Requirements. The Contractor is required to follow all conditions set forth in the Bid Package Requirements.

This project will utilize Nebraska Department of Transportation Standard Plans and Specifications.

All watermain related construction will utilize the 2023 City of Lincoln Standard Specifications for Municipal Construction and 2023 Lincoln Standard Plans (LSP).

These Special Provisions amend or supplement the Nebraska Department of Transportation Standard Specifications for Highway Construction, 2017 Edition, and other provisions of the Contract Documents as indicated herein. All provisions that are not so amended or supplemented via these special provisions remain in full force and effect.

The Contractor shall not take advantage of any apparent error, discrepancy or omission in the plan, specifications or geotechnical reports. Upon discovery of such an error, discrepancy or omission, the Contractor shall notify the City's representative immediately. The City's Representative will then make such corrections or interpretations as necessary to fulfill the intent of the plans and specifications. Materials or work described in words which, so applied, have known technical or trade meaning shall be held to refer to such recognized standards.

Figured dimensions on the plans shall be taken as correct but shall be checked by the Contractor before starting construction. Any errors, omissions, or discrepancies shall be brought to the attention of the City's Representative and the City's Representative's decision thereon shall be final. Correction of errors or omissions on the drawings or specifications may be made by the City's Representative when such correction is necessary for the proper execution of the work.

LIMITATIONS OF THE WORK

The Contractor will not be permitted to use pavement along existing Worthman Boulevard or Pine Street for construction purposes and for the storage of materials and equipment. Side streets are allowed to be closed where immediate work is taking place. The location and extent of the areas so used shall be designated by the Owner. The Owner shall approve all materials to be stored on site prior to their delivery. No materials or equipment may be placed upon the property of the Owner until the Owner has agreed to the location contemplated by the Contractor to be used for storage.

It shall be understood that the responsibility for protection and safekeeping of equipment and materials on or near the site shall be entirely that of the Contractor and that no claims shall be made against the Owner by reason of any act of an employee or trespasser. It shall be further understood that should any occasion arise necessitating access to the sites occupied by these stored materials and equipment, the Contractor owning or responsible for the stored materials or equipment shall immediately move same.

The Contractor shall be solely responsible for obtaining and shall pay all costs in connection

with any additional work area, storage site, access to the site, or temporary right-of-way which may be required for proper completion of the work.

All prospective bidders shall visit the site to familiarize themselves with the existing site conditions, access locations, site constraints, existing site drainage, existing utilities and other construction currently underway or planned within the project area. In addition, the selected Contractor shall be required to verify the location, elevations and flowlines of existing utilities that may be in conflict with the proposed work or that will need to connect to the new work prior to start of construction. This may require the Contractor to pothole existing utilities in advance of the start of work to verify flowlines at outlets or connection points, location and depth of utilities, size and or material types of existing utilities. This verification work shall include but not be limited to connections to existing storm sewers, sanitary sewers and water mains. Verification of existing site conditions and utility locations shall not be paid for directly except where shown on the plans.

CONTRACT TIME

All work associated with this project shall be substantially complete by August 1st, 2025 with an anticipated notice to proceed of May 21st, 2025. Once construction begins, the Contractor shall have no more than 56 calendar days to complete all work associated with the project. Suspension of calendar days may be requested by the Contractor to be approved by the City.

Failure to meet the substantial completion date of the overall project shall result in liquidated damages of $500 per calendar day beyond the specified calendar days allowed.

Substantial completion shall be defined as all new watermain in service. Final completion of all work shall be completed by September 1st, 2025. Determination of Substantial Completion and Final Completion shall be subject to the City's Representative's approval.

SPECIAL PROSECUTION AND PROGRESS

The following prosecution and progress of work shall be used in developing the baseline schedule for the project. The contractor will be required to submit a schedule of construction tasks that identify an order of completion based on the complete dates identified for this construction project.

General

All work shall be confined within the limits of the existing right-of-way or easements unless the Contractor has obtained separate rights from an adjacent property owner. The Contractor shall provide to the City's Representative written copies of any agreements for separate property rights that are obtained.

CONSTRUCTION STAKING

Construction staking shall be done by the Engineer at the Owners cost. The Engineer will furnish and set construction stakes or benchmarks establishing lines and grades and will furnish the Contractor with all necessary information relating to them. The Contractor shall be responsible for the preservation of all stakes and marks. The cost of replacing any stakes or marks destroyed or disturbed by the Contractor shall be charged against, and deducted from, the payment for the work.

The Contractor shall provide one week's notice for stakes when moving onto the work and 48 hours notice for any additional staking needs.

Any errors or apparent discrepancies found in previous surveys, plans, specifications, or special provisions shall immediately be called to the attention of the Engineer by the Contractor for correction or interpretation before proceeding with the work.

STATUS OF PERMITS

The City of Seward is in the process of obtaining a Construction Permit for Public Water Systems through the Nebraska Department of Environment and Energy (NDEE).

A National Pollutant Discharge Elimination System (NPDES) permit will be required for this project. As outlined in the general conditions of the Construction Storm Water Notice of Intent, the project SWPPP shall be located on site and be accessible by the public at all times during construction. The SWPPP shall be placed at a location agreed upon by the Contractor and Engineer.

The Contractor shall understand the terms and conditions of the general NPDES permit that authorizes the storm water discharges associated with industrial activity from the construction site. Additionally, the Contractor, as evidenced by their signature on this project proposal, agrees and understands that, if awarded the contract on this project, he/she:

1. Becomes a co-permittee, along with the owner(s), to the Nebraska Department of Environmental Quality NPDES General Permit for Storm Water Discharges from construction sites on the project;

2. Is legally bound to comply with the Clean Water Act to ensure compliance with the terms and conditions of the storm water pollution prevention plan developed under the NPDES permit and the terms of the NPDES permit; and

3. Will hold the owners harmless for damages or fines arising as a result of noncompliance with the terms of the storm water permits and authorizations associated with the work on this project.

Unless otherwise indicated, all vegetative and structural erosion and sediment control practices and stormwater management practices will be constructed and maintained according to the minimum standards and specifications of Chapter 2 of the Nebraska Department of Transportation Drainage Design and Erosion Control Manual.

Following soil disturbance, permanent or temporary stabilization shall be completed within seven (7) calendar days to the surface of all perimeter sediment controls, topsoil stockpiles, and any other disturbed or graded areas on the project site which are not being used for material storage, or on which actual earth moving activities are being performed.

If existing BMPs need to be modified or additional BMPs are necessary for any reason, implementation must be completed before the next storm event whenever practicable. If implementation before the next storm is impracticable, the situation must be documented and the alternative BMPs must be implemented as soon as possible.

Permanent Stabilization: Disturbed areas that will not be hard surfaced will be sodded with grasses.

Stormwater Runoff and Management: Runoff from the roadway will be routed through the proposed underground enclosed storm sewer system. The storm sewer system will be designed to accommodate the runoff and discharge the peak flows without creating increased erosion.

Spill and Mitigation Plan: Spills of hazardous materials shall be contained and cleaned up immediately. Any contaminated soils or materials shall be removed and treated or disposed of (as appropriate) in accordance with NDEQ and EPA guidelines. Spills large enough to reach the storm sewer system will be reported to the National Response Center at 1-800-424-8802.

Northern Long-eared Bat

This project is within the range of the state and federally listed threatened northern long-eared bat (Myotis septentrionalis). The following conservation measures must be implemented in order to avoid adverse impacts on northern long-eared bat. No removal of suitable trees or removal of roosting structures between May 15 and July 31.

Western Prairie Fringed Orchid

This project is within the range of the state and federally listed threatened western prairie fringed orchid (Platanthera praeclara). The following conservation measures must be implemented in order to avoid adverse impacts. Survey according to protocol required during flowering period (June 15 – July 15) prior to ground disturbing activities or herbicide application. If species not found during the survey, work may proceed. Knife in outside of April 15 – October 1 growing season or have a blooming presence survey completed.

Migratory Bird Treaty Act

Clearing and grubbing of any identified trees will be allowed prior to the primary nesting season and prior to the issuance of the project Notice to Proceed when requested in writing by the Contractor. The primary nesting season in Nebraska has been determined to generally occur between April 1 and September 1. These nesting dates are a guide only, nesting can occur outside of those dates. Work outside of those dates is not exempt from compliance with the Migratory Bird Treaty Act.

The Contractor shall, to the extent possible, schedule clearing and grubbing activities to occur outside the primary nesting season in Nebraska if possible. However, if circumstances dictate that project construction or demolition must be done when nesting migratory birds may be present, a survey of the number of active nests and species of birds shall be conducted by a qualified bird surveyor provided by the Owner and a representative of the Contractor. If the survey finds that nests will be impacted by the proposed construction, delays may occur requiring adjustment of the phasing, project schedule, or daily production to comply with the Migratory Bird Treaty Act and meet the desired completion date.

If an active nest is found during the survey, the Contractor should do everything possible to restructure his activities and leave the nest undisturbed until the young fledge. Fledging could occur within a week, or up to a month, after the survey depending on the species of bird and whether the nest contained eggs or young. Also depending on the species of bird and their sensitivity to disturbance, a buffer of up to 30 feet surrounding the tree with the active nest could be required. If construction operations result in unavoidable conflict with nesting migratory bird's eggs or young, which will result in "taking" nests and their contents, the Contractor should notify the Engineer as soon as practicable. If construction cannot be rescheduled to allow the birds to fledge, and it is determined as an unavoidable "take" circumstance, the Contractor shall stop all work within 30 feet of the active nest and coordinate with the Engineer to determine how to proceed. The Engineer will facilitate coordination with the US Fish and Wildlife Service to determine the appropriate way to address the active nest. No work shall occur within 30 feet of the active nest until US Fish and Wildlife Service coordination is complete and the requirements of the Migratory Bird Treaty Act are satisfied.

Once a bird survey is conducted, it is the Contractor’s responsibility to use any legal and practical method to prevent the nesting of birds in order to prevent the need for additional surveys. The Contractor shall schedule his/her work to accommodate the process of conducting a survey(s) and remove cleared trees as soon as practicable. It is understood and agreed that the Contractor has considered in the bid all of the pertinent requirements concerning migratory birds (including endangered species) and that no additional compensation, other than time extensions if warranted, will be allowed for any delays or inconvenience resulting in these requirements.

TRAFFIC CONTROL

Prior to construction, the Contractor shall submit a traffic control plan and construction schedule for road closure to the City Engineer for approval. The Contractor shall provide any project status changes or updated information to the Engineer on a daily basis.

Total road closures to through traffic will be allowed on Walker Road during the period of

construction. The Contractor will need to provide access to local traffic during construction. The Contractor will also need to identify a location to store materials and equipment during construction hours.

All temporary traffic control items required for the project shall be supplied, installed and removed per NDOT Standard Specifications for Highway Construction. "TRAFFIC CONTROL" shall be paid for at the contract unit price bid per lump sum. The Contractor shall be responsible for determining the Traffic Control needs for the project, including all devices and personnel, and to develop the bid amount accordingly. This payment includes the set-up, maintenance, removal, and any traffic control devices required.

STATUS OF EASEMENT

No additional land rights have been acquired for this project.

STATUS OF UTILITIES

Utility facilities, aerial and/or underground exist within this project. The Contractor shall avoid damaging any utility(s). Any such damage caused by Contractor, Contractor's employees, sub-contractors, suppliers or agents will be the responsibility of Contractor to repair at Contractor's expense. No additional compensation will be allowed for protecting utility(s) or for repair of any damage caused by Contractor, Contractor's employees, subcontractors, suppliers or agents. Contractor shall coordinate utility relocation or reconstruction with the appropriate utility company. Any relocation work necessary will be concurrent with construction.

CITY OF SEWARD UTILITIES

The City of Seward has existing power, water mains, sanitary sewers, and storm sewers within the limits of the project. Impacts to these utilities are not anticipated outside of improvements outlined within the plans. All work within this area which may impact public water, sewer, or power facilities will require coordination with the City of Seward Engineer and the City's Representative to minimize impact to daily activities.

The Contractor shall notify the City of any unforeseen conflicts with power lines. The City of Seward shall be responsible for any relocation and/or structural support of power lines.

The point of contact for the City of Seward is:
City of Seward Engineer
Contact: Michael Oneby, P.E.
Phone: (402) 643-4000

PRIVATE UTILITIES

Black Hills Energy has gas lines along Walker Road which crosses a new water main pipe shown in the plans. The Contractor is required to notify Black Hills Energy when construction staking has been scheduled.

The point of contact for Black Hills Energy is:
Contact: Kris McCoy (Utility Construction Planner)
Phone: (402) 858-3571

Allo Communications has communications lines in the project area. The Contractor is required to notify Allo Communications when construction staking has been scheduled.

The point of contact for Allo Communications is:
Contact: Riley Weideman
Phone: (402) 418-2446

SEPARATION OF WATER MAIN AND SEWERS

See attached Water Main and Sanitary/Storm Separations (2023) guidance from NDEE.

WATERMAIN TESTING AND DISINFECTION

Piping Tests: Conduct piping tests after thrust blocks have hardened sufficiently. Fill pipeline 24 hours before testing and apply test pressure to stabilize system. Use only potable water.

Hydrostatic Tests: Test at not less than 1-1/2 times working pressure for 2 hours, per Section 10 AWWA C605.

Disinfection: All new main and connections to existing main shall be disinfected in accordance with AWWA C651-14. Following chlorination the main shall be flushed within 24 hours. Provisions shall be made to prevent contamination of existing mains by cross-connection during pressure testing, disinfection or flushing of new mains.

City of Seward will take all samples and perform all bacteriological testing for the project. The City will pay testing cost for up to two sets of tests for each segment tested. Contractor will reimburse the City for all costs in excess of two failed tests, for each segment.

All other testing and sampling, flushing and or reflushing testing and sampling shall be at the Contractor's expense and will be considered subsidiary to items for which direct payment is made.

GENERAL CLEARING AND GRUBBING

The work area consists of grasses, shrubs and pavement. With this in mind, clearing and grubbing of vegetation within the project area may be required. The Contractor will not be allowed to dispose of trees, stumps, logs, down timber, shrubs, brush, weeds, or other herbaceous material resulting from clearing and grubbing operations on the Project Right-of-Way.

CONTAMINATED SOIL REMOVAL

During the execution of the work on this project the Contractor may encounter contaminated soils, debris or groundwater (media). If contaminated media is encountered the Contractor shall immediately cease excavation operations and contact the City's Representative. If it is determined by the City's Representative that the contaminated soils cannot be used on-site (e.g. as backfill for the utility trenches), the Contractor shall be required to dispose of any contaminated media in accordance with all federal, state and local laws.

In the event the Contractor or on-site construction management personnel suspect that contaminated media is encountered or will be during the performance of the work, they shall immediately notify the City's Representative and follow their direction for resolution on how to manage the contaminated media. Typical indications of potentially contaminated media include discoloration and/or odors associated with the media removed as part of boring, trenching or other excavation work.

During the course of the project the Contractor shall not haul any excavated material that is suspected to be contaminated off-site without the prior approval of the City's Representative. As such, the Contractor shall provide locations on-site to temporarily stockpile all excavated material that may be suspected to contain contaminated soils. All temporary stockpiles of contaminated soils shall be kept separate from clean soils and shall comply with the requirements set forth in the Construction Storm Water Pollution Prevention Plan (SWPPP) (if required). The City's Representative will determine the appropriate method for disposal of the excavated material if it is determined to be contaminated and make a recommendation to the Contractor. Work associated with removal and disposal of contaminated material will be considered on an 'Extra Work' basis.

EROSION CONTROL, CLASS 1A

Section 810 of the Standard Specifications shall be amended to include the following:

A. The work included in this item shall consist of providing an accepted uniform stand of perennial turf grasses by fine grading and furnishing and placing fertilizer, seed, and mulch on all areas to be treated as shown on the plans. This shall include, but not be limited to: disking, harrowing, leveling/fine grading, planting, fertilizing, mulching, establishment, and maintenance till acceptance.

PART 1 SUBMITTALS:

A. The Contractor shall submit the following samples, certifications, or test results prior to use on the project:

a) Fertilizer - Form for Affidavit (on official stationery of supplier) certifying compliance with State and Federal regulations and standards of the Association of Official Agricultural Chemists.

b) Seed - Form for Affidavit (on official stationery of supplier) certifying compliance with State and Federal regulations and testing provisions of the Association of Official Seed Analysts for each shipment of seed for this project.

c) Sample and product information on erosion control blankets and hold down pins.

d) Sample and product information on hydromulch.

e) All original seed tags for all bags (and partial bags) of seeds used on the project shall be submitted to the Engineer.

f) Soil test identifying the lawn and garden package values before the seed bed preparation process has been started. Soil report is to include the cation exchange capacity (CEC), levels of phosphorus, potassium, calcium, magnesium and other nutrients, soil PH and soil buffer PH and suggested pounds per Acre recommendations to achieve a prepared soil for seeding on bare ground.

g) Typical desired nutrient levels for the area are; Organic matter 3%, PH 6-7.2, Phosphorus 25-30ppm, Potassium 150-200 ppm.

PART 2 - PRODUCTS

2.01 GENERAL:

All materials furnished in accordance with the requirements of this specification shall be delivered, where applicable, in sealed, unbroken packages bearing the brand and maker's name, and shall be stored on platforms and be properly covered to protect them from the weather and damage.

2.02 FERTILIZER/NUTRIENTS:

Commercial composite fertilizer or nutrients, uniform in composition, dry and free flowing. It shall bear the manufacturer's guaranteed statement of analysis which shall be as designated in the soils report for original fertilization/nutrient modification to the insitu soils. Any fertilizer/nutrients which becomes caked or otherwise damaged, rendering it unsuitable for use, will not be accepted.

2.03 SEED:

A. Acceptable Seed Mixtures (Nebraska Region B)

Seed Mixtures for Nebraska Region B

Loess & Glacial Drift (see the map on page 24)

Rural Highway Shoulder Mixture

Species	Minimum Purity (percent)	Lbs. of PLS/acre
Perennial ryegrass – Linn, Amazon, Norlea	85	15
Western wheatgrass – Barton	85	3.5
Slender wheatgrass	85	12
Kentucky fescue	85	15
Red fescue (Festuca rubra)	85	6
Buffalograss – Cody, Bison, Sundancer, Texoka	80	3.5
Fults alkali grass (Puccinellia distans)	85	2
Sideoats grama – Butte, El Reno, Trailway	75	4
Sand dropseed (Sporobolus cryptandrus)	90	0.5
Oats/Wheat (wheat in the fall)	90	16

Or Approved Equivalent.

2.04 WATER: Potable.

Verify that prepared soil base is ready to receive work of this Section. Fill all depressions and rivulets with topsoil to establish a smooth grade. Beginning of installation means acceptance of existing site conditions.

2.05 PREPARATION OF TOPSOIL:

A. Conditioned soil:

1. The Contractor shall be responsible for determining the availability of organic soil additive material prior to bidding the project. If there is not sufficient supply of organic soil additive material, the Contractor shall condition the soil by nutrients and fertilizer per the requirements of this specification

2. 2 inches of organic soil additive shall be incorporated into the topsoil as described above.
3. The Contractor shall notify the Engineer five (5) days prior to the start of amended soil activities.
4. Once the Contractor is allowed to use manufactured organic soil, the Contractor shall notify the Engineer five (5) days in advance to schedule pick up of the manufactured organic soil material.
5. The Contractor shall place the conditioned soil in accordance with the Contract Documents.

6. Conditioned soil may be accomplished by mixing the organic soil additive with a stockpile of topsoil material then placing, or by spreading the organic soil additive over replaced topsoil and mixing together in place.
7. Organic soil additive may be spread over undisturbed native soil to a depth of two (2) inches and incorporated into the native soil to a total depth of six (6) inches.
8. Fertilizer shall not be added when using manufactured organic soil.

B. Soil conditioning by nutrients/fertilizer, only if compost is not available.
   1. Apply if needed according to recommendations from a soil test
   2. Apply 19-19-19 or equivalent nutrients fertilizer at the rate of 450 lbs/AC as a minimum.
   3. Incorporate recommended nutrients/fertilizer into the top 4-6 inches of the soil by discing or other means.

C. Seedbed preparation
   1. Harrow, disk or rake the topsoil to a depth of three (3") on slopes flatter than 3:1 and one to three (1-3") inches for slopes steeper than 3:1 in a minimum of two directions.
   2. When an area is compacted, crusted or hardened, the soil surface shall be loosened by discing, raking, or harrowing.
   3. Seed bed preparation should not be undertaken when excessively wet conditions exist.
   4. Remove all debris and stones having any dimension greater than one inch.
   5. Rake finish surface smooth

2.06 RATE OF APPLICATION:

A. Initial Fertilizing: Application rate shall be obtained from the required soils report.
B. General Lawn Seed: 12 pounds per 1,000 SF.
C. Refertilizing: As required by the engineer if the establishment is not as required to complete the seeding.

2.07 SEEDING:

A. Drill seed or sow (broadcast) grass seed, applying half the quantity in one direction, and the remaining quantity at right angles to it.
B. Do not sow seed on a windy day, or when the ground is frozen, wet or otherwise non-tillable.
C. Cover seed with a thin layer of topsoil by raking or dragging.

D. Cover newly seeded area with hydromulch or erosion control blankets. Hydromulch or erosion control blankets shall be applied within twenty four (24) hours after planting seed.
E. Install erosion control blankets where shown on the Drawing(s) and as per manufacturer's instructions. Hold down pins shall be installed two (2) pins per square yard.

2.08 SEEDING SEASON:

A. The suggested calendar dates for seeding are:

Spring:	March 15 to June 1.
Fall:	August 15 to October 1.

B. All disturbed soil areas shall be treated during the seeding season.

C. Areas at final grade: Permanent seeding will be accomplished

2.09 MAINTENANCE:

A. To achieve better germination of seed, the Contractor may water the seeded areas in order to maintain a moist seed bed at all times. If the Contractor chooses to water the seeded areas, water should be applied so that the topsoil is wet to a depth of two inches. Apply one complete coverage to the seeded area in an eight-hour period.

B. Protect the seed bed with barricades, if necessary, to keep all traffic off the area.

C. After the seed mixture has germinated, reseed all areas which have failed to show a uniform stand of germinated seed.

D. Maintain all seeded areas until acceptance. Suggested maintenance items shall include, but not be limited to any or all of the following, whichever are necessary:

1. Regrading.
2. Refertilizing.
3. Reseeding.
4. Re-Hydromulching or repositioning or replacing erosion control blankets.
5. Watering.
6. Weeding.
7. Rolling.
8. Filling in eroded areas.

2.10 INSPECTION AND ACCEPTANCE OF SEEDED AREAS:

A. Submit written notice requesting inspection by the Engineer at least ten days prior to the anticipated date.

B. No seeded areas will be inspected for acceptance prior to sixty (60) days from date of seeding.

D. A satisfactory stand of grass which is acceptable is defined as consisting of a uniform stand of at least eighty-five percent (85%) established permanent grass species. An acceptable stand of grass will be determined by the Engineer.

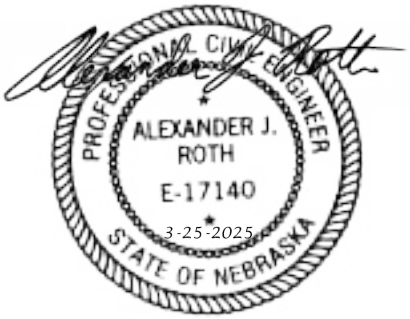
E. Appropriate materials to be furnished and installed by the contractor for Erosion Control Class 1A can be obtained from the NDOT approved products list.

F. Other items required to be furnished and installed before payment are; testing, soil conditioning with fertilization/nutrients, conditioned soil, seed bed preparation, and seeding will all be incidental to the direct pay items for erosion control

1. Soil Test required by this special provision are subsidiary.
2. Conditioned soil added to the area to be seeded shall not be paid for directly but will have to be completed in accordance with this special provision. The cost for the Contractor to provide, haul, and mix the organic soil additive shall be considered incidental to items for which the Contract provides direct payment
3. Fertilizer/ Nutrients added to the area to be seeded shall not be paid for directly but will have to be completed in accordance with the soils report.

APPENDIX A – CITY OF LINCOLN, NEBRASKA STANDARD SPECIFICATIONS

CHAPTER 20 – CONSTRUCTION FOR UTILITIES AND STRUCTURES
CHAPTER 23 – WATER MAINS
WATER MAIN AND SANITARY/STORM SEPARATIONS (2023) GUIDANCE FROM NDEE.



NEBRASKA
Good Life. Great Resources.
DEPT. OF ENVIRONMENT AND ENERGY

Jim Pillen. Governor

3/21/2025

Michael Oneby
City of Seward, Nebraska
142 N. 7th Street
Seward, NE 68434

RE: PERMIT TRACKING NUMBER: CSW-202509449
Issuance of storm water discharge authorization for the Seward - Worthman Boulevard Phase II Watermain construction project located at Seward Rail Campus in Seward, NE.

Dear Michael Oneby:

This is to acknowledge receipt of the CSW-NOI form on 3/21/2025, for the project referenced above. This project has authorization to discharge storm water under the terms and conditions of NPDES General Permit NER210000. Please review the entire permit to ensure compliance.

When final stabilization (Part I.C.5.d of the permit) has been completed, login and access the storm water portal to submit Notice of Termination form.

Local jurisdiction requirements may apply.

For Lincoln, contact the City of Lincoln Watershed Management Division via email at NPDES@lincoln.ne.gov; by phone at (402) 309-5936, or go to lincoln.ne.gov and reference keyword "NOI".
For Omaha, contact James Kee at (402) 444-3915 for grading permit requirements.

Portal can be located at: NDEE Website

If you have any questions concerning this NPDES storm water discharge authorization, please contact our office at (402) 471-8330.

Sincerely,

Billy Wesley, Environmental Specialist
NPDES and State Permits Section
Nebraska Department of Environment and Energy

Department of Environment and Energy
P.O. Box 98922
Lincoln, Nebraska 68509-8922

OFFICE 402-471-2186 FAX 402-471-2909
ndee.moreinfo@nebraska.gov

CITY OF LINCOLN, NEBRASKA, STANDARD SPECIFICATIONS

CHAPTER 20

CONSTRUCTION FOR UTILITIES AND STRUCTURES

CITY OF LINCOLN, NEBRASKA, STANDARD SPECIFICATIONS

CHAPTER 20

CONSTRUCTION FOR UTILITIES AND STRUCTURES

CHAPTER 20

CONSTRUCTION FOR UTILITIES AND STRUCTURES

20.00 GENERAL

Construction for utilities and structures shall include the excavation and backfill of all materials necessary to complete the Work in conformance with the plans and these Standard Specifications; all necessary sheeting, shoring and bracing; and any pumping that may be necessary to keep the trench free from water. Construction for utilities and structures shall also include the removal and replacement of pavement, driveways and sidewalks; disposal of surplus materials, borrow, maintenance and protection of excavation, and the restoration of all surfaces to a satisfactory condition.

These Standard Specifications shall apply to all utility and structure work regardless of the type of Work being performed.

20.01 MATERIALS

The following materials are approved for use in the City of Lincoln pursuant to the Standard Specifications described herein. Alternate materials maybe requested in writing to the Director of Public Works and Utilities.

A. SMOOTH STEEL PIPE CASING

Smooth steel pipe used for encasement shall be of the diameter, length, and wall thickness shown on the Plans. The encasement shall be new welded steel pipe conforming to ASTM Designation A 139, Grade B. All joints shall be welded.

B. CORRUGATED METAL PIPE

Corrugated metal pipe used for encasement shall be copper steel galvanized and shall conform to the requirements of AASHTO “Standard Specifications for Corrugated Metal Culvert Pipe”, Designation M-36, and shall be of the diameter, length and gauge as shown on the Plans.

C. FOUNDATION

Foundation material shall conform to the requirements of ASTM “Standard Specifications for Concrete Aggregates”, Designation C-33. The gradation for foundation material shall be size Number 357 (2" to #4).

D. BEDDING

For Lincoln Water System and Lincoln Wastewater System projects, bedding material shall be a well graded “crusher run” crushed rock with a percent passing gradation range of 1" - 100, #4 - 20 to 60, #10 - 0 to 30 and #200 - 0 to 10, unless otherwise designated on the plans or Special Provisions or approved by the City’s Project Manager.

For Lincoln Watershed Management projects, limestone rock and crushed concrete will also be permitted, provided that the gradation range requirements listed above are satisfied.

20.01 MATERIALS (Continued)

E. GROUT

The grout shall be mixed in the volumetric proportions of 2 parts Portland cement, 1 part fly ash, and not to exceed 6 parts sand. Enough water shall be used to produce a pumpable grout.

F. FLOWABLE FILL

Flowable fill material shall meet the requirements of Chapter 3 of these Standard Specifications.

20.02 EARTHWORK

A. CLEARING AND GRUBBING

Clearing and grubbing shall be accomplished as provided in Chapter 2 of these Standard Specifications.

B. TREE REMOVAL

The removal of trees and stumps shall be accomplished as provided in Chapter 2 of these Standard Specifications.

C. EXCAVATION

In general, all excavation shall be made by open cut from the surface of the ground and at the width and to the depth necessary for the proper construction of the utility and its appurtenances, according to the plans and these Standard Specifications. The Work shall be performed in conformance with Occupational Safety and Health requirements. Nothing contained in these Standard Specifications or Contract Documents shall relieve the Contractor from complying with any Local, State, or Federal safety requirements. The Work shall be performed within the limits of construction as shown on the plans. All necessary precautions must be made to prevent slides and cave-ins. Bracing or sheeting, shall be provided to maintain the sides and bottom of the trench in unstable material.

The excavated material shall be handled in such a manner as to cause a minimum of inconvenience to public travel and to permit safe and convenient access to public and private property along the line of Work. If a utility excavation is to remain open overnight in the built environment, all material (spoil) excavated, shall be properly covered and protected. If the excavation is to remain open for more than five (5) business days, all excavated material shall be removed from the job site. If excavating and backfilling on the same day, all unsuitable material (spoil) shall not be used for backfill. It shall be the Contractor's responsibility to secure the necessary permission and make all necessary arrangements for all required storage, borrow, and disposal sites.

Access shall be provided at all times to fire hydrants and water valves in the vicinity of the Work and firefighting equipment shall have access to any structure at all times. Trenches shall not be opened more than 100' in advance of the installed utility or as directed by the City's Project Manager. All trenches shall be backfilled as soon as practical after the pipe is in place, or as ordered by the City's Project Manager. Unless otherwise specified or authorized by the City's Project Manager, all excavated material shall be placed on the street side of the trench.

C. EXCAVATION (Continued)

Holes for pipe bells shall be provided at each joint, but shall be no larger than necessary for joint assembly and assurance that the pipe barrel will lie flat on the trench bottom. Other than the bell holes, the trench bottom shall be true and even in order to provide support for the full length of the pipe barrel.

Excavation below subgrade with subsequent refilling with loose earth will not be permitted. Should the Contractor inadvertently excavate below subgrade, such over excavation shall be filled and brought up to grade with compacted soil, crushed rock, or sand or gravel as approved by the City's Project Manager.

The width of the utility trench at the top of the pipe shall be no greater than the width specified in the standard bedding details. Excessive trench width may be cause for providing a higher class bedding at no cost to the City. The width of excavation for utility lines 6" or greater in diameter shall be a minimum of 3'. In no case shall the excavation be less than 2' greater than the outside diameter of the pipe or the outside dimensions of the structure to be built. The bottom of all excavations shall be finished to the true profile grade, of full width, and cleared of any rocks, clods, roots, or other material that may interfere with properly placing the pipe or structure.

No measurement or direct payment will be made for any excavation required as part of the Work. The costs of excavation will be considered subsidiary to other items for which direct payment is made.

D. BACKFILL

Backfilling and compaction of excavations shall follow as closely after the construction as possible. All excavations shall be backfilled with approved material up to the original surface of the ground unless otherwise indicated on the plan. No backfill shall be made with material containing stone, large clods, frozen earth or debris of any kind. The backfill shall be placed in loose lifts not to exceed the thickness required to attain 12" thick compacted layers or as noted in a geotechnical report signed and sealed by an Engineer registered in the State of Nebraska.

Backfilling shall not be done in freezing weather, except by permission of the City's Project Manager, nor shall any fill be made where the material already in the trench is frozen. If construction proceeds at any time when frozen material is encountered and frozen material is placed in the trench line, all such trenches shall be re-compacted in the spring after frost conditions are no longer present in the ground. This re-compaction of the trench shall include the removal of all material to a depth of 12" below the depth of the frozen material and the replacement and re-compaction of the trench to the proper grade with suitable material.

Care shall be exercised in backfilling so as not to damage any finished Work. The backfill shall be brought up evenly on both sides of the utility or structure.

Backfilling against any concrete structure shall not be started until test specimens of the concrete develop a compressive strength of at least 2000psi.

Unless otherwise directed by the City's Project Manager, compaction of backfill within 3' of all structures and utility appurtenances, including but not limited to, valves, hydrants, manholes, and inlets, shall be accomplished by mechanical compaction using hand operated tampers, rammers, or other approved devices for the soil type(s) encountered.

D. BACKFILL (Continued)

Jetting or hydro-flushing of the backfill shall not be permitted. Care shall be taken to ensure that the utility is properly bedded with material of an approved density or in conformance with these Standard Specifications. The initial 12" of backfill above the top of the pipe shall be carefully placed to protect the pipe bedding from further backfilling operations.

Backfill shall be mechanically compacted to a minimum density of 96% of the maximum dry density of the material as determined by AASHTO Method T-99. The moisture content of the soils shall be between 2% below and 4% above the optimum moisture content as determined by the above test.

When the moisture content of the material is too low to obtain specified density, sufficient water shall be added to the material and/or lift thickness shall be decreased before compaction.

After backfilling, the Work area shall be kept maintained in a smooth and well drained condition.

E. BASIS OF PAYMENT

No measurement or direct payment will be made for any backfilling or compaction required as a part of this Work. The costs of backfilling and compaction will be considered subsidiary to other items for which direct payment is made. When directed by the City's Project Manager, additional water shall be mixed in with backfill materials to allow compaction to be completed. Such water quantities shall be paid as an "EXTRA WORK" item. Lincoln Water System hydrant meter readings immediately before/after the addition of water shall establish the volume of water used.

F. MAINTENANCE AND PROTECTION OF EXCAVATIONS

Temporary support, adequate protection and maintenance of all underground and surface utilities, structures, drains, sewers, and other obstructions encountered in the progress of the Work shall be furnished by the Contractor at Contractor's own expense. Contractor shall take all reasonable precautions to prevent movement of the sides of such excavations. The Contractor shall protect all excavations from surface water by the construction of adequate dikes. The Contractor shall furnish and put in place such sheeting and bracing as may be required to support the sides of the excavations and the Contractor shall remove such sheeting and bracing as the trenches or excavations are filled. The City's Project Manager may order the sheeting be left in place if, in the City's Project Manager's opinion, the utility or structure might be damaged by its being removed.

In lieu of sheeting and bracing, the Contractor may use a trench box of adequate design during the construction of the utility to protect the utility and all personnel.

The Contractor shall satisfy the City's Project Manager that the proposed methods of bedding and foundation material placement is in compliance with the requirements of the Standard Drawings for pipe bedding details when the trench box is moved. The Contractor shall protect the integrity of the pipe embedment zone when utilizing or moving the trench box.

F. MAINTENANCE AND PROTECTION OF EXCAVATIONS (Continued)

No measurement or direct payment shall be made for maintenance and protection of excavations, except for sheeting left in place as required above. Payment for sheeting left in place shall be made as an "EXTRA WORK" item. Such payment shall be the value of the sheeting minus the cost of removal. The cost of maintaining and protecting excavations shall be considered subsidiary to the other items for which direct payment is made.

G. DISPOSAL OF SURPLUS MATERIAL

The Contractor shall dispose of all surplus excavated material not needed for fills or other designated purposes. All material deemed unsuitable by the City's Project Manager shall be disposed of properly and replaced with approved material.

No measurement or direct payment shall be made for disposal or stock piling surplus materials. The costs of disposal or stock piling surplus materials shall be considered subsidiary to the other items for which direct payment is made.

All material deemed unsuitable by the City's Project Manager and required to be removed from the job site, as well as approved replacement material not readily available at the job site, shall be measured and paid for as an "EXTRA WORK" item.

H. SOIL EROSION CONTROL

Soil Erosion Control shall be accomplished as provided in Chapter 32 of these Standard Specifications.

20.03 UTILITY ALIGNMENT AND GRADE

Prior to excavation, investigation shall be made to the extent necessary to determine the location of underground structures and utilities. Care shall be exercised by the Contractor during excavation to avoid damage to existing structures or utilities. Where shown on the plans, or as requested by the City's Project Manager, the Contractor shall make such excavation as may be necessary to ascertain the vertical and horizontal location of existing utilities.

The utilities and structures shall be constructed and maintained to the lines and grades established by the plans and Standard Specifications. When crossing existing utilities or other structures, alignment and grade may be adjusted by the City's Project Manager to provide clearance as required or deemed necessary to maintain minimum clearance, or to prevent future damage or contamination of either utilities or structures.

20.04 GROUND WATER

The Contractor is required to follow proper dewatering (e.g. includes sediment bags or use of sediment basins) to avoid eroding the soil on the construction site. Best management practices must be followed when water is being pumped to lakes, wetlands or directly to storm sewer inlets. When selecting discharge areas from a dewatering process, the Contractor shall not permit the water to be pumped directly into slopes, if available, dewatering activities should be directed to a vegetated area such as a well-established grassed area.

The Contractor shall discontinue dewatering if the area being discharged to shows signs of instability or erosion. If utilizing channels, the Contractor must ensure they are stable and protected with grass or vegetation. The Contractor shall avoid dewatering during heavy rain conditions. The Contractor shall never discharge water that has been contaminated with oil, grease, or chemical products, as these would need to be collected and disposed of properly and legally.

The Contractor shall provide and maintain adequate equipment to remove and dispose of ground water entering the excavations, trenches, or other parts of the Work. Each excavation shall be kept dry during subgrade preparation and continually thereafter until the structure to be built, or the pipe to be installed therein, is completed to the extent that no damage from hydrostatic pressure, flotation or other cause will result.

All excavations for concrete structures or trenches which extend down to or below ground water shall be dewatered by lowering and keeping the ground water below the bottom of the pipe or as required to maintain a stable foundation.

The Contractor will be held responsible for the condition of any existing storm sewer system which may be used for drainage purposes on this contract, and all storm sewers shall be left clean and free of sediment. The Contractor shall not pump or drain any ground water or surface runoff into any part of the sanitary sewer system.

No measurement or direct payment shall be made for removal and disposal of ground water unless otherwise provided in the proposal or Special Provisions. The costs of removal and disposal of ground water shall be considered subsidiary to the other items of Work for which direct payment is made.

20.05 FOUNDATION AND BEDDING

A. GENERAL

Foundation and bedding materials shall meet the requirements of these Standard Specifications.

Foundation materials generally will be required where unstable soil conditions exist at the bottom of the trench. Foundation material shall be placed to the satisfaction of the City's Project Manager.

Bedding material shall be placed and compacted as called for on the plans. After the pipe has been properly placed to grade and line on the initial bedding course, additional bedding material shall be placed in 6" lifts and thoroughly settled by mechanical compaction in order to fill all voids below, around and above the top of the pipe as shown on the Standard Plans details for pipe bedding.

B. BASIS OF PAYMENT

Foundation material when placed in conformance with these Standard Specifications as directed by the City's Project Manager shall be paid as an "EXTRA WORK" item. Weight tickets for material installed shall be submitted prior to any payment for this "EXTRA WORK" item. This "EXTRA WORK" payment shall be full compensation for furnishing all materials, installation, labor, equipment, tools and incidentals necessary to create a stable foundation.

No measurement or direct payment shall be made for bedding material, except that all weight tickets for bedding material shall be submitted prior to any payment for pipe being installed. The cost of bedding materials, in the appropriate classes for the type of pipe material utilized, as shown on the drawings or for the structures constructed, shall be considered subsidiary to the other items of Work for which direct payment is made.

20.06 HORIZONTAL DIRECTIONAL DRILLING

A. GENERAL

Horizontal directional drilling (HDD) is a trenchless excavation method which is accomplished in three phases. The first phase consists of drilling a small diameter pilot hole along a designed directional path. The second phase consists of enlarging the pilot hole to a diameter suitable for installation of the pipe. The third phase consists of pulling the pipe into the enlarged hole. The Contractor shall furnish all labor, materials, tools, equipment, drilling fluids, and other items as necessary for a complete and functional installation as required, to the lines and grades shown on the Plans and as specified.

B. SUBMITTALS

1. Shop drawings, catalog data, and manufacturer's technical data showing complete information on material composition, physical properties, and dimensions of new pipe, fittings and drilling fluids. Include manufacturer's recommendation for handling, storage, and repair of pipe and fittings damaged.

2. The proposed phasing and schedule of the Work including location of launching and receiving pits, services affected, length of pipe effected during each phase, and proposed traffic disruptions. The phasing and schedule of the Work must be approved by the City's Project Manager prior to Work starting.

3. The proposed methods for monitoring, prevention, containment, and clean-up of drilling fluid surface returns at unauthorized locations.

4. The tabulation of pilot hole survey coordinates.

5. Written record of the installation pullback loads on the utility during the installation process.

6. Plan and profile drawings of the documented as-built location of the installed utility.

C. MATERIALS

1. Water main installed by HDD shall use Certa-Lok C900 RJ, Class 200 DR 14 pipe as manufactured by Certainteed, or approved equal. Pipe material other than Certa-Lok must be approved prior to ordering. Restrained joint pipe shall also meet all performance requirements of AWWA C900.

2. The Contractor shall at all times provide and maintain instrumentation which will accurately locate the pilot hole, measure drill string axial and torsional loads, and measure drilling fluid discharge rate and pressure. The City's Project Manager shall have access to these instruments and their readings at all times. A log of all recorded readings shall be maintained by the Contractor and will become a part of the Project Record Documents supplied by Contractor. Instrumentation systems shall be calibrated immediately prior to beginning the work.

3. The Drilling Fluid System shall be capable of mixing and delivering the drilling fluid to the drill head or the reamer in the volumes and pressures required. Contractor shall maximize recirculation of drilling fluid surface returns. Contractor shall provide solids control and fluid cleaning equipment of a configuration and capacity that can process surface returns and produce drilling fluid suitable for reuse.

4. The Drilling Fluid shall be used as required during the installation of the pilot hole, enlarging of the pilot hole, and installation of the water pipe. No drilling fluid will be accepted or utilized that does not comply with permit requirements and environmental regulations.

5. Drill Pipe (drill stem) shall be of sufficient size and strength to resist all installation loadings including tensile, compressive, bending, and torsional loads. An appropriate safety factor shall be used by the Contractor in sizing the drill pipe.

6. Drill Head configuration shall be as selected by Contractor and compatible with requirements for location system.

7. Reamer and Swivels shall be as selected by Contractor. Reamer and swivel assembly shall be capable of enlarging borehole while preventing damage due to rotation of the pipe during its pullback into its final position.

D. INSTALLATION

1. BORING OF THE PILOT HOLE

Install pilot hole using steerable drilling head. Pilot hole shall be drilled along the path shown on the Drawings to the tolerances listed herein. Listing of tolerances shall not relieve Contractor from responsibility for safe operations or damage to adjacent utilities and structures.

Monitor location of drill head as required to install pilot hole to indicated lines and grades, but in no instance shall the interval between locating the drilling head exceed 15' in length along the alignment.

Use drilling fluids as required to lubricate and support the pilot hole excavation.

Pilot hole shall be free from abrupt changes in line or grade that could result in unacceptably high loadings on the drill pipe or the water pipe during installation.

After completion of pilot hole drilling, Contractor shall provide a tabulation of coordinates, referenced to the drilled entry point, which accurately describe the location of the pilot hole. This tabulation shall be in addition to the log of recorded readings required.

2. PRE-REAMING OF THE PILOT HOLE

Subsequent to the City's Project Manager's acceptance of pilot hole, Contractor may, at his option, pre-ream the pilot hole as necessary for installation of the water pipe.

Pre-reaming operations shall be conducted at the discretion of the Contractor. Contractor shall insure that a hole sufficient to accommodate the pull section of water pipe has been produced. Any damage to the water pipe resulting from inadequate pre-reaming shall be the responsibility of the Contractor. All provisions of this Specification relating to simultaneous reaming and pulling back operations shall also pertain to pre-reaming operations.

Use drilling fluids as required to lubricate and to support the reamed pilot hole.

Use of pre-reaming shall be at the option of the Contractor; however, lack of pre-reaming shall not result in excessive installation loads on the water pipe.

3. REAMING AND PULLBACK OF THE MAIN

Contractor shall utilize a reamer to enlarge the pilot hole to sufficient size for installation of the main without imposing excessive installation loadings on the water pipe.

Grippers used on the water pipe shall not damage adjacent sections of the pipe. Sections of the pipe utilized by the grippers shall be removed from the pipe after installation.

Contractor shall handle and support the pull section of water pipe so as to prevent damage and minimize pullback forces. Pull section of water pipe shall be supported as it proceeds during pull back so that it moves freely and the pipe is not damaged.

D. INSTALLATION (Continued)

Contractor shall use drilling fluids as required to lubricate and support the reamed pilot hole, lubricate installation of the water pipe, and completely fill all overcut of the reamed pilot hole.

The pull section of water pipe shall be installed in the reamed hole in such a manner that external pressures are minimized and an appropriate counter-balancing internal pressure is maintained. Any damage to the pipe resulting from external pressure during installation shall be the responsibility of Contractor. The pipe shall be filled with water as it enters the ground to ensure that adequate internal pressure is maintained at all points to counter balance external collapse pressures. Contractor shall submit pipe filling procedure proposed for use to the City's Project Manager for review and acceptance.

Contractor shall continuously monitor the pulling loads imposed upon the water pipe. The maximum allowable tensile load imposed on the water pipe shall not exceed the recommendations of the pipe manufacturer. Contractor shall take all required measures necessary to prevent installation loads on the water pipe from exceeding those recommended by the pipe manufacturer. If necessary, Contractor shall at his own expense, stop the pullback of the water pipe, remove the section of pipe installed within the enlarged pilot hole, and pre-ream the pilot hole as required to allow installation of the water pipe without exceeding the allowable pullback forces.

After the installation, Contractor shall determine and log the installed location and depth of the water pipe. Contractor shall submit to the City's Project Manager a drawing detailing the installed location of the water pipe in both plan and profile view.

E. REJECTION

1. If the pilot hole is rejected by the City's Project Manager, the Contractor shall, at his own expense, backfill the rejected pilot hole with bentonite, and install a pilot hole acceptable to the City's Project Manager.

2. Monitoring records indicate that pullback loads exerted on pipe exceeded the loadings recommended by pipe manufacturer.

3. Installation outside of the allowable tolerances.

F. TOLERANCES

Tolerances for the pilot hole and the installed water pipe shall be as listed below.

1. For vertical tolerance, the water pipe shall be installed at the grade indicated on the plans. Minor deviations from the grade indicated on the plans may be allowed, provided that:

   a. The soil cover above the top of the water pipe shall not be less than shown on the drawings.

   b. Except at crossings under water courses, the water pipe shall maintain downward slope towards all blowoff points to provide for positive drainage of the water pipe.

   c. The water pipe shall maintain upward slope towards all venting points to provide for positive venting and air release from the water pipe.

F. TOLERANCES (Continued)

2. For horizontal tolerance, the water pipe shall be installed at the locations indicated on the plans. Minor deviations from the locations indicated on the plans may be allowed, provided that:

   a. The horizontal deviation of the water pipe from the location required on the drawings shall not exceed one (1) foot at any location along the water pipe without prior authorization of the City's Project Manager.

   b. The horizontal deviation shall not cause the water pipe to interfere with existing structures, utilities, or result in any part of the finished work being installed outside of the permanent easements.

G. CLEAN UP AND DISPOSAL OF MATERIALS

1. Contractor shall remove all construction debris and spoil material and dispose of it at an acceptable location.

2. Drilling fluid shall be removed from pits and then the pits backfilled as required.

3. Disposal of excess drilling fluids shall be the responsibility of the Contractor and shall be conducted in compliance with all environmental regulations, right-of-way and workspace agreements, and permit requirements. Disposal of drilling fluids shall not be allowed on the project site.

4. Contractor shall employ his best efforts to maintain full annular circulation of drilling fluids. Drilling fluid returns at location other than the entry and exit points shall be minimized. In the event that annular circulation is lost, Contractor shall take steps to restore circulation. If inadvertent surface returns of drilling fluids occur, they shall be immediately contained as required and collected. If the amount of the surface return is not great enough to allow practical collection, the affected area shall be diluted with fresh water and the fluid will be allowed to dry and dissipate naturally. If the amount of the surface return exceeds that which can be contained and collected using practical methods, drilling operations shall be suspended until surface return volumes can be brought under control.

H. BASIS OF PAYMENT

Directional Drilling for carrier pipes completed in conformance with these Specifications and accepted by the City's Project Manager shall be measured and paid for at the contract unit price bid per linear foot for DIRECTIONAL DRILLING FOR __" WATER MAIN, for each size and type called for in the Contract Documents. Such payment shall be full compensation for all materials, equipment, tools, labor and incidentals necessary to produce the directional drill and install the carrier pipe as required in the Contract Documents.

20.07 CONCRETE AND REINFORCING STEEL FOR STORM DRAINAGE

A. GENERAL

When called for on the plans, the Contractor shall construct reinforced concrete collars, elbows, plugs and headwalls for storm drainage at the locations indicated. The collars, elbows, plugs and headwalls shall conform to the details shown in the Lincoln Standard Plans.

B. BASIS OF PAYMENT

When called for in the proposal, concrete for storm water collars, elbows, plugs and headwalls placed in conformance to these Standard Specifications and accepted by the City's Project Manager shall be paid for at the contract unit price bid per cubic yard for CONCRETE FOR COLLARS, ELBOWS, PLUGS AND HEADWALLS, IN PLACE. The concrete shall not be measured separately for payment, but the quantities shall be established based upon the volume of concrete required for the Design Section, unless otherwise specified. Such payment shall be full compensation for all mixing, hauling, forming, placing, jointing, curing, finishing, excavation, backfill, materials, equipment, tools, labor, and incidentals necessary to complete the structure.

When called for in the proposal, payment for reinforcing steel for collars, elbows, plugs and headwalls placed in conformance with these Standard Specifications and accepted by the City's Project Manager shall be made at the contract unit price bid per pound for REINFORCING STEEL FOR COLLARS, ELBOWS, PLUGS AND HEADWALLS, IN PLACE. The reinforcing steel shall not be measured separately for payment, but the quantities shall be established based upon weight of steel required for the Design Section, unless otherwise specified. Such payment shall be full compensation for all placing, tying, chairs, materials, equipment, tools, labor, and incidentals necessary to place the steel in the proper locations in conformance with the plans.

20.08 CONCRETE AND REINFORCING STEEL FOR SANITARY SEWER

A. GENERAL

When called for on the plans, the Contractor shall construct reinforced concrete plugs and collars for sanitary sewer at the locations indicated. The plugs and collars shall conform to the details shown in the Lincoln Standard Plans.

B. BASIS OF PAYMENT

When called for in the proposal, concrete for sanitary sewer plugs and collars placed in conformance to these Standard Specifications and accepted by the City's Project Manager shall be paid for at the contract unit price bid per cubic yard for CONCRETE FOR PLUGS AND COLLARS, IN PLACE. The concrete shall not be measured separately for payment, but the quantities shall be established based upon the volume of concrete required for the Design Section, unless otherwise specified. Such payment shall be full compensation for all mixing, hauling, forming, placing, jointing, curing, finishing, excavation, backfill, materials, equipment, tools, labor, and incidentals necessary to complete the structure.

20.08 CONCRETE AND REINFORCING STEEL FOR SANITARY SEWER (Continued)

B. BASIS OF PAYMENT (Continued)

When called for in the proposal, payment for reinforcing steel for sanitary sewer plugs and collars placed in conformance with these Standard Specifications and accepted by the City's Project Manager shall be made at the contract unit price bid per pound for REINFORCING STEEL FOR PLUGS AND COLLARS, IN PLACE. The reinforcing steel shall not be measured separately for payment, but the quantities shall be established based upon weight of steel required for the Design Section, unless otherwise specified. Such payment shall be full compensation for all placing, tying, chairs, materials, equipment, tools, labor, and incidentals necessary to place the steel in the proper locations in conformance with the plans.

20.09 CONCRETE AND REINFORCING STEEL FOR WATER MAIN

A. GENERAL

When called for on the plans, the Contractor shall construct reinforced concrete thrust collars, thrust blocks, anchorages, gravity blocks, tee blocks and plug blocks for water main at the locations indicated. The thrust blocks, anchorages, tee blocks and plug blocks shall conform to the details shown in the Lincoln Standard Plans.

Concrete shall be L3500 conforming to Chapter 3 of these Standard Specifications. Reinforcing steel shall conform to "Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement" ASTM Designation A615, Grade 40 or 60, or "Standard Specification Axle-Steel Deformed and Plain Bars for Concrete Reinforcement" ASTM Designation A617, Grade 60.

B. BASIS OF PAYMENT

When called for in the proposal, concrete for water main thrust collars, thrust blocks, anchorages, gravity blocks, tee blocks and plug blocks placed in conformance to these Standard Specifications and accepted by the City's Project Manager shall be paid for at the contract unit price bid per cubic yard for CONCRETE FOR COLLARS, BLOCKS AND ANCHORAGES, IN PLACE. The concrete shall not be measured separately for payment, but the quantities shall be established based upon the volume of concrete required for the Design Section, unless otherwise specified. Such payment shall be full compensation for all mixing, hauling, forming, placing, jointing, curing, finishing, excavation, backfill, materials, equipment, tools, labor, and incidentals necessary to complete the structure.

When called for in the proposal, payment for reinforcing steel for water main thrust collars, thrust blocks, anchorages, gravity blocks, tee blocks and plug blocks placed in conformance with these Standard Specifications and accepted by the City's Project Manager shall be made at the contract unit price bid per pound for REINFORCING STEEL FOR COLLARS, BLOCKS AND ANCHORAGES, IN PLACE. The reinforcing steel shall not be measured separately for payment, but the quantities shall be established based upon weight of steel required for the Design Section, unless otherwise specified. Such payment shall be full compensation for all placing, tying, chairs, materials, equipment, tools, labor, and incidentals necessary to place the steel in the proper locations in conformance with the plans.

20.10 PAVEMENT CONSTRUCTION AND RECONSTRUCTION

Pavement reconstruction and miscellaneous masonry reconstruction shall be accomplished in conformance as described in these Standard Specifications.

20.11 FINAL CLEANUP

A. GRAVEL OR ROCK ROADWAY SURFACE

Where the Work of the Contract crosses or is parallel to any unpaved roadway and where the roadway surface is affected in any way by operations under the contract, the Contractor shall repair and restore the same to at least its original condition. Such restoration shall include, but not be limited to, regrading ditches and roadway surface, restoration of culverts and drives, and placement of rock or gravel surfacing as directed by the City's Project Manager.

The cost of regrading ditches, roadway surfaces, and drives shall not be paid for directly but shall be considered subsidiary to other items of Work for which direct payment is made.

Culverts required to be removed and re-laid shall be measured and paid for as provided in Chapter 21 of these Standard Specifications. Crushed rock or gravel surfacing shall be measured and paid for as provided in Chapter 9 of these Standard Specifications.

B. FINAL CLEANUP AND PARKING SPACE FINISH

When all other Work has been completed, the Contractor shall thoroughly clean all pavement, parking spaces, sidewalks, rights-of-way, storage areas, access roads, and private property of all earth and other debris by use of approved equipment. All pavement, parking spaces, sod, sidewalks, storage areas, access roads and private property shall be restored to a condition at least equal to that existing prior to any operations under this Contract.

No measure or direct payment shall be made for cleanup or parking space finish. The costs of cleanup and parking space finish shall be considered subsidiary to other items for which direct payment is made.

C. SODDING AND SEEDING

Sodding and seeding shall be accomplished as provided in Chapter 30 of these Standard Specifications.

20.12 COLD WEATHER CONSTRUCTION

A. LIMITS OF CONSTRUCTION

Work to be performed in developed areas, or Work affecting the operation, capacity, and safety of arterial and collector streets, between December 1 and March 15, shall be limited by the following provisions:

1. A maximum of 650 linear feet within the limits of the project may be under construction at one time.

2. A maximum of 2 intersections may be closed at one time within project limits, even though the third intersection may not violate the 650' limit described in Paragraph 1 above.

3. "Under Construction" shall include all operations which disrupt or limit the use of public facilities, such as pavement removal, sidewalk removal, excavation, backfilling, pipe laying, material storage, equipment storage, and/or any other operation deemed by the City's Project Manager as a disruption of normal ingress and egress to the public right- of-way within project limits.

20.12 COLD WEATHER CONSTRUCTION (Continued)

A. LIMITS OF CONSTRUCTION (Continued)

4. Temporary restoration will be required to reduce long-term disruptions and inconvenience during construction. 2 weeks after beginning Work in an area, the City's Project Manager shall require temporary restoration of facilities by the Contractor. The entire cost of installation, maintenance, and removal of such temporary installations shall be the Contractor's responsibility.

B. SUSPENSION OF WORK

Suspension of Work during the winter construction period, December 1 to March 15, may be requested by the Contractor under the following conditions:

1. The request must be made in writing to the City's Project Manager and shall include the beginning date and duration. If Work is to be resumed prior to expiration of time requested, 48 hours written notice of such intent will be required.

2. The Contractor shall be required to restore all vehicular and pedestrian facilities to full use by either permanent or temporary restoration before the suspension period will become effective.

3. Calendar days included in the period that Work is actually suspended shall be counted from the effective suspension date, and the governing completion date shall be adjusted accordingly.

In no case shall a granted suspension of Work be cause for requesting or granting additional calendar days for completion of this Contract.

The City's Project Manager shall state to the Contractor, in writing, the effective suspension date and the date on which the suspension expires.

In addition, following the suspension period, the City's Project Manager shall notify the Contractor, in writing, of the new completion date of the Contract as provided above.

20.13 SUBSTANTIAL COMPLETION

Refer to Chapters 21 through 23 for a specific definition of Substantial Completion for each type of utility Work.

20.14 FINAL ACCEPTANCE

Refer to Chapters 21 through 23 for a specific definition of Final Acceptance for each type of utility Work.

20.15 GUARANTEE

Refer to Chapters 21 through 23 for a specific definition of guarantee for each type of utility Work.

CITY OF LINCOLN, NEBRASKA, STANDARD SPECIFICATIONS

CHAPTER 23

WATER MAINS

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WATER MAINS

23.00 GENERAL

The Work covered in this chapter includes the materials, appurtenant devices, water services, installation and testing of water main construction and reconstruction.

23.01 MATERIALS PURCHASED FROM THE CITY

The Contractor shall purchase the following materials from the Lincoln Water System:

- Valves
- Valve boxes, rings and lids
- Fire hydrants

The above materials are available for inspection at the Lincoln Water System Service Center. The Contractor shall provide all labor and transportation for loading and hauling of said materials.

Water will be supplied to the Contractor in conformance with the General Conditions and Title 17 of the Lincoln Municipal Code.

All materials shall be billed to the Contractor at prices and rates established by the Lincoln Transportation and Utilities Business Office. Contractors may obtain the current material prices from the Lincoln Transportation and Utilities Business Office.

23.02 CONSTRUCTION SERVICES PURCHASED FROM THE CITY

The Contractor shall purchase the following services from the Lincoln Water System:

- Flushing and disinfection services and materials
- Water main tapping and abandonments
- Water main shutdowns
- Installation of hydrant extensions

All services shall be billed to the Contractor at prices and rates established by the Lincoln Transportation and Utilities Business Office.

23.03 CONTRACTOR SUPPLIED MATERIALS

A. REFERENCED STANDARDS

1. American National Standards Institute (ANSI). American Water Works Association (AWWA). Society of Cable Telecommunications Engineers (SCTE. All referenced standards shall be the latest revision thereof

   a. ANSI/AWWA C104/A21.4 - Cement-Mortar Lining for Ductile Iron Pipe and Fittings

   b. ANSI/AWWA C105/A21.5 - Polyethylene Encasement for Ductile-Iron Pipe Systems

   c. ANSI/AWWA C110/A21.10 - Ductile-Iron and Gray-Iron Fittings

   d. ANSI/AWWA C111/A21.11 - Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings

23.03 CONTRACTOR SUPPLIED MATERIALS (Continued)

A. REFERENCED STANDARDS (Continued)

1. American National Standards Institute (ANSI) (Continued)

e. ANSI/AWWA C115/A21.15 - Flanged Ductile-Iron Pipe With Ductile-Iron or Gray-Iron Threaded Flanges

f. ANSI/AWWA C151/A21.51 - American National Standard for Ductile-Iron Pipe, Centrifugally Cast for Water

g. ANSI/AWWA C153/A21.53 - Ductile-Iron Compact Fittings for Water Service

h. ANSI/AWWA C301 - Prestressed Concrete Pressure Pipe, Steel-Cylinder Type

i. ANSI/AWWA C651- Disinfecting Water Mains

j. AWWA C800 – Underground Service Line Valves and Fittings

k. ANSI/AWWA C900-16 - Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 4" thru 60" for Water Transmission and Distribution

l. AWWA C906-15 – Polyethylene (PE) Pressure Pipe and Fittings, 4" through 65"

m. AWWA M28 – Rehabilitation of Water Mains

n. ANSI B16.1 - Cast Iron Pipe Flanges and Flanged Fittings, Class 25, 125, 250, and 800

o. ANSI/SCTE 77 T15 – Specifications for Underground Enclosure Integrity

2. American Society for Testing and Materials (ASTM)

a. A193 – Standard Specification for Alloy-Steel and Stainless Steel Bolting for High Temperature or High Pressure Service and Other Special Purpose Applications

b. A380 – Standard Practice for Cleaning, Descaling and Passivatin of Stainless Steel Parts, Equipment and Systems

c. A536 – Standard Specification for Ductile Iron Castings

d. A617 - Specifications for Axle-Steel Deformed and Plain Bars for Concrete Reinforcement.

e. B62 – Standard Specification for Composition Bronze or Ounce Metal Castings

f. B88 - Specification for Seamless Copper Water Tube

g. B584 – Standard Specification for Copper Alloy Sand Castings for General Applications

h. D1248 – Specification for Plastic Molding and Extrusion Materials, Type 1, Class C, Grade 5

i. F1216-09 – Standard Practice for Rehabilitation of Existing Pipelines and Conduits by the Inversion and Curing of a Resin-Impregnated Tube

23.03 CONTRACTOR SUPPLIED MATERIALS (Continued)

A. REFERENCED STANDARDS (Continued)

2. American Society for Testing and Materials (ASTM) (Continued)

j. F477 - Standard Specification for Elastomeric Seals (Gaskets) for Joint Plastic Pipe

k. G97 – Standard Test Method for Laboratory Evaluation of Magnesium Sacrificial Anode Test Specimens for Underground Applications

3. National Association of Corrosion Engineers (NACE)

a. NACE SP0169 – Control of External Corrosion on Underground or Submerged Metallic Piping Systems

b. NACE TM0497 – Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Piping Systems

4. Material and Construction Trade Standards

a. Ductile Iron Pipe Research Association, Polyethylene Encasement Installation Guide

b. Uni-Bell PVC Pipe Association, Installation Guide for PVC Pressure Pipe

B. JOINT TYPES

1. Push-on joints shall conform to the requirements of ANSI/AWWA C111/A21.11 for ductile iron pipe and "Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe ASTM F477 for Polyvinyl Chloride Pipe."

2. Mechanical joints shall conform to the requirements of ANSI/AWWA C111/A21.11. Bolts and nuts for mechanical joints shall be high-strength, low alloy steel as described in Paragraph 11-6.5 of ANSI A21.11.

3. Restrained push-on joints shall conform to the performance requirements as described in Section 11.9 of ANSI A21.11.

4. Special mechanical joints shall conform to the following:

a. Swivel couplings (anchoring couplings) shall mean a standard plain end connection with an integrally cast compression gland and freely rotating bolt ring bearing on the compression gland, designed to mate with a standard mechanical joint connection and to prevent the joint from separating under pressure when all bolts are in place. Swivel couplings shall be similar to Tyler Pipe swivel adapter or U.S. Pipe rotatable mechanical joint gland. The rotatable bolt ring portion of swivel couplings shall be fabricated from ductile iron and shall have the letters "D.I." or the words "Ductile Iron" cast in the bolt ring.

b. Solid couplings shall mean a standard plain end connection with an integrally cast compression gland and bolt ring, designed to mate with a standard MJ bell and gasket. Solid couplings shall be similar to Tyler Pipe solid gland or U.S. Pipe integral mechanical joint gland.

B. JOINT TYPES (Continued)

c. All retainer glands shall utilize a wedge action principle or grip ring principle to fully restrain the fitting and pipe together. Wedge Action Retainer Glands shall be ductile iron with heat-treated ductile iron wedges and twist-off torque nut bolts. Ductile iron shall be per ASTM A536 grade 65-45-12. Wedges shall have a minimum hardness of 370 BHN. The gland shall allow for a minimum deflection of 3° and allow joint movement after installation. The gland shall be provided with torque limiting twist-off nuts with an additional fixed hex head to allow for removal and reinstallation of the gland. Twist-off torque nut bolts shall be coated or lubricated in a manner to prevent corrosion and pre-mature twist-off of the torque limiting twist-off nuts. Additional requirements include:

TABLE 23.03 A – WEDGE REQUIREMENTS FOR RETAINER GLANDS

Specification Item	Ductile Iron Pipe	PVC Pipe
Pressure Rating For 6"-12" Pipe	350 psi	305 psi (DR 14)
Pressure Rating For 16" Pipe	350 psi	235 psi (DR 18)
Pressure Rating for 24" and larger	250 psi	NA
Color	Black	Red
Acceptable Manufacturers	EBAA Iron Megalug Series 1100 Ford Uni-Flange Series 1400 STAR Stargrip 3000 SIGMA One-Lok SLD TYLER UNION TUFGRIP	EBAA Iron Megalug Series 2000PV STAR PVC Stargrip 4000E9408985 TYLER UNION TUFGRIP PVC FORD Uni-Flange Series 1500

Acceptable manufacturers are required to meet all stated specifications requirements. Failure to meet requirements shall be cause for rejection.

d. Mechanical Joint Restraint Adaptors for connection of MJ valves to MJ fittings and MJ fittings to MJ fittings shall be a bolt-through positive restraint mechanism meeting working pressure specifications of AWWA C153 for compact fittings and manufactured of ductile iron conforming to ASTM A536, 80-55-06. MJ adaptors shall connect standard mechanical joint fittings (AWWA C110 or C153) and valves at a linear distance not to exceed three (3) inches and without attachment to pipe. MJ adaptors shall be installed with standard styrene butadiene rubber (SBR) MJ gaskets conforming to the latest revision of AWWA C111 be supplied with an NSF 61, 7-mil. fusion bonded epoxy coating. The bolts and nuts shall be ASTM A193 Type 304 Stainless Steel Acceptable manufacturer shall be Foster Adaptor.

5. Flange connections shall conform to the requirements of ANSI B16.1 for 125-pound class and shall also conform to ANSI/AWWA C115/A21.15. The flange gaskets shall be 1/8" thick red rubber. The gasket shall be of the full face or inside bolt ring coverage styles. Bolts shall be sufficient length to expose 1/4" to 1/2" of the bolt beyond the outer face of the nut when the joint is fully assembled.

B. JOINT TYPES (Continued)

6. Precast concrete cylinder pipe joints shall conform to AWWA C301. The joint rings shall be galvanized steel. The external joint filler material shall be cement impregnated polyurethane foam in a closed loop form equal to Mar Mac Flex-Protex or shall be a cement mortar grout composed of 1 part Portland or mortar cement to 2 parts sand and sufficient water to flow easily. Joint diapers shall be heavy-duty cotton with wire or steel straps in the hem. Diapers shall be a minimum of 6" wide for all pipes 36" in diameter or smaller. All diapers for pipes larger than 36" shall be a minimum of 7" wide.

C. GASKET MATERIAL

All gaskets, with the exception of gaskets for flanged joints, shall be neoprene or other synthetic rubber. Natural rubber gaskets are not acceptable.

D. JOINT LUBRICANTS

All joint lubricants shall be a vegetable soap base or equal and shall be supplied by the pipe manufacturer. Lubricants shall be supplied in sterile, tightly sealed, small quantity containers. Any lubricant which has been contaminated with dirt or other foreign material shall be rejected.

E. DUCTILE IRON PIPE

Ductile iron pipe shall conform to the requirements of ANSI/AWWA C151/A21.51. All pipe shall be Class 52 unless otherwise specified. The cement mortar lining shall be standard weight and shall conform to the requirements of ANSI/AWWA C104/A21.4. Unless otherwise specified, all pipe shall be supplied in 18’ or 20’ lengths and shall have push-on type joints.

F. PRESTRESSED CONCRETE CYLINDER PIPE

Prestressed concrete cylinder pipe shall be manufactured in conformance with AWWA C301 and shall be designed in conformance with Appendix A or Appendix B of that Specification. Pressures and external loads used in design shall be as specified elsewhere in the Contract Documents.

The Contractor shall supply the following information for approval prior to delivery of the pipe and appurtenances:

1. Design Calculations
2. Proof of Design Test Results
3. Tabulated Layout Schedule
4. Affidavit of Compliance

Fine aggregate shall be clean natural sand. Artificial or manufactured sand shall not be used.

All branch outlets and other connections shall be of the joint type shown on the plans. Where projects are terminated without connecting to existing pipe, a mechanical joint bell adapter and mechanical joint plug shall be provided.

Adapter section shall be provided to connect to valves, fittings and existing pipe. All adapters, fittings and other specials shall be cement mortar lined.

G. POLYVINYL CHLORIDE (PVC) PIPE

Polyvinyl Chloride (PVC) pipe shall conform to AWWA C900-16. All pipe 12" in diameter or smaller shall be PVC 1120 DR 14 with O.D. conforming to that of ductile iron pipe unless otherwise specified. PVC pipe larger than 12" in diameter shall be PVC 1120 DR 18 conforming to that of cast iron pipe unless otherwise specified. Joints shall be push-on type with rubber compression ring joints conforming to "Standard Specification for Elastomeric Seals (Gaskets) for Joint Plastic Pipe" ASTM F477.

H. HIGH-DENSITY POLYETHYLENE (HDPE) PIPE, FITTINGS, SERVICES AND CONNECTORS

High-Density Polyethylene (HDPE) Pipe, Fittings, Services, and Connectors may be used only upon submittal, review, and approval of the Lincoln Water System. All items installed without prior approval shall be removed at the contractor's expense.

All contractors working with HDPE must be certified and hold a current certification card authorized by McElroy Butt-Fusion Training or GF – Electrofusion Training.

The only acceptable methods of fusion for Lincoln Water System are:

1. Butt-Fusion (must include data logger information for each butt-fusion)
2. Electro-Fusion (electro-fusion fittings must be submitted and reviewed by LWS prior to installation)

Socket Fusions and Sidewall Fusions are not allowed.

I. CURED-IN-PLACE PIPE (CIPP) LINING

Cured-in-place pipe (CIPP) lining may be used only upon review and approval of the Lincoln Water System. Liner material shall be a Class IV fully structural Cured-in-place pipe in accordance with AWWA M28, ASTM F1216-09, ASTM F1743-08 or ASTM F2019-03 with the exception that the liner thickness is in accordance with ASTM F1216-07a.

J. CAST IRON AND DUCTILE IRON FITTINGS

Cast iron and ductile iron fittings shall conform to the requirements of ANSI/AWWA C110/A21.10 and shall be supplied with a standard weight cement mortar lining conforming to ANSI/AWWA C104/A21.4 and all necessary glands, bolts, nuts and gaskets to complete a non-restrained mechanical joint fitting connection. Ductile iron compact fittings shall be in conformance with ANSI/AWWA C153/A21.53. All joints shall be mechanical joint bells unless otherwise provided in the Contract Documents.

Pressure ratings for fittings shall be a minimum of 250 p.s.i. water working pressure for 12" nominal diameter and smaller, based on the diameter of the largest bell. For fittings larger than 12" nominal diameter, a pressure rating of 150 p.s.i. shall be used unless otherwise specified.

K. ANCHORING COUPLINGS AND FITTINGS

Anchor couplings shall consist of a length of pipe with a solid coupling end connection and a swivel coupling end connection. Anchor couplings shall be similar to Tyler Pipe adapter swivel fittings or U.S. Pipe hydrant connection pieces.

Anchor elbows shall consist of 90° elbow with 2 swivel couplings, Anchor elbows shall be similar to the Tyler Pipe Swivel x Swivel 90° ELL swivel fittings.

Anchor pipe shall consist of a length of pipe with 2 swivel coupling end connections.

Swivel tees shall be cast to the requirements of ANSI A21.10 with mechanical joint run end connection and a swivel coupling on the branch connection. Swivel tees shall be similar to Tyler Pipe MJ x MJ x swivel tees or U.S. Pipe valve and hydrant tees.

L. RESTRAINT COLLARS FOR VALVES AND REDUCERS

Restraint collars for valves and reducers when using PVC for water main construction shall be supplied and constructed in conformance to the applicable Lincoln Standard Plans or contract Special Provisions. Restraint collars for valves and reducers shall be considered subsidiary to PVC Water Main construction and are not measured or paid for as a separate fitting for purposes of this chapter.

M. POLYETHYLENE ENCASEMENT

Polyethylene encasement shall be Class C, black pigmented, 8 mils. thick, linear low density, polyethylene conforming to the requirements of ANSI/AWWA C105/A21.5. The encasement may be supplied in flat sheets or tubes at the Contractor's option. Tape used to repair or patch the encasement shall be manufactured from synthetic materials. Duct tape shall not be used for repairs. The tubes, measured when laid flat, and the flat sheets shall conform to TABLE 23.03 B – POLYETHYLENE ENCASEMENTS.

TABLE 23.03 B – POLYETHYLENE ENCASEMENTS

Nominal Pipe Diameter	Polyethylene Encasement Tube and Sheet Widths (inches)	
	Tube	Sheet
6"	20	40
8"	24	48
12"	30	60
16"	37	74
24"	54	108
30"	67	134
36"	81	162
48"	108	216
54"	121	242

N. COPPER SERVICE PIPE

Copper water service pipe shall be Type “K” seamless soft-drawn copper tubing which conforms to the “Specifications for Seamless Copper Water Tube”, ASTM Designation B 88.

O. SERVICE PIPE CONNECTORS

All copper service pipe connectors shall be fabricated from red brass. All copper supply and service pipe shall be joined by either flared-end connectors or brazed, non-lead, eutectic joints.

All connectors intended for use on HDPE applications must be submitted and approved by LWS prior to installation or payment. All items installed without prior approval shall be removed at the contractor's expense.

P. HYDRANT DRAIN MATERIAL

Hydrant drain material shall be clean, washed, hard, durable, uncoated, and uniformly graded Class "A" gravel as specified by the Nebraska Department of Transportation. Gradation shall be as follows:

TABLE 23.03 C – HYDRANT DRAIN MATERIAL GRADATIONS

Sieve Size	% Passing	Tolerance
3/4"	100	0
3/8"	95	+/- 5
#4	78	+/- 4
#10	16	+/- 13
#200	3	+/- 3

Q. AIR RELIEF VALVES

Air relief valves shall be provided by the Contractor to conform to the size, type and configuration shown on the plans.

R. TRACER WIRE

All PVC water mains owned by the City of Lincoln shall be installed with a locator wire attached. The wire shall be direct bury 12 AWG solid steel core, copper clad wire with 30 mil, blue, HDPE insulator. Wire shall have a 30-volt rating with a minimum tensile break force of 380 pounds.

Approved manufacturer shall be Copperhead Industries, Pro-Line Pro-Trace, or equal. The wire shall be installed with as few splices as possible. Splices shall utilize end to end 3M DBR connectors, sealed with silicone sealant, aqua seal, or equal and covered with Scotch #33 electrical tape.

Tracer wire must be properly grounded at all dead-end mains, including cul-de-sacs. Grounding of tracer wire shall be achieved by using a 1.5-lb drive-in magnesium ground rod with a minimum 20-feet of #12 high strength copper-clad steel wire coated with red 30 mil HDPE insulation connected to the rod, specifically manufactured for this purpose. Where the anode wire will be ran into the top of a valve box, a minimum of 18 inches of excess/slack wire is required after meeting final elevation.

Subject to meeting the requirements of this Specification, acceptable manufacturer's products which may be incorporated into the work include Copperhead Ground Rod (ANO-12), Pro-Trace (PTANODE12) *or an approved equal*.

23.03 CONTRACTOR SUPPLIED MATERIALS (Continued)

S. GEOTEXTILE FILTER FABRIC

Geotextile Filter Fabric, for water main construction, shall be Mirafi 500X, Synthetic Industries 200ST, or approved equal and shall be supplied and constructed in conformance to the applicable Lincoln Standard Plans or contract Special Provisions. Geotextile Filter Fabric shall be considered subsidiary to Water Main construction and are not measured or paid for as a separate item for purposes of this chapter.

23.04 REMOVED MATERIALS

A. GENERAL

When called for on the plans and Contract Documents, the Contractor shall remove water main pipe and dispose of it.

When called for on the plans, the Contractor shall remove and reset water main valves, hydrants, and plugs at the location and grade as indicated on the plans. The Contractor shall exercise care in the removal and resetting of these items. Removal and Resetting of hydrants and valves will only be allowed in cases where the existing item was installed within the past 5 years, otherwise they shall be Removed and Salvaged. Remove and Reset items must be in "like new" condition, clean, with no defects including the painted surfaces. The Contractor shall thoroughly examine each appurtenance to ascertain whether it is in proper working condition; and if there is a question regarding the condition of the appurtenance, the Contractor shall contact the Lincoln Water System to exchange the item for one that is working.

When called for on the plans and Contract Documents, water main valves, hydrants, and plugs shall be removed and salvaged. The Contractor shall deliver the salvaged appurtenances to the Lincoln Water System Shop. Receipts for salvaged materials shall be delivered to the City's Project Manager.

B. BASIS OF PAYMENT

Water main pipe removed in conformance with these Specifications and accepted by the City's Project Manager shall be measured and paid for at the contract unit price bid per linear foot for REMOVE WATER MAIN. Such payment shall be full compensation for all excavation, removal, backfill, disposal of excess materials, equipment, tools, labor and incidentals necessary to perform the Work called for.

Water main valves, hydrants and plugs removed and relayed, removed and salvaged, or removed in conformance with these Specifications and accepted by the City's Project Manager shall be measured and paid for at the contract unit price bid per each for REMOVE AND SALVAGE _____, REMOVE AND RESET _____, or REMOVE _____. Such payment shall be full compensation for all excavation, removal of appurtenances and thrust blocking, bedding or foundation rock if required, resetting, loading of salvaged items, resetting valve box, backfill, materials, equipment, tools, labor and incidentals necessary to perform the Work.

23.05 HANDLING AND STORAGE

The Contractor shall protect all material from damage and handle material carefully in conformance with the manufacturer's recommendations. Equipment used to handle material such as slings, lifting lugs, hooks and other devices shall be designed to protect pipe, coatings, linings, joint elements, castings, valves, hydrants, and all other material.

Gaskets shall be protected from deterioration and stored out of direct sunlight for prolonged periods and in such a manner that they will not contact oils, fumes, solvents, and other materials and substances that attack rubber or synthetic rubber materials.

All hydrants and valves shall be protected so that latent water within the valves or hydrants will not freeze. The hydrants and valves shall be stored in such a manner that water will not enter drains and other openings. All butterfly valves shall be stored indoors. All resilient seated wedge valves shall be stored indoors or with the wedge in a raised position. All pipe, fittings, valves and hydrants shall be kept clean and protected from contamination by mud and dirt.

Prestressed concrete cylinder pipe shall not be stacked higher than allowed by the manufacturer's recommendations. PVC pipe shall not be stacked higher than 8’ or in conformance with manufacturer’s recommendations whichever is less. Ductile iron pipe shall not be stacked higher than allowed in TABLE 23.05 A – DUCTILE IRON PIPE STORAGE.

TABLE 23.05 A – DUCTILE IRON PIPE STORAGE

Pipe Size	Maximum Number of Tiers
6"	13
8"	11
12"	9
16"	7
24"	5
30"	4
36"	4

No direct measurement or payment for storage and handling of materials used in the construction of water mains will be made. The costs associated with the materials to be incorporated into the Work shall be considered subsidiary to the items for which direct payment is made.

23.06 EXCAVATION AND BACKFILL

Excavation and backfill for water mains and appurtenances shall conform to the requirements of Chapter 20 of these Specifications except as hereinafter modified for water main construction.
Unless otherwise shown on the plans, modified by Special Provisions, or directed by the City’s Project Manager, all PVC pipe shall be embedded with approved materials to at least 6" above the top of the pipe.

23.07 INSTALLATION OF PIPE AND FITTINGS

A. GENERAL

The Contractor shall use the proper tools and equipment necessary to safely install all pipe, fittings and appurtenances to the lines and grades as shown on the plans. Installation of pipe and fittings shall be in conformance to manufacturer's requirements and instructions except where otherwise provided in the specifications. Prior to beginning Work, the Contractor shall submit to the City's Project Manager a copy of the manufacturer's installation instructions for review and approval. The Contractor shall retain a copy of the installation instruction at the project site for reference during construction. PVC pipe shall be installed in strict conformance to the manufacturer's requirements and instruction except that in no case shall PVC pipe be installed by bending the pipe.

B. CUTTING PIPE

1. Ductile Iron Pipe

When nonstandard lengths of pipe are required to install valve and fittings, terminate lines, or make connections, the Contractor shall cut the pipe using an abrasive wheel, milling type cutter, or other approved mechanical cutter. Torch cutting shall be used only with specific permission of the City's Project Manager and then only in strict conformance with the manufacturer's recommendations. After cutting, the Contractor shall bevel the ends of the pipe to approximate the manufactured bevel of a full length of pipe. Pipe which is not cut square or which has rough and jagged edges that might nick or cut gaskets shall be reworked to the approval of the City's Project Manager.

2. Prestressed Concrete Cylinder Pipe

No cutting of prestressed cylinder pipe will be allowed. All pipe which does not fit or close shall be rejected and the rejected pipe removed from the job site.

3. PVC Pipe

PVC pipe shall be cut using carpenter, hack saws or abrasive wheel. Care shall be taken to make all cuts square and perpendicular to the longitudinal axis of the pipe. After cutting, the Contractor shall bevel the ends of the pipe to approximate the manufactured bevel of a full length of pipe. Pipe which is not cut square or which has rough and jagged edges that might nick or cut gaskets shall be reworked to the approval of the City's Project Manager. When 12" butterfly valves are called for on the plans for PVC pipe, the pipe ends shall be chamfered on the inside radius as detailed in the Lincoln Standard Plans so that the valve operates to a fully closed position.

C. PREVENTING CONTAMINATION

Existing valves and valves connecting the existing system to the new construction shall be operated only by the Lincoln Water System; except that the Contractor may operate those valves to fill the new mains for testing, only after notification of Lincoln Water System personnel.

The Contractor shall keep the pipe and appurtenances clean and free from tools, rags, dirt, mud, non-potable water, and other foreign materials and objects at all times during installation. If pipe laying is stopped or delayed for any reason, the Contractor shall seal the open ends of all pipes. Seals shall be capable of preventing the entry of water and other foreign material with the excavation completely full of water.

All pipes shall be jointed immediately after placement in the excavation. Bell-ends of pipe shall face in the direction of laying. The Contractor shall ensure that the pipe is not displaced after it is laid to the proper line and grade; and should the pipe become displaced the Contractor shall relay the pipe to the proper line and grade at no additional cost or expense to the City.

D. UTILITY CONFLICTS

Where unforeseen conflicts between the water construction and existing utilities are discovered, the Contractor shall immediately notify the City's Project Manager. Where the water main is to be constructed below or within 18" of a storm sewer pipe, the Contractor shall lay a full length of water main pipe centered on the sewer or such length as will provide the maximum possible separation of the joints in the water main from the sewer line. The Contractor shall also reconstruct any sanitary sewer with (1) 20' length of C900 pressure pipe or equivalent, such that the maximum possible separation between the water main and the sewer pipe joints will result. The backfill material shall be select, low-permeability soil.

Where the water main is located below a sanitary sewer pipe, to prevent the possibility of contaminated wastewater reaching the potable water main, the entire space between the top of the water main up to the spring line (half way) of the sanitary sewer shall be back-filled with flowable fill. No granular fill shall be used. The extent along the water main shall be the entire length of pipe and fittings at the bottom of the excavation, and the extent along the sewer shall be to undisturbed earth. This flowable backfill shall be subsidiary to other items of work for which direct payment is made.

Where existing water mains are to be looped around another utility, the Contractor shall plan his Work so that disruptions to water service are minimized. The Contractor shall provide adequate personnel, equipment and materials necessary to complete the Work as quickly as possible. All necessary materials shall be on site, and wherever possible, the Contractor shall preassemble the entire looping configuration, including bends or offsets and restraint devices, before the water main will be scheduled for shutdown by Lincoln Water System. Service fees charged by the Lincoln Water System shall be considered subsidiary to the cost of looping the water main in the event of a utility conflict. Additional fees for extended shutdowns shall not be cause for additional compensation to the Contractor.

E. CAST-IN-PLACE THRUST RESTRAINTS

The Contractor shall construct concrete thrust blocks conforming to the requirements of the Lincoln Standard Plans at all locations shown on the plans or indicated by the City's Project Manager. All thrust blocks shall be placed so that pipe and fitting joints will be accessible for repairs. The bearing face of all thrust blocks shall rest against undisturbed soil.

When the existing water mains must be reconstructed or looped, the Contractor shall restrain all fittings with ductile iron retainer glands installed in conformance with the manufacturer's recommendations in addition to concrete thrust blocks, anchorages and/or gravity blocks.

Gravity block straps of the size and type specified in the Lincoln Standard Plans shall be State Steel type M1020, or equivalent, low carbon, low manganese, general purpose, merchant quality stainless steel that is suitable for forming and welding. All strap material not embedded in concrete shall be covered with polywrap or tape prior to backfilling.

F. TRACER WIRE

The Contractor shall install tracer wire (as per 23.03 P) directly to the top of the pipe between the 10 o'clock and 2 o'clock positions, with non-conductive pipe only. Tracer wire shall be secured to the main every 5' with tape patches and shall be secured so that some slack can be taken out of the wire for valve and tap installations. Tracer wire shall be extended to the ground surface and terminated in conformance with the Standard Plans using a coil of excess wire at least 18" in length inside the valve box. For line valves and hydrant branch valves (branch less than 10') the tracer wire shall be attached to the exterior of the valve box and inserted into the valve box 8" from the top of the box through a field drilled 1/2" hole. Tracer wire shall be installed with as few splices as possible. No bare wire shall be exposed, with the exception of 1" of wire to be stripped at the access loop for contact with tracing equipment. The two ends of the wire shall be knotted to prevent strain on the splice. Branch connections shall be made without cutting the main wire utilizing a connection clip and sealing the joint the same as splices. All new tracer wire installations shall be located using typical low frequency (512Hz) line tracing equipment, witnessed by the contractor, inspector and LWS representative, prior to acceptance of ownership. A locating device transmitting the 512Hz signal shall be set up and connected to the new tracer wire at the new connection to the existing water main (typically a temporary valve or permanent valve on the new portion of the project) and successfully traced to each dead end or temporary hydrant, without connecting the transmitting device at any other locations on the new project. Any deviations from the 512Hz frequency shall be discussed with the LWS representative during the testing, deviations from the 512Hz frequency shall only be approved by LWS. All wires failing to provide successful testing for signal transmission shall be repaired or replaced at the Contractor's expense. Continuity testing in lieu of actual line tracing shall not be accepted. After testing the ends, all tracer wires shall be sealed with heat shrink tape. Installation and testing of tracer wire shall be considered subsidiary to the installation of non-conductive pipe.

All water main reconstructions (loops for conflicting utilities) as shown on LSP 301 shall have tracer installed when using PVC pipe. When reconstruction is performed on ductile iron pipe or cast-iron pipe, tracer wire shall be terminated on both ends of the loop directly to the existing pipe using an exothermic welded connection, or a stainless steel Cathodi-Clamp™. Polyethylene encasement shall be (re)installed over the areas of the existing pipe where the tracer is terminated extending from a minimum of 2' past the connection point of the new PVC pipe to a minimum of 2' past the wire termination point on the existing water main.

G. JOINTING PIPES

1. General

All bells, gaskets, lubricants and appurtenances shall be kept clean. Gaskets shall be of the proper style for the pipe being laid. Joints shall be deflected after assembly.

2. Ductile Iron Pipe

Bell ends shall be protected during joining by approved methods.
Maximum pipe joint deflections for push-on and mechanical jointed pipe shall conform to TABLE 23.07 A – MAXIMUM JOINT DEFLECTIONS.

3. PVC Pipe

PVC pipe shall be joined by inserting the spigot end of the pipe into the bell no further than marked by the manufacturer. Insertion on the PVC pipe further than the manufacturer's mark shall require reassembly. Bell ends shall be protected during joining by approved methods. Maximum pipe joint deflections for PVC pipe shall confirm to the manufacturers recommended standards for the brand of pipe being installed.

4. Mechanical Joints

Mechanical joints shall be assembled in strict conformance with the manufacturer's instructions and recommendations. Bolts on opposite sides of the joint shall be drawn up evenly to ensure even pressure around the gland and gasket. The Contractor shall tighten all retainer gland screw wedges according to manufacturer's recommendations for each type of retainer gland and pipe material. Prior to final tightening, the Contractor shall make any necessary deflections. Deflections for DUCTILE IRON pipe shall not exceed those shown in TABLE 23.07 A – MAXIMUM JOINT DEFLECTIONS.

TABLE 23.07 A – MAXIMUM JOINT DEFLECTIONS (DUCTILE IRON PIPE ONLY)

Pipe Diameter	Push-on Joints			Mechanical Joints		
	Deflection Angle	Maximum Offset	Minimum Curve Radius	Deflection Angle	Maximum Offset	Minimum Curve Radius
6"	4º 00'	17.0"	285'	4º 00'	17.0"	285'
8"	4º 00'	17.0"	285'	4º 00'	17.0"	285'
12"	4º 00'	9.5"	285'	4º 00'	9.5"	285'
16"	2º 24'	9.5"	475'	2º 24'	9.5"	475'
24"	2º 24'	9.5"	475'	2º 24'	9.5"	475'
30"	2º 24'	9.5"	475'	2º 24'	9.5"	475'
36"	2º 24'	9.5"	475'	2º 24'	9.5"	475'
48"	1º 36'	6.5"	715'	1º 36'	6.5"	715'
54"	1º 12'	5.0"	955'	1º 12'	5.0"	955'

G. JOINTING PIPES (Continued)

5. Prestressed Concrete Cylinder Pipe Joints

The Contractor shall make all joints in prestressed concrete cylinder pipe in strict conformance with the manufacturer's instructions and recommendations. After placing the gasket on the spigot end of the pipe, the Contractor shall run a smooth round steel rod between the gasket and the spigot for one complete turn around the pipe and repeat in the opposite direction to ensure uniform stretching of the gasket.

After seating but prior to homing the pipe, the Contractor shall check the gasket for proper location using feeler gauges. Gaskets for pipes larger than 24" in diameter shall be checked from both the inside and outside of the pipe. Pipes shall be deflected where required after homing, according to the following:

TABLE 23.07 B – MAXIMUM JOINT OPENINGS

Pipe Diameter	Maximum Joint Opening
6"-36"	3/4"
48"	1’
54"	1’-1/8"

The exterior joint recesses shall be filled with cement mortar. Cement mortar shall be rodded into diaper with a wire curved to conform to the radius of the pipe.

H. POLYETHYLENE ENCASEMENT

Polyethylene (PE) encasement shall be installed on all ductile and cast-iron water mains, water valves, fittings and water services using Method A or B as detailed in AWWA/ANSI C105/A21.5 except that the encasement shall consist of double wrapping. All pipe and fittings encased with PE shall be handled, repaired and installed in conformance to guidelines published by DIPRA. The Contractor shall double wrap and seal with tape all bolted connections, anchoring couplings, anchoring elbows, valves, and fire hydrants. Encasement for fittings and valves on PVC pipe shall extend a minimum of 18" past the joint. The Contractor shall ensure that hydrant drain holes are not blocked or covered. All water main and service valves shall be doubled wrapped, fully encased and sealed with tape around the valve stem operator underneath the operating nut.

The Contractor shall wrap all copper supply pipes from the tap extending 5’ away from any ductile or cast iron main, and shall repair all PE encasement at the tap location. Copper services connected to PVC water mains are not required to be encased, unless otherwise noted. All ductile iron fittings used on PVC water services shall be doubled wrapped.

I. WATER MAIN SHUTDOWNS

The Lincoln Water System schedules and performs all shutdowns of the existing water system and corresponding interruptions of service to customers. Unless otherwise approved by the Engineer, the Contractor shall excavate areas of work prior to LWS scheduling shutdowns with customers to better assess the time required for the service interruption. In all cases the Contractor shall provide at least 48-hour notification for a request to interrupt service.

The Lincoln Water System also schedules and performs tapping, valve operation, and flushing and disinfection services, when required. In all cases the Contractor shall notify the Assistant Superintendent of Water Construction, or his representative, to provide for scheduling such services at least 48 hours prior to the time that they are needed. These services shall be scheduled only during City working hours.

Prior to LWS making the shutdown, the Contractor shall be fully prepared to perform the work in the most expedient manner possible. The Contractor shall have all necessary fittings, pipe, tools, and accessories available onsite and all parts/pieces necessary to complete the work must be preassembled to the extent possible to perform the work. If in the opinion of LWS, the City's Project Manager or the Engineer that the contractor is not fully prepared to perform the work, a shutdown shall not be provided. The LWS reserves the right to charge the contractor a lump sum amount not to exceed $200 if the shutdown is cancelled due to lack of preparedness. This condition shall be not cause for claim of damages or additional compensation by the Contractor.

If the proposed work involves 8" or larger water mains, any fittings to complete the installation or affects service to commercial or industrial customers, then a plan must be submitted to LWS for approval. The aforementioned plan shall indicate all fittings and dimensions of any pieces to be installed to complete the work causing the shutdown. The plan shall indicate the estimated time out of service, requested time for the shutdown, general description of how the work will be performed, required pumping equipment and the number of employees expected to perform the work.

The water main shall be excavated prior to the shutdown and the excavation prepared to make work conditions safe and clean. Where directed by LWS, the City's Project Manager or the Engineer, the contractor shall use approved bedding material in the bottom of the excavation to provide a suitable work surface for ease of construction and to provide for sanitary conditions. These materials shall be compensated in accordance to applicable bid items.

Contractors shall be adequately equipped to pump drain water and anticipate some leakage of water past valves. Adequate pumping equipment shall be a condition for approval of the shut-down plan.

I. WATER MAIN SHUTDOWNS (Continued)

There shall be no cost for a shut-down which interrupts water service for less than two (2) hours. For interruptions of water service lasting two (2) or more hours, the shut-down fees are as follows:

TABLE 23.07 C - WATER MAIN SHUTDOWN APPLICABLE FEE SCHEDULE

Hours of Shutdown	Applicable Fee
0 – 2 hours	no charge
2 – 3 hours	$200
3 – 4 hours	$700
4 – 5 hours	$1,700
5 – 6 hours	$4,200
6 – 7 hours	$9,200
7 – 8 hours	$19,200
over 8 hours to 12 hours	$15,000 each additional hour
over 12 hours	$25,000 each additional hour

Example: Fee for water main shut down for 11.5 hours =
$19,200 + $15,000 + $15,000 + $15,000 + $15000 = $79,200

The shut down time shall be considered the time from when the water main has been isolated by the Lincoln Water System (LWS) to the extent possible up to the time that LWS is notified that work has been completed sufficiently to allow service to be restored. This cost shall not be reimbursable.

J. BASIS OF PAYMENT

WATER MAIN of the various sizes called for on the plans shall be measured and paid for at the contract unit price bid per linear foot for each different diameter required. Pipe shall be measured through fittings and valves. Such payment shall be full compensation for all excavation, backfill, pipe, bedding material, other materials, testing, equipment, tools, labor, and incidentals necessary to complete the Work in conformance with these Specifications and as accepted by the City's Project Manager.

DUCTILE IRON PIPE WATER MAIN of the various types and sizes called for on the plans shall be measured and paid for at the contract unit price bid per linear foot for each different diameter required. Pipe shall be measured through fittings and valves. Such payment shall be full compensation for all excavation, backfill, pipe, other materials, testing, equipment, tools, labor and incidentals necessary to complete the Work in conformance with these Specifications and as accepted by the City's Project Manager.

POLYVINYL CHLORIDE (PVC) WATER MAIN of the various types and sizes called for on the plans shall be measured and paid for at the contract unit price bid per linear foot for each different diameter required. Pipe shall be measured through fittings and valves. Such payment shall be full compensation for all excavation, backfill, pipe, bedding material, other materials, testing, equipment, tools, labor, and incidentals necessary to complete the Work in conformance with these Specifications and as accepted by the City's Project Manager.
HIGH-DENSITY POLYETHYLENE (HDPE) PIPE of various sizes, including fittings for HDPE applications, must be submitted and approved by LWS prior to installation or payment. All items installed without prior approval shall be removed at the contactor's expense.

All CAST IRON AND DUCTILE WATER MAIN FITTINGS, including ductile iron compact fittings, shall be measured separately and shall be paid for at the contract unit price bid per each for the various fittings called for in the proposal.

Glands, bolts, nuts and gaskets necessary to complete a non-restrained mechanical joint connection for water main fittings are considered accessory items to the connection. No direct payment shall be made for these items, but are considered subsidiary to CAST IRON AND DUCTILE IRON WATER MAIN FITTINGS for which payment is made.

RETAINER GLANDS of the various sizes called for to complete a restrained mechanical joint connection for water main fittings shall be counted and paid for at the contract unit price bid per each. All Work shall be in conformance with these Specifications and accepted by the City's Project Manager.

23.08 INSTALLATION OF VALVES AND HYDRANTS

A. GENERAL

Immediately prior to installation, the Contractor shall inspect all valves and hydrants to ensure they are in good operating condition and free from defects. All valves shall be installed in such a manner that the operating nut and key will be in a vertical position. When the operator is located on the side of the valve, the Contractor shall install the valve with the operator located on the curb side of the valve.

All valve sizes should rest on support block with treated wood wedge(s) driven between the bottom of the valve and the support blocking. Valves 12" in diameter and larger shall be installed resting on one or more precast concrete support blocks 18" square and 4" thick which bear against undisturbed earth.

The Contractor shall check the installation of all butterfly valves to be certain that the valve can be operated throughout its entire range of operation, and that it does not have contact with the inside edges of the pipe when operating.

Where tapping sleeves and valves are to be installed, the Contractor shall make all excavations to the dimensions required and provide all necessary trench protection. The Contractor shall provide precast concrete pads and other stabilizing materials under the tapping valves necessary to prevent rotation of the tapping sleeve on the main.

The Contractor shall provide and install a valve box over every valve operator. The valve box shall be installed plumb and centered over the operating nut and with the bottom of the box sufficiently lower than the operating nut to prevent the entry of soil. The top of the box shall be set flush with the final grade or paved surface. Valve box adjusting rings shall not be used to adjust valve boxes to grade. Valve boxes shall be stabilized to prevent out of alignment during compaction. Misaligned valve boxes shall be replaced during the warranty period. Only one valve box extension can be used at each location. Valves installed at a depth of 7’ or greater will require a 6” diameter Sch. 80 PVC pipe used to reach grade with Sch 40 coupler mounted just below surface level to attach ring and lid. Upon final construction, the valve box ring and lid should be set flush with grade.

Hydrants shall be set plumb, resting on precast concrete pads, 4" thick and 16" square. The support pads shall rest against undisturbed earth. The top of the flange on the hydrant shall be set to the grade shown on the plans. A hydrant of the length shown on the plans shall be used to attain this elevation. The Contractor shall make appropriate deflections or rotations in the tee and anchoring elbow, or use an anchoring offset, to meet this grade.

Fire hydrant barrel lengths shown on the plans are estimated and may not be sufficient dimensions for actual field conditions due to conflicting utilities and field modifications of water main profile. Contractors shall confirm actual hydrant barrel length required prior to construction so that hydrants are constructed in accordance with the LSP. This work shall be subsidiary to the water main construction.

Where a hydrant extension is necessary to meet the required grade, the hydrant extension shall be installed only by Lincoln Water System. Only one extension will be permitted on a hydrant. The Contractor shall remove and reset all hydrants which cannot be adjusted to grade with one extension. The Contractor shall notify the City’s Project Manager or that person’s representative when hydrant extensions are required.

A. GENERAL (Continued)

The Contractor shall place a minimum of 0.75 cubic yards of hydrant drain material (as per 23.03 N) around the base of the hydrant to allow free ready drainage of the barrel. Polyethylene wrap shall be placed on top of the drainage gravel prior to the commencement of backfilling. Hydrant drain holes shall be kept open and clean at all times. Care should be exercised as to not block the drain holes with polyethylene wrap or concrete from backing blocks.

When obtaining hydrants from the Lincoln Water System, the Contractor shall determine and select the hydrant shoe configuration that best suits proper orientation of the steamer (large) nozzle perpendicular to the curb line. When required, adjustments to the final hydrant nozzle orientation shall be made by the Lincoln Water System with all applicable costs and fees assessed to the Contractor. These fees shall be considered subsidiary to the cost of installing the water main and shall not be cause for additional compensation by the Contractor.

Backfill shall be accomplished in conformance with the provisions of Chapter 20 of these Specifications, except that all backfill within 3' of all hydrants and valve boxes shall be compacted using a mechanical hand tamper to 96% of maximum dry density as measured by AASHTO Method T-99.

B. BASIS OF PAYMENT

All VALVES of the various types and sizes indicated on the plans and actually installed shall be counted and paid for at the contract unit price bid per each. Such price shall include the valve, valve box, support blocks, other materials and labor necessary to install the valves, all equipment, tools, and incidentals necessary to complete the Work in conformance with these Specifications and as accepted by the City's Project Manager.

All HYDRANTS installed, as shown on the plans or as directed, except temporary hydrants used for flushing or disinfection of the mains, shall be counted and paid for at the contract unit price bid per each for HYDRANT, COMPLETE, L=5.5' or L=6.5'. Such price shall be full compensation for all loading, hauling, installation, thrust blocking, hydrant drain material, backfilling, labor, tools, materials, equipment and incidentals necessary to complete the Work in conformance with these Specifications and as accepted by the City's Project Manager.

All HYDRANT EXTENSIONS necessary to adjust the hydrants to grade shall be counted and paid for at the contract unit price bid per each for HYDRANT EXTENSION, COMPLETE. Such price shall be full compensation for all installation costs charged by Lincoln Water System, hydrant extension kits, labor, tools, materials, equipment and incidentals necessary to complete the Work in conformance with these Specifications and as accepted by the City's Project Manager.

The unit price for HYDRANT EXTENSION, COMPLETE shall be an established unit price per each in the bid proposal.

23.09 BENTOMAT® CL GEOSYNTHETIC CLAY LINER

A. GENERAL

This work shall consist of installation of Bentomat ® CL Geosynthetic clay liner (GCL) on water pipe as specified on the plans.

B. MATERIAL

GCL shall be Bentomat ® CL Geosynthetic clay liner (GCL) as manufactured by CETCO and dry Bentonite granules shall be non-toxic, high swelling, low dust, granular, sodium bentonite used for sealing overlapped sections of geosynthetic clay liner around pipe. Acceptable brands are CETCO Volclay CG-50 (50 lb. bag) and BAROID granular bentonite (50 lb. bag) available at local horizontal directional drilling (HDD) supply companies.

C. INDICATIONS FOR USE

As specified on drawings, in Contract Specifications or as directed by the Engineer, GCL shall be installed in accordance with this Construction Standard on all water pipe in locations where it is impractical or unfeasible to obtain the required separation between the water main and existing or proposed sanitary or storm sewers per State of Nebraska Department of Health and Human Services Title 179 NAC 7.

The GCL shall be installed 360º around polyethylene encased pipe to create a second barrier between the pipe and the surrounding soil. For pipe that normally is not encased in polyethylene wrap (i.e. PVC, HDPE, etc), install one layer of polyethylene wrap prior to installing the GCL. All lumps of clay, mud, and so forth, on the pipe surface shall be removed prior to installation of the polyethylene encasement and GCL.

During installation, care shall be taken to prevent soil from becoming trapped between the polyethylene encased pipe and GCL.

The GCL shall be installed in a manner to provide a snug fit. Extra care shall be taken to completely cover and bridge irregular surfaces such as bell-spigot interfaces, bolted connections, and fittings. The GCL shall not be installed in locations where the surrounding soil is contaminated.

D. EQUIPMENT

Additional equipment needed for installation of GCL's includes:

- Sharp Gasket Knife and spare blades
- Bentonite mastic and/or granular Bentonite paste made from dry powder sodium Bentonite
- Adhesive tape

Cutting GCL shall be performed using a sharp gasket knife. Frequent blade changes are recommended to avoid tearing of the geotextile components of the GCL.

The GCL shall be sealed around pipe joints, MJ hubs, flanges, bolts, nuts, valve bonnets, actuators, etc. using tape and bentonite past or bentonite mastic to seal GCL to these irregular surfaces.

23.09 BENTOMAT® CL GEOSYNTHETIC CLAY LINER (Continued)

E. BENTONITE PASTE PREPARATION

Bentonite paste shall be prepared immediately prior to installation of the GCL. Mix water with bentonite granules to form a paste with a consistency similar to peanut butter. Spread bentonite past on seams and folds before taping. If desired, bentonite paste may be spread with a trowel on polyethylene-wrapped pipe and fittings before wrapping with GCL.

F. INSTALLATION ON PIPE

The standard 15' wide roll of GCL is similar to heavy carpeting for handling purposes. Unroll the 15' roll of GCL and cut off the required amount needed to wrap around the outside diameter plus the required seam overlap on the bell end of MJ or RJ pipe. Refer to Table 23.09A below for the amount to cut from the roll.

TABLE 23.09 A – BENTOMAT GCL INSTALLATION GUIDE

PIPE SIZE	OD MJ/RJ BELL	CIRCUMFERENCE OF MJ/RJ BELL	MINIMUM SEAM OVERLAP ON MJ/RJ BELL	FEET TO CUT FROM 15' WIDE ROLL
6"	11.44"	35.94"	6"	4'
8"	13.97"	43.89"	6"	4'
12"	18.75"	58.90"	6"	6'
16"	23.22"	72.95"	6"	7'
24"	32.54"	102.23"	9"	10'

The GCL shall be wrapped around the pipe for the full length of the piping section, as indicated on project drawings or as directed by the Engineer, plus 2 additional feet. Therefore, if the section of pipe is longer than 13', additional sections of GCL shall be cut off of the roll and installed on the pipe in an overlapped fashion until the required length of pipe plus the additional 1' on each end has been wrapped.

For example:

If a section of 12" diameter pipe to be covered with GCL is 20' long, two 6' long sections would be cut off the 15' wide GCL roll. These sections would be trimmed and overlapped a minimum of 1' in the middle and 1' on each end of the pipe section for a total distance of 22', see Figure 1 and Figure 2. Seal the area where the two sections of GCL overlap with Bentonite paste and tape closed.

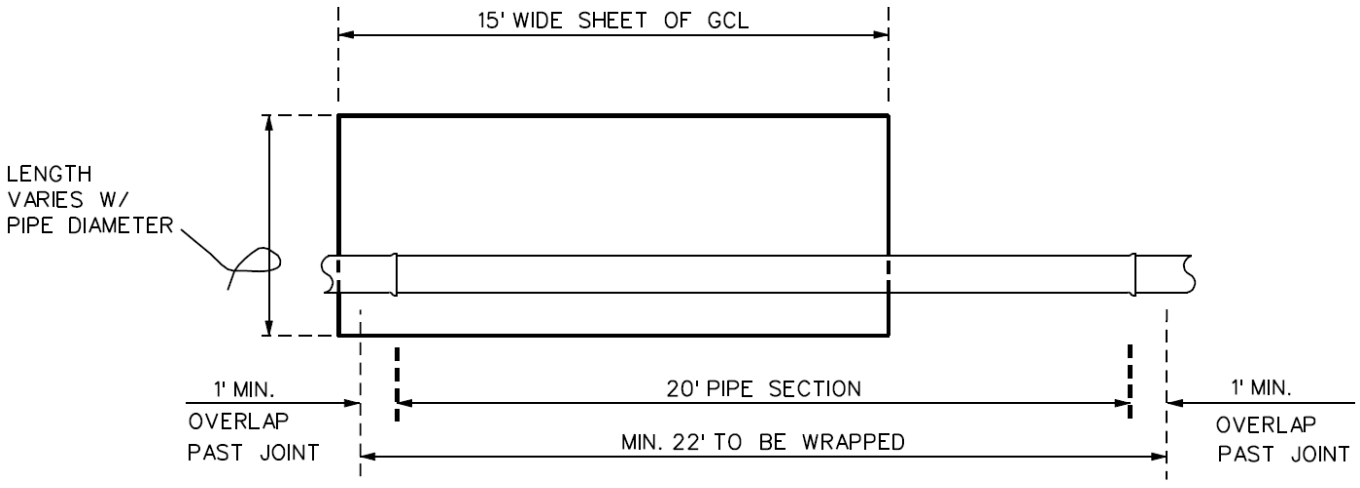


FIGURE 1

F. INSTALLATION ON PIPE (Continued)

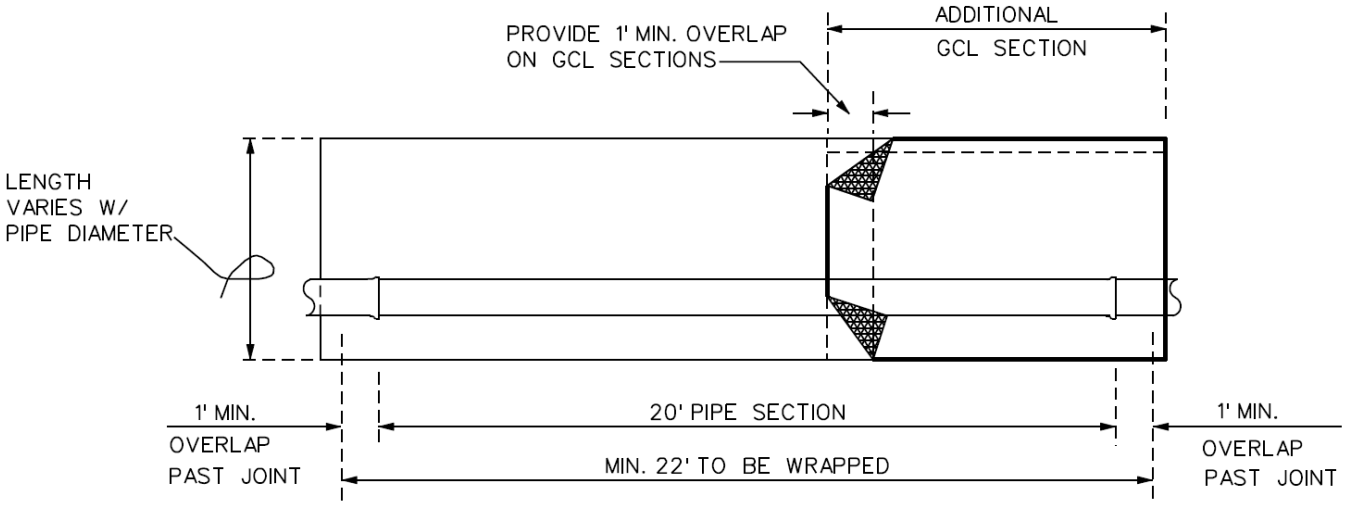


FIGURE 2

Bring the sections of GCL up and around the circumference of the pipe overlapping the bell, barrel and spigot with a minimum of 6" to 9" as specified in Table 1. Take up the slack width at the top of the pipe as shown in Figure 3 to make a snug but not tight fit along the barrel of the pipe and/or surface of fitting, securing any folds in the GCL with tape. Folds shall be made, pasted and taped closed such that open area of fold does not collect back-fill material. Spread bentonite paste over folds and seams to seal wrap as needed prior to backfilling.

After folds and seams have been pasted and taped closed along the longitude of the pipe section the ends shall be pasted with bentonite and sealed with tape as shown in Figure 4.

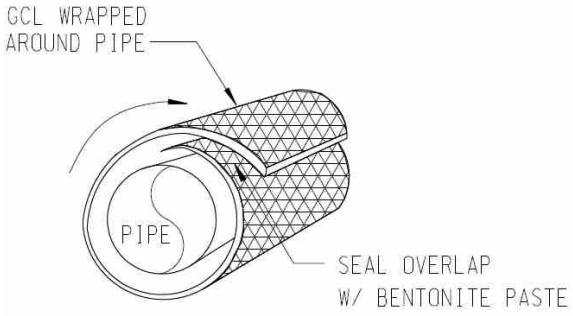


FIGURE 3

F. INSTALLATION ON PIPE (Continued)

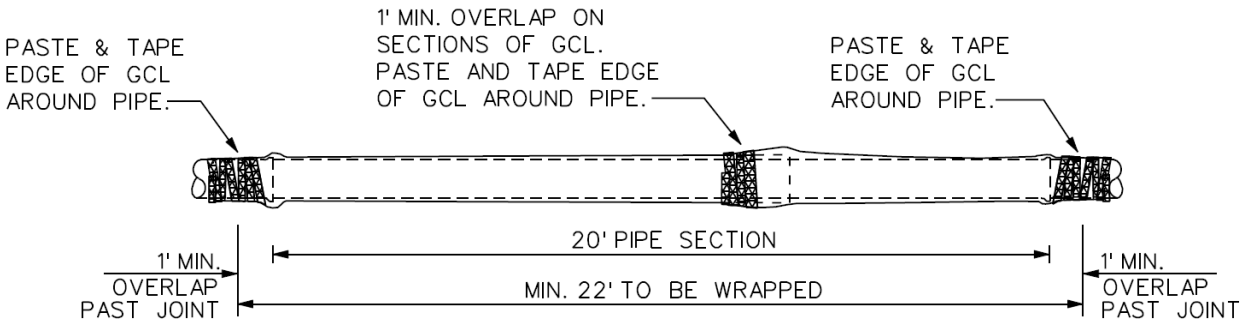


FIGURE 4

G. INSTALLATION AT SEWER CROSSING

Bentomat ® encasement at sewer crossing shall extend a minimum of 10' beyond the outside edges of single sewers. At locations where multiple sewers are crossed, the encasement shall extend 10' from the outside edge of the first sewer crossing to 10' beyond the outside edge of the last sewer crossing. See Figure 4A.

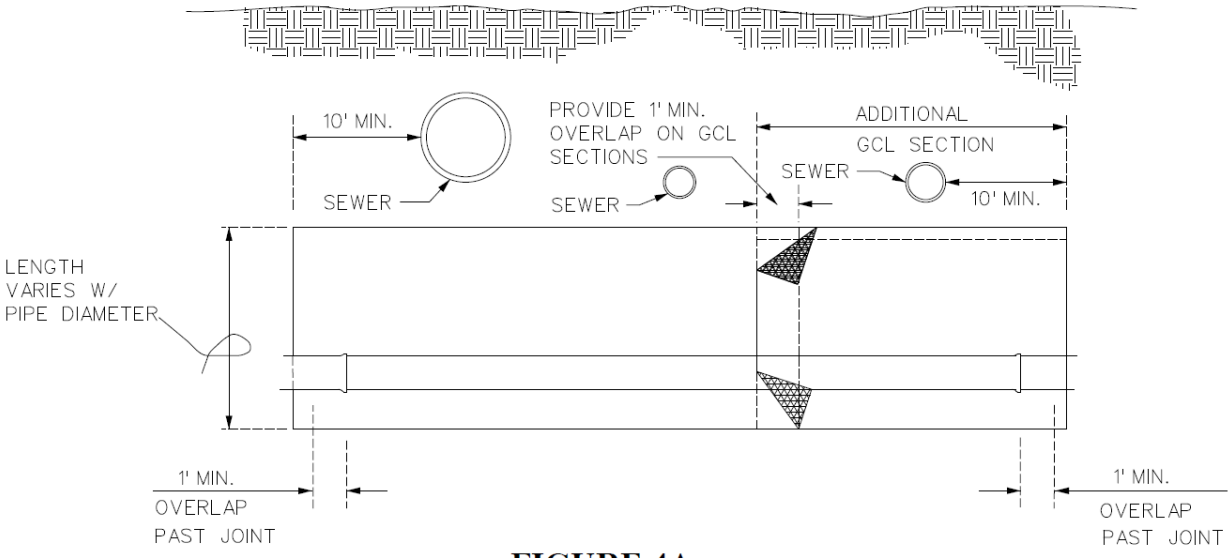


FIGURE 4A

H. BASIS OF PAYMENT

Bentomat ® CL Geosynthetic clay liner (GCL) installed per this Chapter, as shown on the plans or as directed, shall be paid for at the contract unit price bid per Square Foot for BENTOMAT GEOSYNTHETIC CLAY LINING. Such price shall be full compensation for all loading and unloading, hauling, excavation, installation, backfilling, labor, tools, materials, equipment and incidentals necessary to complete the Work in conformance with these Specifications and as accepted by the City's Project Manager.

23.10 TEMPORARY HYDRANTS AND BLOW-OFF FOR FLUSHING AND DISINFECTION

A. GENERAL

Temporary hydrants and blow-offs shall be provided as shown on the plans or as determined by the Lincoln Water System to provide adequate discharge of water for preliminary and final flushing of the water main(s) in conformance to AWWA C651. The installation of temporary hydrants and blow-offs shall include any necessary protection of surrounding areas from damage caused by water erosion and any other provisions necessary for the conveyance of discharge water to protect downstream facilities or property.

B. BASIS OF PAYMENT

When called for in the proposal, payment for temporary hydrants and blow offs used in conformance with these Specifications and accepted by the City's Project Manager shall be made at the contract unit price bid per each for TEMPORARY HYDRANT AND BLOW-OFF. The Such payment shall be full compensation for installation of temporary hydrant and blow-off, necessary erosion protection, discharge water conveyance and downstream protection, removal of temporary hydrant and blow-off and any materials, equipment, tools, labor, or incidentals necessary to complete the work in conformance with the plans.

23.11 WATER SERVICE CONSTRUCTION OR RECONSTRUCTION

A. GENERAL

For the purpose of constructing or reconstructing all water supply and service lines, the Contractor shall comply with the provisions of Title 17 of the Lincoln Municipal Code. The Contractor shall cause all Work to be performed by a licensed plumber. All water services that are uncovered in the course of construction shall be inspected by the Lincoln Water System to assess their integrity and recommend replacement to customers when found to be in unsatisfactory condition. All water services that are reconstructed shall be inspected by the Lincoln Water System.

Copper water supply or service lines which are to be looped or reconstructed shall be constructed of Type "K" seamless soft-drawn copper tubing or ductile iron pipe.

HDPE Service Pipe can only be used as a repair on existing HDPE service lines and not as a repair on other service line material types.

All HDPE service pipe and fittings for HDPE applications must be submitted and approved by LWS prior to installation or payment. All items installed without prior approval shall be removed at the contractor's expense.

The Contractor shall place all reconstructed water services or looped water services so as to provide a minimum cover of 4'. Minimum lateral clearance from structures open to the weather, such as storm sewer inlets, shall be 3'.
All other clearance shall be a minimum of 6".

A. GENERAL (Continued)

Looping a water service shall consist of the reconstruction of a water service across the width of the excavation for the facility being built or within 5' of said excavation. When the break in the service line is within 5' of either the tap or the curb stop, the Contractor shall loop the service pipe from the tap or curb stop to the opposite side of the excavation and only 1 joint will be allowed. When the break in the service line is beyond 5' from the tap or curb stop, the Contractor shall loop only that portion of service within the excavation and 2 joints will be allowed. All joints shall be located at or near the edges of the excavation and in no case shall the joints be positioned beneath other pipes or structures. Unless specifically approved by LWS due to conflicts with driveway pavement, sidewalk pavement, landscaping or trees, replacement taps will have no joints in the supply pipe if the excavation is located within 5 ft. of the curb stop.

When a service constructed of lead, galvanized steel, pitted copper, or other material considered unacceptable according to Title 17 of the Lincoln Municipal Code requires looping or reconstruction, the entire service from tap to curb stop shall be replaced.

When a water service which does not conflict with the Work is damaged by the Contractor, it must be repaired or replaced at the expense of the Contractor to the City's Project Manager's satisfaction. Copper service pipe in good condition may be repaired, all other unacceptable service materials shall be replaced from tap to curb stop, except for water services that contain or may have previously contained lead materials or lead contaminated materials, which require full replacement from tap to meter.

When a service is replaced to the corporation tap, a new tap may be required. No tap shall be allowed to remain which is smaller than 3/4".

New curb stops and boxes may be required when the service is reconstructed to the curb stop. Such curb stop may be ordered to be replaced if inoperable or obsolete. All curb stops and boxes shall be supplied by the Lincoln Water System at no cost to the Contractor.

All corporation taps, labor and equipment required to replace taps will be supplied by the Lincoln Water System to the Contractor at no cost. The Contractor shall be responsible for all excavation, boring, backfilling, installation of curb stops and boxes, sod, pavement, and other incidentals necessary to complete the looping or reconstruction.

All water services crossing or paralleling a new main shall be transferred to the new main if the main is 16" or smaller.

Any tap removed from service shall be immediately abandoned at the main by the Lincoln Water System at no cost to the Contractor, unless the main is to be abandoned as part of the Work of the contract. The Contractor shall be responsible for excavation, backfill, sod, pavement and other incidentals necessary to complete the abandonment.

Whenever a water service is reconstructed that provides fire protection (fire service), the Contractor shall obtain the necessary Underground Fire Sprinkler Permit through the City's Building and Safety Department, Bureau of Fire Prevention. The Contractor shall comply with the requirements of the permit and anticipate and arrange any necessary inspections of the fire service reconstruction.

23.11 WATER SERVICE CONSTRUCTION OR RECONSTRUCTION (Continued)

B. BASIS OF PAYMENT

When the items of Work stated below do not appear as bid items in the proposal form, all Work necessary for the looping or reconstruction of water services shall be paid for as an Extra Work item.

When the items of Work stated below are included in the proposal form, the payment shall be as follows:

COPPER WATER SERVICE PIPE or DUCTILE IRON WATER SERVICE PIPE of the various sizes called for shall be measured and paid for at the contract unit price bid per linear foot. Such payment shall be full compensation for all materials, tools, equipment, and labor including the licensed plumber, excavation, backfill, sod, clean-up and incidentals necessary to install the pipe in a manner acceptable to the City's Project Manager.

Boring for water service pipe shall be measured and paid for at the contract unit price per linear foot for BORING FOR ___" WATER SERVICE PIPE. Such payment shall be full compensation for all labor, materials, equipment, tools and incidentals necessary to produce the bore hole ready to receive the water service pipe, as accepted by the City's Project Manager. Water service pipe to be placed in the bore hole shall be paid for as provided above.

LOOP WATER SERVICE shall be measured and paid for at the contract unit price bid per each. This payment shall be full compensation for all labor, equipment, excavation, backfill, tools, incidentals, and materials except pipe, necessary to complete the Work in a manner acceptable to the City's Project Manager.

CONSTRUCT OR RECONSTRUCT WATER SERVICE shall be measured and paid for at the contract unit price bid per each. Such payment shall be full compensation for all labor, tools, and materials, except pipe and materials supplied by the City, equipment, excavation, backfill and incidentals necessary to complete the Work in a manner acceptable to the City's Project Manager.

23.12 ABANDONMENT OF WATER MAIN

A. GENERAL

When existing water mains are shown to be abandoned in place on the plans, the Contractor shall plug each end of the abandoned water main segment with a sleeve and plug or concrete after all services have been connected to the new water main for that section.

When existing water valve boxes are shown to be abandoned in place on the plans and the proposed water main is in service with service lines reconnected, the Contractor shall turn the valves to the off position, remove 1 or more feet of the top section of the valve box, fill with sand, and cap or plug with concrete.

B. BASIS OF PAYMENT

ABANDONMENT OF WATER MAIN shall be measured and paid for at the contract lump sum amount. Such payment shall be full compensation for all labor, tools, and materials necessary to complete the Work in a manner acceptable to the City's Project Manager.

23.13 HIGHWAY, STREET AND RAILROAD CROSSING

Highway, street and railroad crossings shall be constructed as indicated on the plans and as specified in the respective permits issued, if applicable. The City will obtain all necessary permits. Pipe encasement shall be constructed in conformance with Chapter 20 of these Specifications.

23.14 TESTING

The Contractor shall notify Lincoln Water System 48 hours prior to pressure testing water mains on new construction. The Contractor shall furnish all gauges, pumps and other equipment necessary to perform all of the acceptance tests and shall provide all assistance necessary or required by the City's Project Manager to verify the test results. No test shall be conducted until all thrust blocking has attained sufficient strength to resist any thrusts imposed by the test pressures applied.

The Contractor shall carefully fill the main or mains to be tested with water from the existing water distribution system. The Contractor shall bleed all air from pipes, valves, fittings and hydrants during filling operations. All corporation stops required to expel air shall be installed by the Lincoln Water System. The Contractor shall provide and backfill all excavations required to install corporation stops. All air taps will be abandoned by the Lincoln Water System personnel after testing is completed.

The Contractor shall pump water into the system to raise the pressure to the level indicated in the table below at the lowest elevation in the section being tested. The Contractor shall maintain the test pressure, within +/- 5 (psi), during the entire test period. The pressure testing period shall be a minimum of 2 hours. The Contractor shall carefully measure all water added to the system during that period. The rate of water added per 1,000 feet of pipeline shall not exceed maximum allowable rate as shown in TABLE 23.14 A – WATER MAIN PRESSURE TESTING.

TABLE 23.14 A – WATER MAIN PRESSURE TESTING

Nominal Pipe Size	Maximum Allowable Rate (gallons/hour)	Test Pressure (psi)
6"	0.57	200
8"	0.76	200
12"	1.15	200
16"	1.32	150
24"	1.99	150
30"	2.48	150
36"	2.98	150
48"	3.97	150
54"	4.47	150

When the pipeline being tested contains sections of various diameters, the allowable losses shall be the sum of the computed allowable losses for each size. Where sections are isolated for testing, the allowable losses will be computed for the length of sections being isolated.

During the test period, the ground surface along the length of the section being tested shall be examined for leakage. All detected leaks shall be repaired regardless of the test results.

In the event that the test requirements are not met, the Contractor shall locate and repair all defects at his own expense. Following the repairs, the tests shall be repeated until the test result requirements are met.

Pressure testing shall not be measured or paid for directly. Testing shall be considered subsidiary to those items for which direct payment is made.

23.15 DISINFECTION OF THE COMPLETED WORK

The Contractor shall keep the Work clean during construction to facilitate disinfection. All excavation and backfill required to install chlorination taps shall be provided by the Contractor.

For water mains 24" and smaller, the Contractor shall provide for the scheduling of the flushing and disinfection by the Lincoln Water System at least 24 hours in advance of the time that those services are desired. All costs of disinfection, including tests, shall be billed to and paid for by the Contractor.

For water mains 30" and larger, the Contractor shall provide a flushing and disinfection plan to the City's Project Manager for review and approval that is in conformance to the Special Provisions or the requirements specified in AWWA C651. This plan shall include the method and disinfectant to be used in disinfection process, the concentration of disinfectant to be used, the method of neutralization of the disinfectant prior to discharge into open channels or storm sewer systems. The documented results of the bacteriological tests shall be provided to the City's Project Manager with a copy to the Lincoln Water System.

Flushing and disinfection will be repeated at the Contractor's expense until bacteriological tests conducted by the Lincoln Water System indicate the system is properly disinfected.

The Work required to disinfect the system shall not be measured for direct payment. Disinfection shall be considered subsidiary to those items for which direct payment is made

23.16 COLD WEATHER CONSTRUCTION

All construction performed in cold weather or during periods where frost penetration of the soil exceeds 6" shall be in conformance with Chapter 20 of these Specifications.

23.17 SUBSTANTIAL COMPLETION

Water main Work shall be considered substantially complete when all pipe is laid, all hydrants, valves, fittings and appurtenances installed and operable, backfill complete, testing complete and accepted, disinfection complete, tap holes backfilled, water services connected, paving, sidewalks and driveways replaced, final clean-up and park space finished.

23.18 FINAL COMPLETION AND ACCEPTANCE

The project shall be considered eligible for final acceptance by the City when all required Work is complete and accepted by the City's Project Manager, including all Work associated with existing water main abandonment, valve box grade adjustments, required grade adjustments to hydrants including installation of hydrant extensions in conformance to these specifications, required adjustments to hydrant nozzle orientation, seeding and/or sodding, and correction of all deficiencies found as a result of testing and/or final inspection by the City's Project Manager.

23.19 GUARANTEE

At any time during the two-year guarantee period, and within the time period allowed, the Contractor shall correct any defect in material or workmanship which has been brought to his attention. Such items shall include but not be limited to trench settlement including subsequent pavement damage, pipe leaks, damage to polyethylene encasement, hydrants out of plumb, hydrants which drain improperly, valve boxes out of plumb or offset from center of operating nut, or service line leaks.

23.20 CATHODIC PROTECTION

A. GENERAL

When called for on the plans and Contract Documents, the Contractor install cathodic protection for Ductile iron water mains having a diameter of greater than or equal to 12-inches (and their smaller appurtenances such as lateral connections to existing water mains and/or fire hydrants) that are installed using open-trench excavations and driven and bored casings. This shall not apply to water mains installed via horizontal directional drilling.

B. SUBMITTALS

1. Product Data

Submit manufacturer's specifications, recommendations, and installation instructions for each of the following main product categories and all applicable product subheadings specified in this Specification:

a. Electrical Continuity Provisions for Ferrous Pipe (Materials and Testing Procedure)
b. Corrosion Monitoring Test Stations, Buried Reference Electrodes and Calibrated Wire Shunts
c. Electrical Isolation Devices
d. Galvanic Anodes
e. Wire, Cable, and Splices
f. Exothermic Welds and Connection Devices

Manufacturer's product submittals shall be incorporated into a single document to demonstrate that the items have been properly coordinated by the CONTRACTOR as a unit.

a. A notation shall be made on each shop drawing submitted as to the item's specific use by the appropriate Article-Paragraph referenced in this Specification.
b. Multiple or incomplete submittals furnished by the CONTRACTOR may be rejected.

2. Quality Assurance

a. Furnish the services of an individual certified by NACE International® as a Level CP2 Corrosion Technician to monitor compliance with this Specification and to ensure that the cathodic protection system components conform to this Specification.
b. Submit the CP Technician's qualifications and prior experience before installation of any cathodic protection components.
c. After the cathodic protection system has been installed, field commissioning of the cathodic protection system will be performed by the CP Technician furnished by the CONTRACTOR for review and approval by the CITY OF LINCOLN'S CP Specialist.

C. DELIVERY, STORAGE AND HANDLING

Manufacturers shall provide adequate care to protect cathodic protection materials from damage during handling, storage, hauling, and installation.

D. WARRANTY ON CONTRACTOR-PROVIDED MATERIALS

All Contractor-provided materials shall be guaranteed for a period of one year. The one-year period shall commence at the time of the final installation of all components by the Contractor and after the system has been tested and properly adjusted for operation by Lincoln Water System's Corrosion Engineer.

E. APPROVED MATERIAL SUPPLIERS

The following list of suppliers is provided for the CONTRACTOR's convenience in procuring the material required by this Specification. It shall remain the CONTRACTOR's responsibility to ensure that the materials furnished meet the physical descriptions and performance characteristics listed herein.

1. Subject to meeting the requirements of this Specification, cathodic protection materials are available from the following manufacturers-suppliers:

    a. Mesa Products, Inc., (918-627-3188).
    b. BK Corrosion, LLC, (713-225-0349).
    c. T. Christy Enterprises, (800-258-4583).

F. ELECTRICAL CONTINUITY PROVISIONS – FERROUS PIPE

Insulated Stranded Copper Cable

1. The quantity and gauge of continuity bond cables required for each pipe joint shall be as shown on the CP Installation Detail Drawings included hereinafter in this Specification.

    a. The CONTRACTOR, at his option, may install the largest gauge of continuity bond cable for all pipe sizes provided that the weld shots do not damage the pipe wall or its interior lining.

2. Bond cables shall be factory-made with formed copper sleeves installed at both ends of the bond cable using the manufacturer's proper-sized hammer dies.

3. Bond cables shall be fabricated by the same manufacturer as the exothermic weld equipment used to connect the cable to the structure.

4. Cable shall be constructed of stranded copper equipped with a high molecular weight polyethylene insulation. Insulation shall conform to ASTM D1248 – Specification for Plastic Molding and Extrusion Materials, Type 1, Class C, Grade 5 and be configured as follows:

    a. No. of Strands: 7
    b. Outer Jacket Thickness: 0.110 inches
    c. Length: 18 inches (min.)

5. Subject to meeting the requirements of this Specification, acceptable manufacturer's products which may be incorporated into the work include the following *or an approved equal:*

    a. Continental Industries (918-627-5210), thermOweld® Jumper Bonds.
    b. ERICO Products, Inc. (440-248-0100), Cadweld® Bonds – Formed Terminal.

G. CORROSION MONITORING TEST STATIONS

1. Non-Metallic Post-Type Test Stations

   a. Monitoring stations shall be a non-metallic post-type station mounted on a non-metallic conduit post. Test station shall be furnished with a capped terminal board equipped with wire/cable binding posts to permit ready access and shall be constructed as follows:

      (1) Terminal Board: Polycarbonate plastic (clear).
      (2) Test Station Cap: Polycarbonate plastic (color coded by test station type).
      (3) Conduit Post: UV stabilized polyethylene (white).
      (4) Binding Posts: Nickel-plated marine brass (6 minimum).
      (5) Shorting Bars: Nickel-plated copper.

   b. Subject to meeting the requirements of this Specification, acceptable manufacturer's products which may be incorporated into the work include the following *or an approved equal:*

      (1) Tinker & Rasor Company (909-890-0700), Model T-3.

2. Flush-Mounted Test Station Enclosures

   a. Test station shall be contained in a heavy-duty, polymer concrete, flush-to-grade utility enclosure able to withstand incidental traffic and constructed as follows:

      (1) The open bottom body shall be constructed of polymer concrete having a minimum compressive strength of 87 MPa.
      (2) The cover shall be constructed of polymer concrete having a non-skid surface and shall cover the body of the enclosure. Cover shall be capable of withstanding a minimum of 20,000 pounds without failure in accordance with the requirements ANSI/SCTE 77/T15 applications.
      (3) Cover shall have a minimum of two hex-capped stainless-steel hold-down bolts placed at opposite corners and shall be labeled "CP TEST" in minimum 1" high letters.

   b. Subject to meeting the requirements of this Specification, acceptable manufacturer's products which may be incorporated into the work include the following *or an approved equal:*

      (1) Oldcastle Polymer, Model 1324-12
      (2) New Basis, Inc. (951-787-0600) Model PCA132412S.

G. CORROSION MONITORING TEST STATIONS (Continued)

3. Prepackaged Cu-$CuSO_4$ Reference Electrodes

a. Description: Cu-$CuSO_4$ electrodes shall be used for soil environments to provide a stable electrical benchmark from which to measure the cathodic protection system's effectiveness. Electrodes shall be constructed as follows:

(1) Element: Copper rod encapsulated in a proprietary backfill electrolyte containing high purity copper sulfate crystals and a chloride ion trap to prevent contamination of the electrolyte.
(2) Service life of the reference electrode shall be no less than 20 years.
(3) Lead Wire: No. 14 RHH-RHW (yellow) stranded copper wire. Lead wire shall be sufficiently long to reach its termination point without splicing.

b. Subject to meeting the requirements of this Specification, acceptable manufacturer's products which may be incorporated into the work include the following *or an approved equal:*

(1) Borin Manufacturing, Inc. (310-822-1000) Model SRE-007-CUY.
(2) GMC Electrical, Inc. (909-947-6016) Model CU-1-UGPC.

4. Calibrated Wire Shunts

a. Description: Color-coded calibrated wire shunts shall be used to connect the cathodic protection system's anode header cable and structure return connection circuits.

b. Subject to meeting the requirements of this Specification, acceptable manufacturer's products which may be incorporated into the work include the following *or an approved equal:*

(1) Tinker & Rasor Company (909-890-0700), 0.01-ohm wire shunt with yellow mounting plate rated at 8 amps.

H. ELECTRICAL ISOLATION DEVICES

1. Plastic Pipe Inserts (PPI): In soils not known to be contaminated with hydrocarbons, PPI shall be constructed as shown on the CP Installation Detail Drawings included hereinafter in this Specification.

a. High Density polyethylene Pipe Inserts (HDPI) shall meet the requirements for Type III, Grade P345 Polyethylene Material as defined in ASTM Specification D-1248 (PE 3408). The minimum pressure class/SDR rating acceptable shall be Class 200/SDR 11. The pipe shall have an outside diameter matching the ductile iron pipe to which it is connected.

b. Mechanical joint anchor fittings shall be used to transition from ductile iron to HDPE or PVC. The fitting shall be stronger than the pipe in that when it is subjected to tensile stress the pipe will pull apart before the fitting will pull out and the pipe will blow before the fitting will rupture under pressure.

H. ELECTRICAL ISOLATION DEVICES (Continued)

2. Flange Isolation Kit (FIK) Assemblies: In soils not known to be contaminated with hydrocarbons, FIK shall be constructed as shown on the CP Installation Detail Drawing included hereinafter in this Specification. Provide FIK assemblies matching the pressure rating of the pipe.

   a. FIK assemblies shall be certified by an independent certification agency to meet the requirements of the NSF-61 Standard and shall consist of the following components:

      (1) Flange Gasket Retainer: Full-faced (Type E) G-10 Epoxy Glass.
      (2) Sealing Elements: Ethylene propylene diene monomer (EPDM) quad O-Rings.
      (3) Isolation Sleeves: 1/32-inch thick G-10 Epoxy Glass.
      (4) Isolation Washers: Double 1/8-inch thick G-10 Epoxy Glass.
      (5) Backup Washers: Double 1/8-inch thick Type 304 Stainless Steel.

   b. Subject to meeting the requirements of this Specification, acceptable manufacturer's products which may be incorporated into the work include the following *or an approved equal:*

      (1) GPT, Inc.(303-988-1242) Model LineBacker®.
      (2) Lamons® (713-222-0284) Model IsoGuard™.

3. Petrolatum Tape-Wrap Encapsulation of Buried FIK

   a. All buried FIK shall be encapsulated in a three-part cold-applied petrolatum tape coating consisting of a primer, profiling mastic, and a low-temperature petrolatum tape.

      (1) Primer:

         (a.) Solids Content: 100%
         (b.) Specific Gravity: 1.08
         (c.) Specific Volume: 26 cubic inches/pound
         (d.) Flash Point: > 356 ºF
         (e.) Coverage: 10-22 sq. ft./pound

      (2) Profiling Mastic:

         (a.) Solids Content: 100%
         (b.) Specific Gravity: 0.605
         (c.) Specific Volume: 46 cubic inches/pound
         (d.) Flash Point: 356 ºF
         (e.) Coverage: Varies by application

      (3) Low-Temperature Petrolatum Tape:

         (a.) Thickness: 46 mils
         (b.) Maximum Service Temperature: 122 ºF
         (c.) Roll Width: 2 inches to 12 inches
         (d.) Roll Length: 33 feet
         (e.) Coverage with 55% Overlap: 87 sq. ft. of tape per 100 sq. ft. of pipe

H. ELECTRICAL ISOLATION DEVICES (Continued)

3. Petrolatum Tape-Wrap Encapsulation of Buried FIK (Continued)

b. Subject to meeting the requirements of this Specification, acceptable manufacturer's products which may be incorporated into the work include the following *or an approved equal:*

(1) Denso NA, Inc. (281-821-3355) Denso Paste S105/Profiling Mastic/LT Tape.

4. Electrically Isolating Corporation Stops

a. Electrically isolating corporation stops shall be constructed as follows:

(1) All brass construction conforming to AWWA Standard C800 (ASTM B-62 and ASTM B-584).
(2) Solid one-piece tee-head and stem with EPDM O-ring in stem.
(3) Ball-style valve with molded EPDM seat to support fluorocarbon-coated brass ball.
(4) Factory-assembled nylon insulator installed between the body assembly and flared copper/nut service line. Individual or field-installed threaded nylon or plastic components are not acceptable.
(5) All threaded components must be metal. Entire assembly threads secured with adhesive to prevent unintentional disassembly and to render unit leak resistant to 300 psi working pressure.

b. Subject to meeting the requirements of this Specification, acceptable manufacturer's products which may be incorporated into the work include the following, no substitutions:

(1) Mueller Company (770-206-4200), Model N35000N Insulated Ball Corporation Assembly.
(2) A.Y. McDonald (800-292-2737), Model 74701B Corporation Stop with #74755DB Copper Flare x Female Copper Flare Dielectric Bushing.

5. Casing Spacers

a. Carrier pipe shall be contained within each steel casing sleeve by the use of casing isolation spacers.

(1) Configuration:

(a.) Carrier pipe shall be positioned such that the carrier rests near the bottom of the casing pipe and the height of the risers and runners shall be sized to provide a bottom clearance not less than one-half inch between the casing pipe and the extreme outside diameter of the any joint bell of the carrier pipe and a top clearance of three-fourths inch minimum.

(2) Band Sections:

(a.) Casing spacer shall be a two-piece shell per carrier pipe and made from T304 stainless steel of a minimum 14-gauge thickness.

H. ELECTRICAL ISOLATION DEVICES (Continued)

5. Casing Spacers (Continued)

(2) Band Sections: (Continued)

(b.) Each shell section shall be lined with a 0.090" thick, ribbed PVC extrusion with a retaining section that overlaps the edges of the shell and prevents slippage.
(c.) PVC Liner shall have a hardness of 85-90 durometer.
(d.) Bearing surfaces (runners) shall be ultra-high molecular weight polyethylene (UHMW) to provide abrasion resistance and a low coefficient of friction (0.12).

(3) Runners:

(a.) The runners shall be attached to the support risers at appropriate positions to properly support the carrier pipes within the casing pipe and to ease installation.
(b.) The runners shall be mechanically bolted to the spacer.

(4) Risers:

(a.) Risers shall be MIG welded to the shell, where applicable.
(b.) Risers shall be made of T304 stainless steel of a maximum 10 gauge with bolt heads welded to the inside of the risers for strength.
(c.) Bottom risers 6" and over in height shall be reinforced. All reinforcing plates shall be 10-gauge T304 stainless steel and shall be MIG welded to mating parts.
(d.) All weldments shall be fully chemically passivated in accordance with ASTM A380.

b. Subject to meeting the requirements of this Specification, acceptable manufacturer's products which may be incorporated into the work include the following *or an approved equal:*

(1) Cascade Waterworks Manufacturing Co. (800-426-4301), Model CCS.
(2) Advance Products and Systems, Inc. (337-233-6116), Model SSI.
(3) The BWM Company (828-247-0630). Model SS-Pipe Size.

6. Pipe Penetration Sleeve Seals

a. Isolating sleeve seals shall be modular mechanical type constructed of expanding, interlocking links shaped to continuously fill and seal the annular space between the carrier pipe and the sleeve or opening, and shall be constructed as follows:

(1) Links: Synthetic rubber.
(2) Fasteners: Zinc-coated steel.

b. Subject to meeting the requirements of this Specification, acceptable manufacturer's products which may be incorporated into the work include the following *or an approved equal:*
(1) GPT, Inc. (303-988-1242) Model Link-Seal®.
(2) Advance Products and Systems, Inc. (337-233-6116), Model Innerlynx®.

H. ELECTRICAL ISOLATION DEVICES (Continued)

7. Casing End Seals

a. Casing end seals shall be wrap-around style and shall be constructed as follows:

(1) Annulus Wrapping: 1/8-inch thick neoprene rubber.
(2) Hold-down Banding: 1/2-inch wide Type 304 SS worm gear banding.

b. Subject to meeting the requirements of this Specification, acceptable manufacturer's products which may be incorporated into the work include the following *or an approved equal:*

(1) GPT, Inc. (303-988-1242) Model S Pull-On End Seal.
(2) Advance Products and Systems, Inc. (337-233-6116), Model AM End Seal.

I. GALVANIC ANODES

1. Magnesium Anodes

a. Description: Magnesium anodes shall be capable of delivering a minimum efficiency of 500 amp-hours per pound of magnesium and shall have the following metallurgical analysis:

b. Quality Assurance: Furnish spectrographic analysis for assurance of chemical composition and ASTM G97 for verification of electro-chemical properties on samples from each heat or batch of anodes supplied for this project.

c. Metallurgy:

(1) Aluminum: 0.01% (max.)
(2) Manganese: 0.50% - 1.3%
(3) Copper: 0.02% (max.)
(4) Nickel: 0.001% (max.)
(5) Iron: 0.03% (max.)
(6) Other (each): 0.05% (max.)
(7) Other (total): 0.30% (max.)
(8) Magnesium: Balance

d. Packaged Magnesium Anode Backfill: Completely surround the anode ingot in backfill without voids. Provide magnesium anodes packaged within a cotton sack in a special chemical backfill having the following proportions:

(1) Ground Hydrated Gypsum: 75%
(2) Powdered Bentonite: 20%
(3) Anhydrous Sodium Sulfate: 5%
(4) Provide backfill with a grain size such that 100% is capable of passing a 20-mesh screen and 50% is retained by the 100-mesh screen.

I. GALVANIC ANODES (Continued)

1. Magnesium Anodes (Continued)

e. Anode Lead Wire

(1) The standard lead wire for a magnesium anode shall be at least 10 feet in length of No. 12 AWG solid copper wire with Type TW (red) thermoplastic insulation

(2) Lead Wire Connection to Anode Core

(a.) Magnesium anodes shall be cast with a minimum 20-gauge galvanized steel core.
(b.) One end of the anode shall be recessed to expose the core for silver-soldering the lead wire.
(c.) The silver-soldered lead wire connection and anode recess shall be filled with an electrical potting compound before packaging.

(3) Magnesium Anode Physical Parameters

Anode Weight (#)		**Nominal Package Dimensions (in.)**	
Bare Anode	**Pkg'd Anode**	**Length**	**Diameter**
48	98	38	8.0

f. Subject to meeting the requirements of this Specification, acceptable manufacturer's products which may be incorporated into the work include the following *or an approved equal:*

(1) Mesa Products, Inc., (918-627-3188).
(2) BK Corrosion, LLC, (713-225-0349).
(3) T. Christy Enterprises, (800-258-4583).

2. Zinc Anodes

a. Description: Zinc anodes shall be capable of delivering a minimum efficiency of 335 amp-hours per pound of zinc.

b. Quality Assurance: Furnish spectrographic analysis for assurance of chemical composition for verification of electro-chemical properties on samples from each heat or batch of anodes supplied for this project.

c. Metallurgy:
(1) Aluminum: 0.005% (max.)
(2) Cadmium: 0.003% (max.)
(3) Iron: 0.0014% (max.)
(4) Lead: 0.003% (max.)
(5) Copper: 0.002% (max.)
(6) Zinc: Balance

I. GALVANIC ANODES (Continued)

2. Zinc Anodes (Continued)

d. Packaged Zinc Anode Backfill: Completely surround the anode ingot in backfill without voids. Provide Zinc anodes packaged within a cotton sack in a special chemical backfill having the following proportions:

(1) Ground Hydrated Gypsum: 75%
(2) Powdered Bentonite: 20%
(3) Anhydrous Sodium Sulfate: 5%
(4) Provide backfill with a grain size such that 100% is capable of passing a 20-mesh screen and 50% is retained by the 100-mesh screen.

e. Zinc Anode Lead Wire

(1) The standard lead wire for a Zinc anode shall be at least 10 feet in length of No. 12 AWG solid copper wire with Type TW (red) thermoplastic insulation

(2) Lead Wire Connection to Anode Core

(a.) Zinc anodes shall be cast around a centralized ¼-inch diameter electro-galvanized mild steel rod core.

(b.) Lead wire shall be silver-soldered to the rod core.

(c.) Wrap soldered connection with two half-lapped layers of rubber tape followed by two half-lapped layers of vinyl tape.

f. Zinc Anode Physical Parameters

Anode Weight (#)		Nominal Package Dimensions (in.)	
Bare Anode	**Pkg'd Anode**	**Length**	**Diameter**
60	130	66	5.5

g. Subject to meeting the requirements of this Special Provision, acceptable manufacturer's products which may be incorporated into the work include the following *or an approved equal:*

(1) Mesa Products, Inc., (918-627-3188).
(2) BK Corrosion, LLC, (713-225-0349).
(3) T. Christy Enterprises, (800-258-4583).

J. WIRE, CABLE AND SPLICES

1. Anode Header Cable and Structure Return Connection (Direct Burial)

   a. High molecular weight polyethylene insulated stranded copper cable shall be used for all underground portions of the cathodic protection system's anode header cable and structure return connection circuits. Insulation shall conform to ASTM D1248 – Specification for Plastic Molding and Extrusion Materials, Type 1, Class C, Grade 5.

   b. The DC cables shall be sized as follows:

      (1) No. of Strands: 7
      (2) Outer Jacket: 0.110" thickness
      (3) Anode Header Cable: No. 8 AWG (red)
      (4) Structure Return Connection: No. 8 AWG (blue)

2. Test Wires for CP System Monitoring (Direct Burial)

   a. Cross-linked polyethylene (XLPE) Type RHW-2 and USE-2 for use at 600 volts or less shall be used for all underground structure connections as part of the CP system's monitoring circuit. Wire insulation shall conform to NEC for direct burial, general-purpose applications at a maximum continuous operating temperature of 90 degrees C in either wet or dry locations.

   b. The test wires shall be configured as follows:

      (1) Conductors shall be Class B stranded annealed uncoated copper per UL Standard 854 and 44.
      (2) Primary Insulation: 0.045" thickness
      (3) Gauge and Structure Color Code: #12 AWG (colors as shown on drawings)

   c. Subject to meeting the requirements of this Specification, acceptable manufacturer's products which may be incorporated into the work include the following *or an approved equal:*

      (1) Graybar Electric Company (800-472-9227)
      (2) Omni Cable Corp. (800-292-6664)
      (3) Kris-Tech Wire (315-339-5268)

3. Compression Crimp Splice Connectors

   a. All underground spliced connections used within the DC cathodic protection circuit shall be made through the use of copper compression crimp connectors.

      (1) The proper size connectors shall be used in accordance with the manufacturer's recommendations.
      (2) Connectors shall be crimped with a hand tool capable of delivering a minimum of 9000 pounds of compressive force.

   b. Subject to meeting the requirements of this Specification, acceptable manufacturer's products which may be incorporated into the work include the following *or an approved equal:*

      (1) Burndy LLC-US (800-346-4175).

J. WIRE, CABLE AND SPLICES (Continued)

4. Splice Encapsulation

a. All underground spliced connections used within the DC cathodic protection circuit shall be sealed with rubber and plastic tape contained within a waterproof coating.

b. Subject to meeting the requirements of this Specification, acceptable manufacturer's products which may be incorporated into the work include the following *or an approved equal*:

(1) 3M Electrical Products (1-888-364-3577) - Scotch Brand 23 Rubber Splicing Tape.
(2) 3M Electrical Products (1-888-364-3577) - Scotch Brand 33+ Vinyl Electrical Tape.
(3) 3M Electrical Products (1-888-364-3577) - Scotchkote Electrical Coating.

K. EXOTHERMIC WELDS AND CONNECTION DEVICES

1. All connections used within the DC cathodic protection system circuit shall be by exothermic welds.

a. The proper size welders, metal charges, and wire sleeves shall be used in accordance with the manufacturer's recommendations. Do not mix different manufacturers' products.

(1) When connecting to horizontal ductile iron or cast-iron structures, use a maximum of 32-gram weld metal charge and furnaces designated specifically for cast iron.
(2) When connecting to horizontal carbon steel structures, use a maximum of 25-gram weld metal charge and furnaces designated specifically for carbon steel.

b. Subject to meeting the requirements of this Specification, acceptable manufacturer's products which may be incorporated into the work include the following *or an approved equal:*

(1) Continental Industries (918-627-5210), Model thermOweld®.
(2) ERICO Products, Inc. (440-248-0100), (440-248-0100), Model Cadweld®.

2. Coating of Wire and Cable Connections to Structures

a. A pre-fabricated plastic sheet with an igloo-shaped dome and entry tunnel filled with an oil- and gas-resistant elastomeric rubber and a primer-less elastomeric tape for bonding directly to the structure.

b. Subject to meeting the requirements of this Specification, acceptable manufacturer's products which may be incorporated into the work include the following *or an approved equal:*

(1) Continental Industries (918-627-5210), Model thermOcap® PC.
(2) Chase Corporation (781-332-0700), Model Royston Handy Cap® IP.

L. INSTALLATION OF CATHODIC PROTECTION MATERIALS - GENERAL

Examine the areas and conditions under which cathodic protection materials are to be installed and notify RESIDENT PROJECT REPRESENTATIVE in writing of conditions detrimental to the proper and timely completion of the Work. Do not proceed with the Work until unsatisfactory conditions have been corrected.

Drawings: Install all cathodic protection components and equipment according to the following CP Installation Detail Drawings included hereinafter in this Specification.

1. Drawing No. CP-101: Single Horizontal Anode Installation
2. Drawing No. CP-102: Single Vertical Anode Installation
3. Drawing No. CP-301: Continuity Bonding across Ductile Iron Pipe Joint
4. Drawing No. CP-311: Continuity Bonding across Vertical Gate Valve
5. Drawing No. CP-312: Continuity Bonding across Butterfly Valve or Horizontal Gate Valve
6. Drawing No. CP-321: Insulating Rubber & Tape Wye Splice for Sacrificial Anode Cable Connections
7. Drawing No. CP-322: Insulating Rubber & Tape Butt Splice for Sacrificial Anode Cable Connections
8. Drawing No. CP-401: Exothermic Weld Procedure for Ferrous Pipe Material (Horizontal Only)
9. Drawing No. CP-611: Anode Test Station (ATS)
10. Drawing No. CP-612: ATS Terminal Board Installation Details
11. Drawing No. CP-621: Casing Test Station (CTS)
12. Drawing No. CP-622: CTS Terminal Board Installation Details
13. Drawing No. CP-631: Potential Test Station (PTS)
14. Drawing No. CP-632: PTS Terminal Board Installation Details
15. Drawing No. CP-641: Foreign Crossing (Over WM) Test Station (FTS)
16. Drawing No. CP-642: Foreign Crossing (Under WM) Test Station (FTS)
17. Drawing No. CP-643: FTS Terminal Board Installation Details
18. Drawing No. CP-651: Isolation Test Station (ITS)
19. Drawing No. CP-652: ITS Terminal Board Installation Details
20. Drawing No. CP-653: Isolation Test Station at Tapping Sleeve (ITS-TAP)
21. Drawing No. CP-691: Flush-Mounted Enclosure for Test Station Terminal Board & Wires
22. Drawing No. CP-692: Post-Mounted Test Station for Terminal Board & Wires
23. Drawing No. CP-801: Flange Isolation Kit (FIK)
24. Drawing No. CP-804: Polyvinyl Chloride Pipe Insert (PVPI)
25. Drawing No. CP-805: High Density polyethylene Pipe Insert (HDPI)
26. Drawing No. CP-806: Isolation (Ball Type) Corporation Stop (ICS)
27. Drawing No. CP-807: Isolation Service Fitting (Copper Flare) for ¾" to 2" Pipe (ISF)
28. Drawing No. CP-808: Electrical Isolation Devices for Metallic Casing Sleeves
29. Drawing No. CP-809: Electrical Isolation at Pipe Entry with Reinforced Concrete Wall

M. INSTALLATION OF CATHODIC PROTECTION MATERIALS – QUALITY CONTROL

1. CONTRACTOR's Quality Control System

   Implement a quality control system monitored to ensure that the standards for materials, workmanship, construction, and functional performance established by this Specification are adhered to throughout the course of the Work.

2. CONTRACTOR's Technical Assistance

   The CONTRACTOR shall have access (via telephonic assistance) from cathodic protection system material suppliers throughout the duration of the Work.

N. INSTALLATION OF ELECTRICAL CONTINUITY PROVISIONS – FERROUS PIPE

1. General: Factory-made cable bonds shall be installed across all non-welded ferrous pipe joints except as follows:

   a. Pipe joints that are specifically required to be electrically isolated.

   b. Bond around all valves - do not connect cable bonds to valve housing.

2. Method:

   a. Inspect each bond cable to ensure a continuous electrical conductor with no cuts or tears in the cable insulation.

   b. Attach bond cable to water main by the exothermic welding process in accordance with the manufacturer's instructions.

   c. Do not use any exothermic weld equipment that is either damp or wet.

   d. Cover all exothermic welds with a pre-fabricated, igloo-shaped, domed-plastic elastomeric rubber cover as described in this Specification.

3. Post-Installation Visual Inspection: Inspect all electrical continuity bond cable connections by visually examining each exothermic weld connection for strength and suitable coating prior to backfilling.

4. Post-Installation Continuity Testing: CONTRACTOR shall use the following procedure to verify all bonded pipe joints are electrically continuous prior to backfilling. All data shall be documented for the job record and submitted each day to the CITY OF LINCOLN and also summarized and submitted to the CITY OF LINCOLN at the completion of the project.

   a. Measure the electrical potential at each side of selected bonded connections with a portable copper/copper-sulfate reference electrode (CSE) and a digital voltmeter having at least 10 mega-ohm input impedance.

   b. Place the CSE into the soil within 18-inches of the bonded connection and do not move the CSE.

   c. Connect the red meter lead to the CSE and the black meter lead to the pipe (not the cable). Ensure a secure direct contact to the pipe by using an awl or similar tool.

N. INSTALLATION OF ELECTRICAL CONTINUITY PROVISIONS – FERROUS PIPE (Continued)

4. Post-Installation Continuity Testing (Continued)

d. Measure and record the DC voltage between the CSE and the pipe on EACH side of the bonded connection.

e. The two DC voltage readings must be identical to indicate an acceptable connection.

5. Acceptance Criterion: If, in the opinion of the CITY OF LINCOLN, any exothermic weld is deficient, the CONTRACTOR shall remove and replace the deficient welded connection at no expense to the City of Lincoln.

6. Backfilling of Bond Cables:

a. Perform backfilling that will prevent damage to the bond cables and connections to the water main.

b. If construction activity damages a bond cable, the CONTRACTOR shall remove and replace the bond cable at no expense to the CITY OF LINCOLN.

O. INSTALLATION OF CORROSION MONITORING TEST STATIONS

1. General: Install the required number of test stations at the locations shown or as directed by the CITY OF LINCOLN.

2. Reference Electrode

a. Keep permanent reference electrodes dry and protect from freezing before installation.

b. Remove plastic or paper shipping bags from around the reference electrode prior to installation.

c. Place reference electrode in native soil within 12 to 36 inches of the water main.

3. Test Wires

a. Provide test station lead wires that are continuous with no cuts or tears in the insulation covering the conductor.

b. Attach test leads to the water main by the exothermic welding process.

c. Connect all test station wires to one side of the terminal board using the test station manufacturer's standard binding posts at the locations shown on the Plans.

d. Install wire shunt plate and shorting bars to the opposite side of terminal board from the incoming wires.

e. Install wire shunt plate last to permit easy removal from terminal board without having to disassemble other test station wire and cable connections.

O. INSTALLATION OF CORROSION MONITORING TEST STATIONS (Continued)

4. Terminal Board and Test Stations within Flush-Mounted Enclosure:

   a. Route all test station wires through the mounting pipe and run to an area along the water main that will not accumulate standing water or allow the test station to be silted over.

   b. Install the test station terminal board on top of the mounting pipe and extend the pipe vertically to allow at least 24" below bottom of the enclosure.

   c. Install the top of test station head and color-coded cap to allow a minimum separation of 1" from the underside of the enclosure cover. Permanently mark as-built pipeline stationing number on test station cap or mounting post.

   d. Set the top of the enclosure flush to final grade outside of vehicular traffic areas and support with a minimum 6" gravel base to support and drain the inside of the enclosure.

   e. Fasten the two hold-down bolts of the enclosure lid but do not over tighten.

   f. Thoroughly backfill and compact the soil surrounding the enclosure to prevent settling and voids.

   g. Drive a vertical 12-inch long steel rebar flush into the ground and immediately alongside the enclosure to facilitate locating with a magnetic sensing device.

5. Terminal Board and Test Stations on Mounting Post:

   a. Route all test station wires through the mounting pipe and run to an area along the water main that will not accumulate standing water.

   b. Install the test station terminal board on top of the mounting pipe and extend the pipe vertically to a height of at least 36" to 42" above final grade.

   c. Install the top of test station head and color-coded cap. Permanently mark as-built pipeline stationing number on test station cap or mounting post.

   d. Thoroughly backfill and compact the soil surrounding the mounting post to prevent settling and voids.

   e. Install CITY OF LINCOLN-supplied bollard/post in areas with high vegetation that could obscure test station’s PE mounting post.

   f. Affix CITY OF LINCOLN-supplied adhesive identification label to test station’s mounting pipe.

O. INSTALLATION OF CORROSION MONITORING TEST STATIONS (Continued)

6. Post-Installation Backfilling

a. Protect test leads during the backfilling operation to avoid damage to the wire insulation and integrity of the conductor.

b. Protect permanent reference electrode during backfilling to avoid damage to the electrode and its lead wire.

c. If, in the opinion of the CITY OF LINCOLN, the installation of the test station wires or the reference electrode is deficient, the CONTRACTOR shall remove and replace these components at no expense to the City of Lincoln.

P. INSTALLATION OF ELECTRICAL ISOLATION DEVICES

1. General: Install the required number of electrical isolation devices at the locations shown on the CP Installation Schedule provided hereinafter in this Specification or as directed by the CITY OF LINCOLN. The water main intended for cathodic protection shall be electrically isolated at the following locations:

a. At all copper water service laterals at the corporation stop.

b. At all metallic casing sleeves beneath street or rail crossings.

c. At all connections to existing metallic water mains or at connections to new water mains that are not intended for cathodic protection.

2. Casing Isolation Testing:

a. After casing spacers are installed but prior to grouting of the casing annulus, perform electrical isolation test to verify that casing and carrier pipes are electrically separated as follows:

(1) Measure and record the DC voltage difference between the casing and the carrier pipes using a digital voltmeter having at least 10 mega-ohm input impedance.
(2) If the DC voltage difference is not greater than zero DC millivolts, remove electrical connection between the casing and carrier pipes to provide electrical separation and repeat the electrical isolation test. Do not grout the casing annulus until a DC voltage difference of greater than zero DC millivolts is measured and recorded.

3. Flange Isolation Kit (FIK) Procedure:

a. Inspect the gasket kit and verify that the material is as specified and that the material is not damaged.

b. Clean the bolting materials. Apply lubricant or anti-seizing compound to all threads required for alignment with nuts and nut facings.

P. INSTALLATION OF ELECTRICAL ISOLATION DEVICES (Continued)

3. Flange Isolation Kit (FIK) Procedure: (Continued)

c. Align flange faces so that they are parallel and concentric with each other and within 0.010 inch without external loading or springing.

d. Line up bolt holes by driving two tapered drift pins in opposite directions to each other into two diametrically opposite bolt holes.

e. Insert insulating sleeves into bolt holes. Sleeves must slide in easily; if not, flanges must be realigned. Do not force sleeves into bolt holes.

f. Assemble studs/bolts as follows:

(1) Run one nut on each stud so that two full threads are showing beyond the nut.
(2) Slide steel backup washer onto stud and insert into bolt hole. If flange requires two-sided insulation, add an insulating washer after the steel washer.
(3) From the opposite end of the stud, place an insulating washer, steel backup washer, and a nut; tighten by hand.
(4) Torque the first two studs at diametrically opposite locations to a maximum of 30 percent of the final torque value in a star pattern.
(5) Repeat star-torqueing pattern at each bolt by increasing torque to 50-60 percent of final value.
(6) Continue torqueing all studs in a star pattern using the specified torque setting (100 percent) until there is no further rotation of the nuts.

g. Acceptance

(1) Immediately after a FIK has been installed in accordance with the manufacturer's specifications, the CONTRACTOR will perform an electrical isolation test using a radio frequency isolating test meter to verify the flange will not permit current flow across it.
(2) If, in the opinion of the CITY OF LINCOLN, the FIK is shorted, the CONTRACTOR shall remove and replace the isolation gasket or bolt sleeves/washers at the CONTRACTOR's expense.

h. Sealing Buried Isolation Flanges

(1) After any buried FIK has been tested and found to be 100 percent effective, the entire isolator shall be encapsulated in a three-part, non-toxic, petrolatum tape wrap before burial.
(2) Encapsulation shall completely cover both flange sides and shall extend a minimum of six inches beyond the ends of all flange bolt heads and nuts.

Q. INSTALLATION OF GALVANIC ANODES

1. General: Install the required number of anodes at the locations shown on the CP Installation Schedule provided hereinafter in this Specification or as directed by the CITY OF LINCOLN.

2. Method

   a. Remove plastic or paper shipping bags from around prepackaged anodes prior to installation.

   b. Install in the manner and at the dimensions from the water main as shown on the CP Installation Details. Field modifications shall be made only with the approval of the CITY OF LINCOLN.

   c. Handle galvanic anodes in such a manner to avoid damaging anode materials and wire connections.

   d. Attach anode lead wire to insulated header cable or route lead wire directly to pipe or test station as required.

   e. Splices are not permitted within the length of a factory-fabricated anode lead wire.

   f. Install prepackaged anodes with compacted backfill material, such that no voids exist between the anode material and the backfill.

   g. In soils that do not exhibit any signs of moisture content or granular soils that have no cohesive strength, pour 5 gallons of water over the anode after backfilling and tamping have been completed to a point about 6 inches above the anode. After the water has been absorbed by the earth, backfilling shall be completed to the ground surface level.

R. INSTALLATION OF WIRE, CABLE AND SPLICES

1. Install underground wires, cables, and connections at a minimum 36 inches below final grade with a minimum separation of 6 inches from other underground structures.

2. Seal splices against water penetration as follows:

   a. Clean and then wrap with a minimum of two half-lapped layers of rubber electrical tape.

   b. Apply two half-lapped layers of plastic electrical tape.

   c. Cover with a fast-drying electrical sealant.

S. INSTALLATION OF EXOTHERMIC WELDS AND CONNECTION DEVICES

1. All exothermic welding shall be performed in accordance with the manufacturer's recommendations for welding equipment, weld metal charge size, and applicability to the structure. Do not use exothermic weld equipment if the graphite mold is wet.

2. Structure Surface Preparation

   a. All bare metal shall be free of dust, dirt, grease, oil and other foreign matter.

   b. Practical removal shall be by either power or hand wire brushing.

   c. Grinding or filing shall remove sharp edges or burrs.

3. Installation of Elastomeric Cover over Exothermic Welds

   a. Clean the pipe surface which is to be covered by removing all moisture, dirt, grease and other contaminants.

   b. The weld areas shall be no more than warm to the touch before applying the elastomeric cover.

   c. Remove the release paper from the back of the mastic pad. Avoid touching the exposed elastomeric tape.

   d. Apply the mastic pad to the structure by firmly pressing on all edges making sure that the tunnel area of the plastic dome completely covers the lead wire entering the exposed copper of the connection.

   e. Push the dome of the plastic weld cap firmly over the exothermic weld area and the wire entering the weld cap.

T. POST-INSTALLATION TESTING OF CATHODIC PROTECTION SYSTEMS

1. General: CITY OF LINCOLN will provide services of a NACE-certified CP Specialist for periodic field inspections and technical oversight of the CONTRACTOR's commissioning services of the cathodic protection system in accordance with the following NACE International® reference standard and standard test method:

   a. NACE International® Standard Practice SP0169 (latest edition).

   b. NACE International® Standard Test Method TM0497 (latest edition).

2. After installation of the cathodic protection system, field tests including the following items will be performed by the CP Technician furnished by the CONTRACTOR:

   a. Take photographs of each test station – both of the terminal board and also the surrounding landscape for future identification and locating.

   b. Verify that each test station wire is attached to the appropriate structure using the proper color code.

T. POST-INSTALLATION TESTING OF CATHODIC PROTECTION SYSTEMS (Continued)

2. After installation of the cathodic protection system, field tests including the following items will be performed by the CP Technician furnished by the CONTRACTOR: (Continued)

c. Measure cathodic protection data at each test station as follows:

(1) Red Cap Anode Test Station: ON S/S potentials of the pipeline using the buried reference electrode and a portable Cu-$CuSO_4$ reference cell. Momentarily disconnect the anode(s) from the circuit and record Instant-Off S/S potentials of the pipeline using the buried reference electrode and a portable Cu-CuSO4 reference cell. Measure the total current through the anode circuit via the TS shunt.
(2) Orange Cap Isolation Test Station: Structure-to-soil potentials of the pipeline and the foreign structure (across the FIK) using the buried Cu-$CuSO_4$ reference electrode and a portable reference cell.
(3) Blue Cap Casing Test Station: Structure-to-soil potentials of the pipeline and the casing using the buried reference electrode and a portable Cu-$CuSO_4$ reference cell.
(4) Green Cap Potential Test Station: Structure-to-soil potentials of the pipeline using the buried reference electrode and a portable Cu-$CuSO_4$ reference cell.
(5) White Cap Foreign Test Station: Structure-to-soil potentials of the pipeline and the foreign structure using the buried reference electrode and a portable Cu-$CuSO_4$ reference cell. Note any DC interference to the pipeline.

d. Determine the effectiveness of each accessible electrical isolation device.

e. Prepare and submit a summary report to the CITY OF LINCOLN and RESIDENT PROJECT REPRESENTATIVE containing to include a description of the structures intended for protection, a description of the cathodic protection systems, and a tabulation/analysis of the data versus NACE International® performance standards.

3. Final Acceptance: Assist the CITY OF LINCOLN's CP Specialist after energizing and commissioning of the cathodic protection system to ensure that deficiencies are corrected prior to acceptance by the RESIDENT PROJECT REPRESENTATIVE.

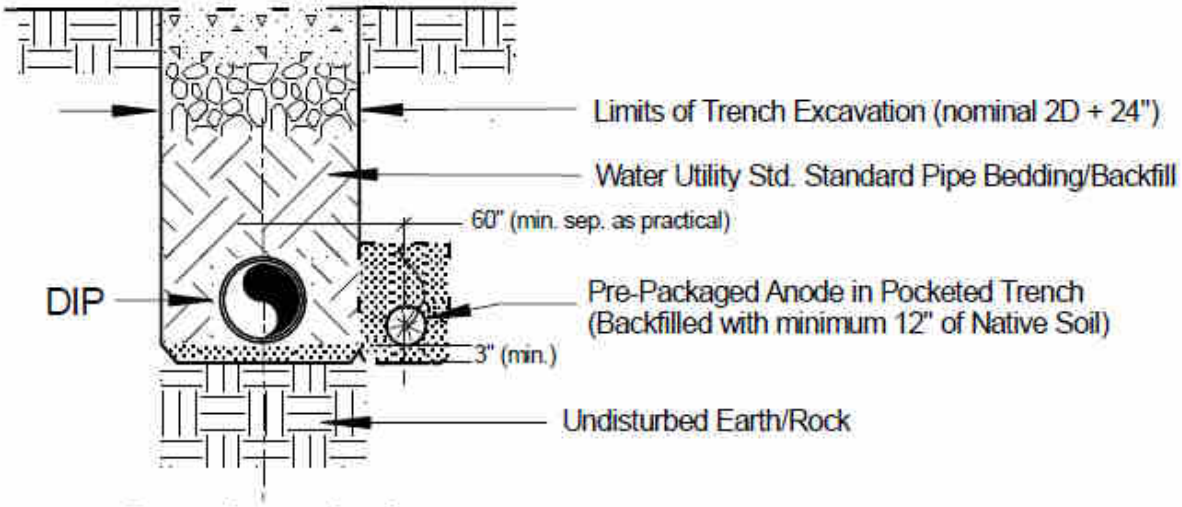
a. The costs for any additional field tests or inspections by the CITY OF LINCOLN's CP Specialist that result from either material or installation deficiencies will be charged to the CONTRACTOR at direct cost with no mark-up and deducted from the CONTRACTOR's final pay application for the project.

b. The cathodic protection system installation will be deemed acceptable for full payment only after being tested by the CONTRACTOR's CP Technician and determined to meet the minimum performance criterion established in this Specification by the CITY OF LINCOLN'S CP Specialist.

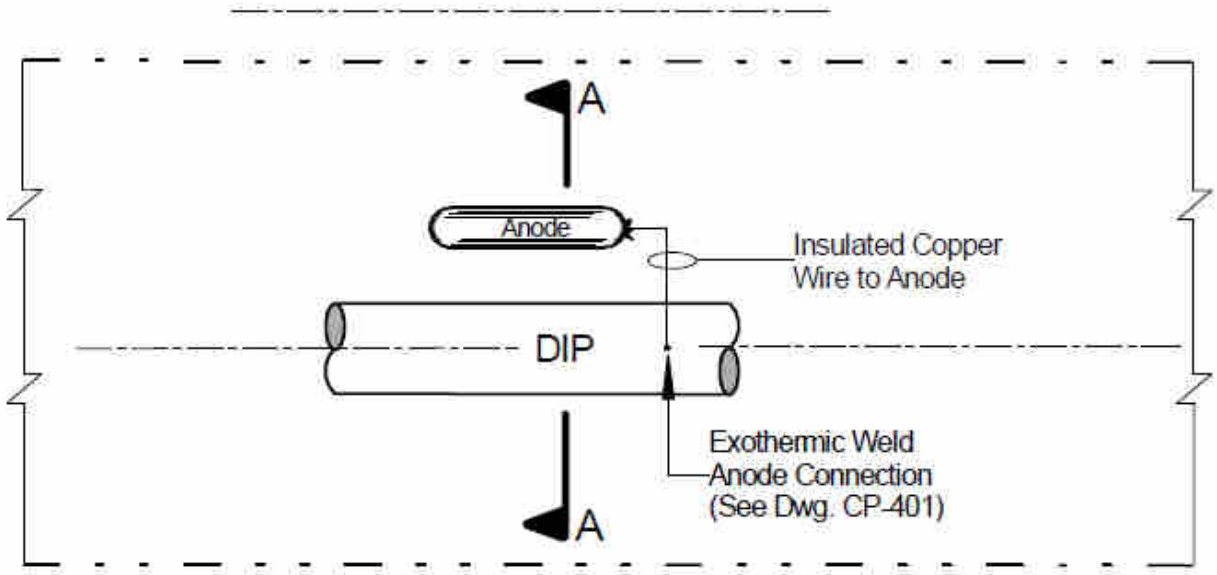
U. BASIS OF PAYMENT

All Cathodic Protection components installed per this Chapter, as shown on the plans or as directed, shall be paid for at the contract unit price bid per Lump Sum for CORROSION CONTROL SYSTEM. Such price shall be full compensation for all loading and unloading, hauling, excavation, installation, backfilling, labor, tools, materials, equipment and incidentals necessary to complete the Work in conformance with these Specifications and as accepted by the City's Project Manager.

DRAWING NO. CP-101
SINGLE HORIZONTAL ANODE INSTALLATION

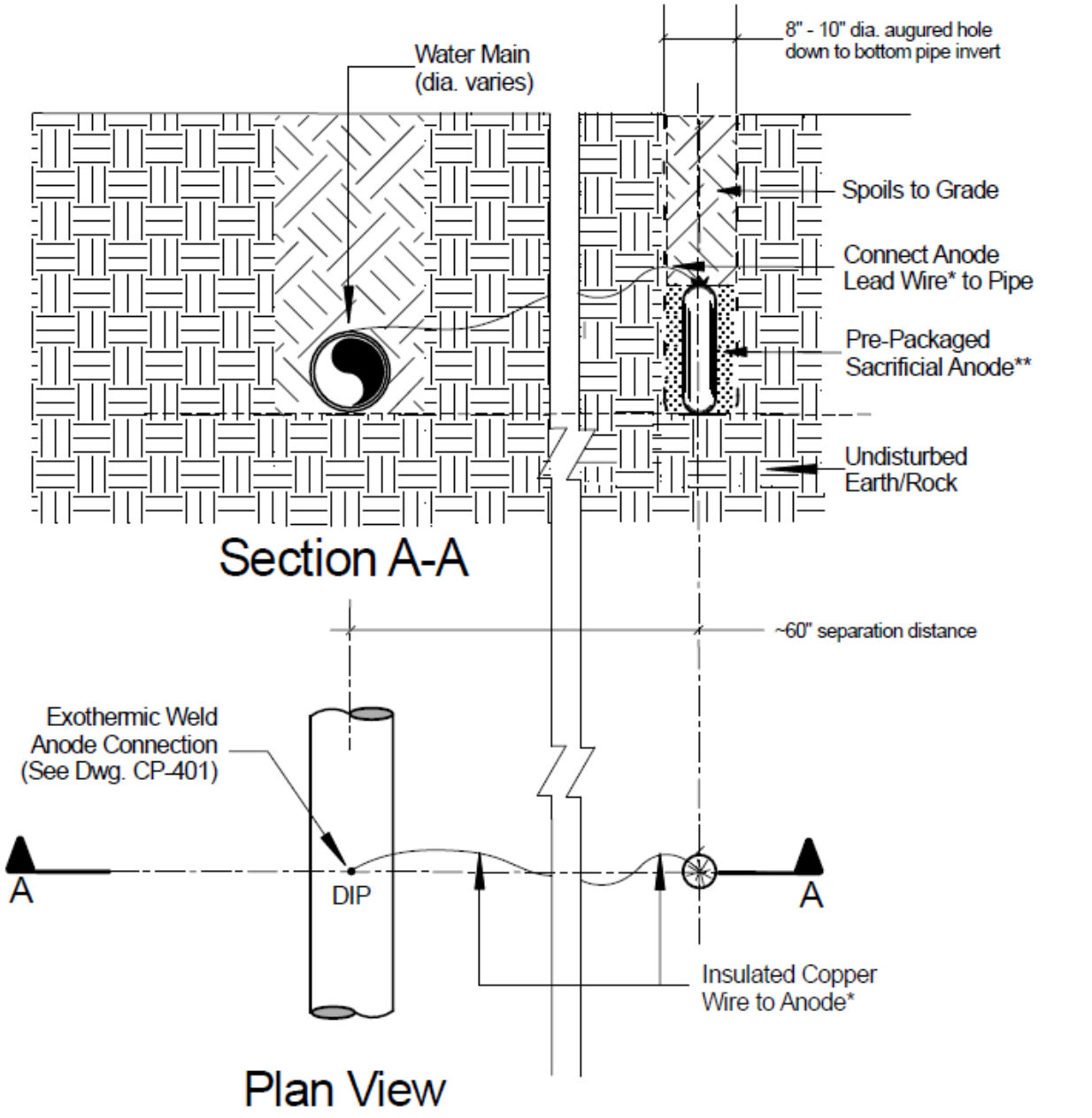


Section A-A



Plan View

DRAWING NO. CP-102
SINGLE VERTICAL ANODE INSTALLATION

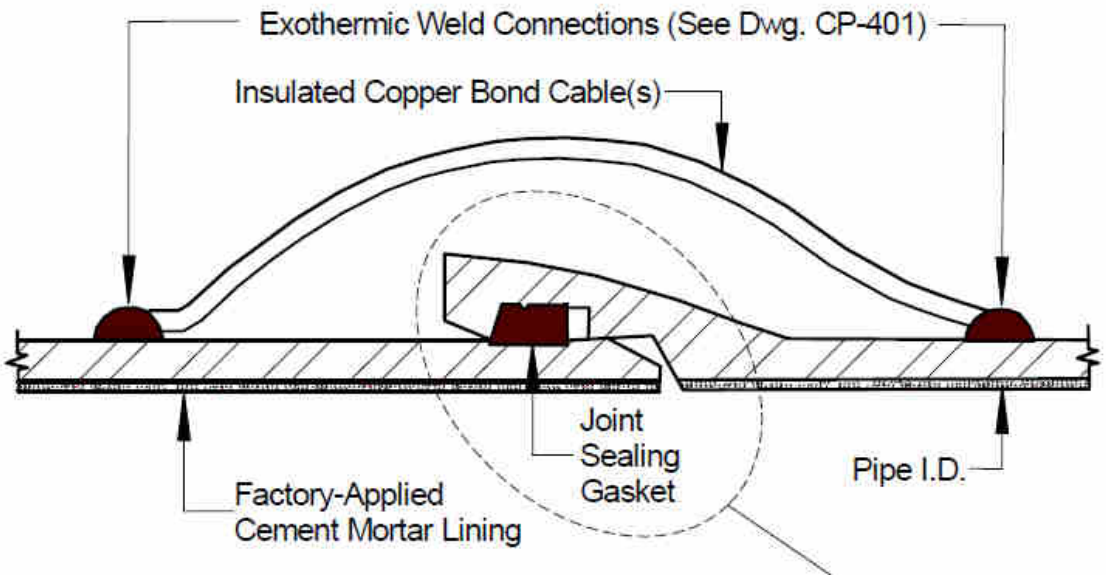


** Surrounded with Clay/Native Soil (no aggregate)
* Protect anode wire by backfilling at min. 36" depth

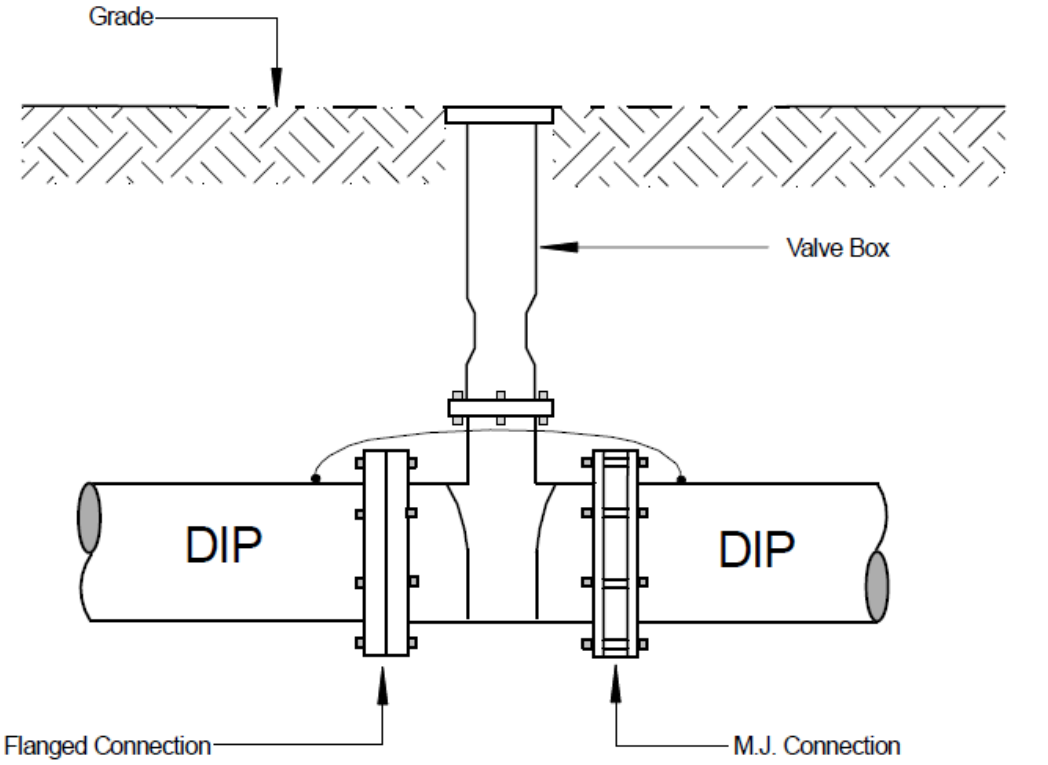
DRAWING NO. CP-301
CONTINUITY BONDING ACROSS DUCTILE IRON PIPE JOINT

Pipe Joint Bonding Information	Pipe Dia. (in.)	Pipe Mat'l	Continuity Bond Min. Cable Sizes	
			Qty.	AWG #
	> 24	DIP	3	2
	16 to 24	DIP	2	2
	10 to 14	DIP	2	4
	6 to 8	DIP	1	8
Refer to City of Lincoln Special Provisions for material and installation requirements				

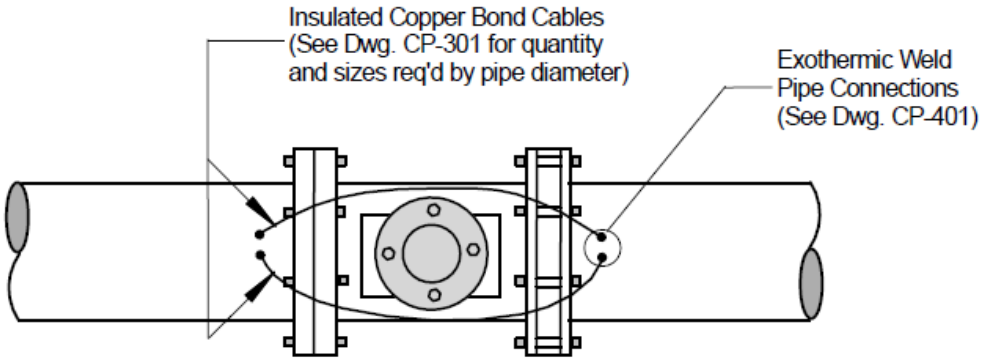
Note: Bonding across water main valves shall be as shown on CP-311 and CP-312



DRAWING NO. CP-311
CONTINUITY BONDING ACROSS VERTICAL GATE VALVE

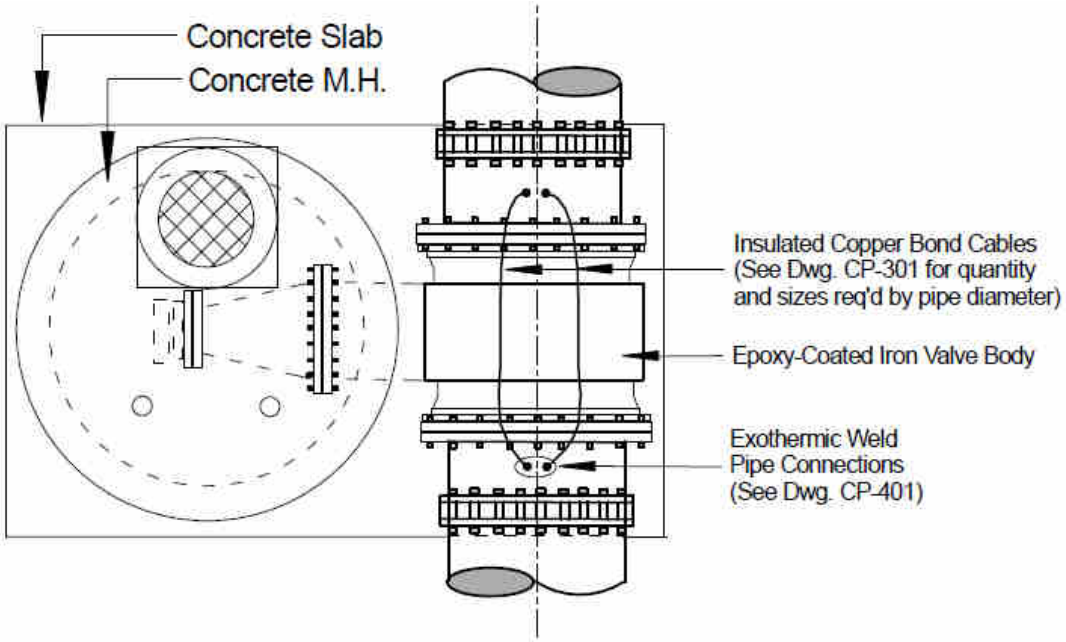


Elevation

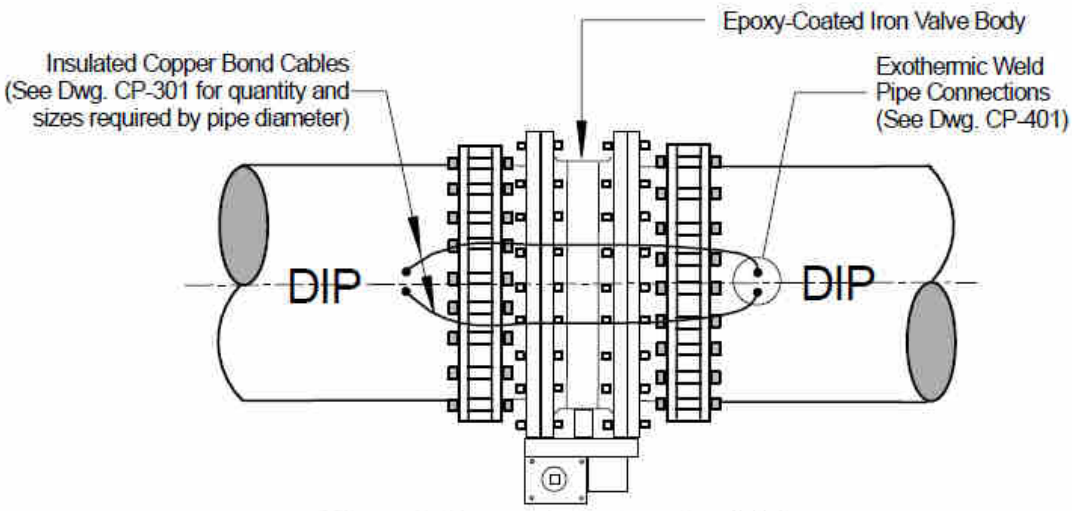


Plan View

DRAWING NO. CP-312
CONTINUITY BONDING ACROSS BUTTERFLY VAVLE OR HORIZONTAL GATE VALVE

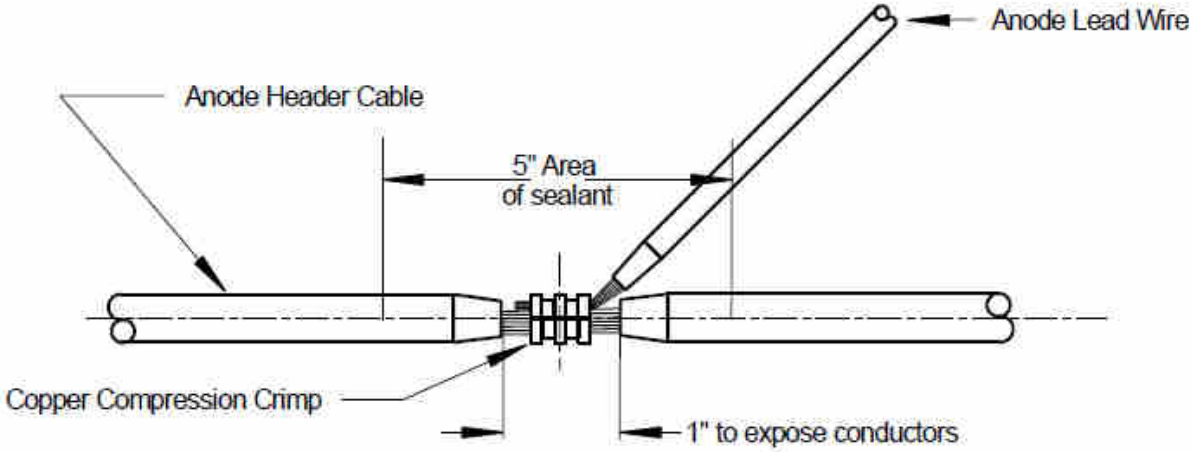


Plan View - Gate Valve



Plan View - Butterfly Valve

DRAWING NO. CP-321
INSULATING RUBBER & TAPE WYE SPLICE FOR SACRIFICIAL ANODE CABLE CONNECTIONS



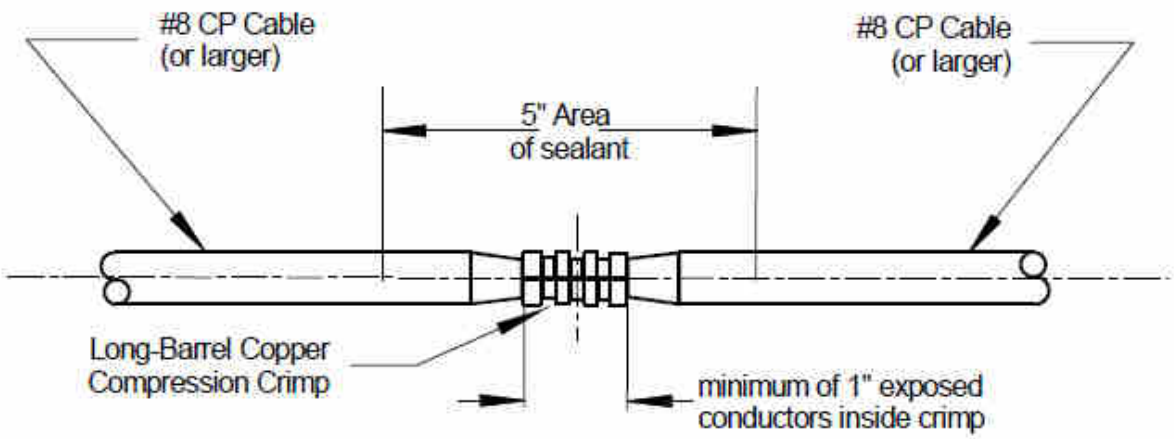
Crimp Splice Procedure

Remove approximately 1" of cable insulation to expose clean copper conductors. Join the conductors by inserting them equidistance into the compression connection sleeve. Crimp conductors firmly in place using a crimping tool that requires a complete crimp before the tool can be removed. A minimum of 2 equally-spaced crimp indents is required. Test the crimped connection by pulling on the cables.

Suggested Splice Sealing Procedure

Roughen the cable insulation 2" beyond the end of the exposed conductors. Ensure the entire surface over which the tape will be applied is clean using a lint-free cloth. Do not use solvents. Fill voids with insulating putty tape as required. Apply a high-voltage rubber tape half lapped over all bare conductors. Tape should be tensioned as recommended by the manufacturer. Half-lap tape to produce a uniform buildup to 1-1/2 times cable diameter over the body of the splice with ends tapered approximately 1 inch over the original jacket. Cover rubber tape with two layers of vinyl pressure-sensitive tape one-half lapped. Coat the entire tape wrap with a brush-applied electrical sealant.

DRAWING NO. CP-322
INSULATING RUBBER & TAPE BUTT SPLICE FOR SACRIFICIAL ANODE CABLE CONNECTIONS



Note: "Splinting" the entire connection before burial to minimize wire stress is recommended.

Crimp Splice Procedure

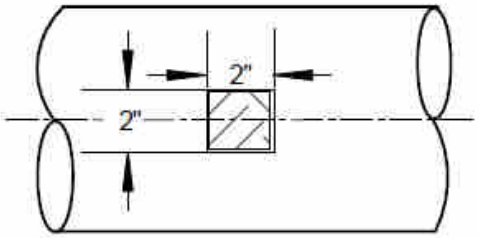
Remove at least 1" of cable insulation to expose clean copper conductors. Join the conductors by inserting them equidistance into the compression connection sleeve. Crimp conductors firmly in place using a crimping tool that requires a complete crimp before the tool can be removed. A minimum of 3 equally-spaced crimp indents is required. Test the crimped connection by pulling on the cables.

Suggested Splice Sealing Procedure

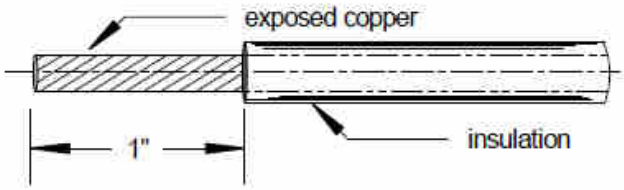
Roughen the cable insulation 2" beyond the end of the exposed conductors. Ensure the entire surface over which the tape will be applied is clean using a lint-free cloth. Do not use solvents. Fill voids with insulating putty tape as required. Apply a high-voltage rubber tape half lapped over all bare conductors. Tape should be tensioned as recommended by the manufacturer. Half-lap tape to produce a uniform buildup to 1-1/2 times cable diameter over the body of the splice with ends tapered approximately 1 inch over the original jacket. Cover rubber tape with two layers of vinyl pressure-sensitive tape one-half lapped. Coat the entire tape wrap with a brush-applied electrical sealant.

DRAWING NO. CP-401
EXOTHERMIC WELD PROCEDURE FOR FERROUS PIPE MATERIALS (HORIZONTAL ONLY)

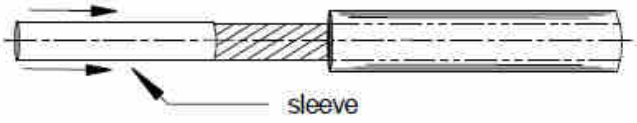
1. Clean a small square area at the top dead center of the pipe. Use a grinder or flat file to expose bright shiny metal.



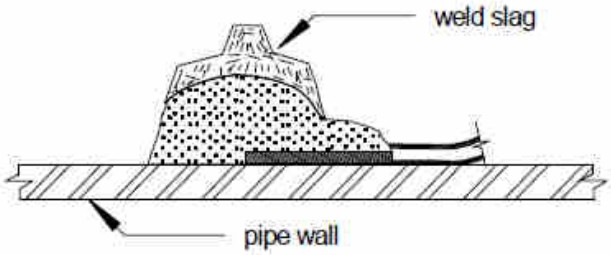
2. Strip off about 1" of insulation from stranded/solid copper wires or stranded copper cables.



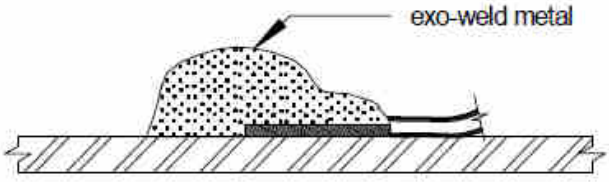
3. Slip on a copper weld sleeve to #10 AWG wire and smaller test wire and to #2 AWG or #4 AWG stranded copper bond cables.



4. Place the weld furnace directly over the copper wire or cable and while holding firmly in place, ignite flash powder with a flint igniter. After cooling, remove all slag from the top of the weld metal.

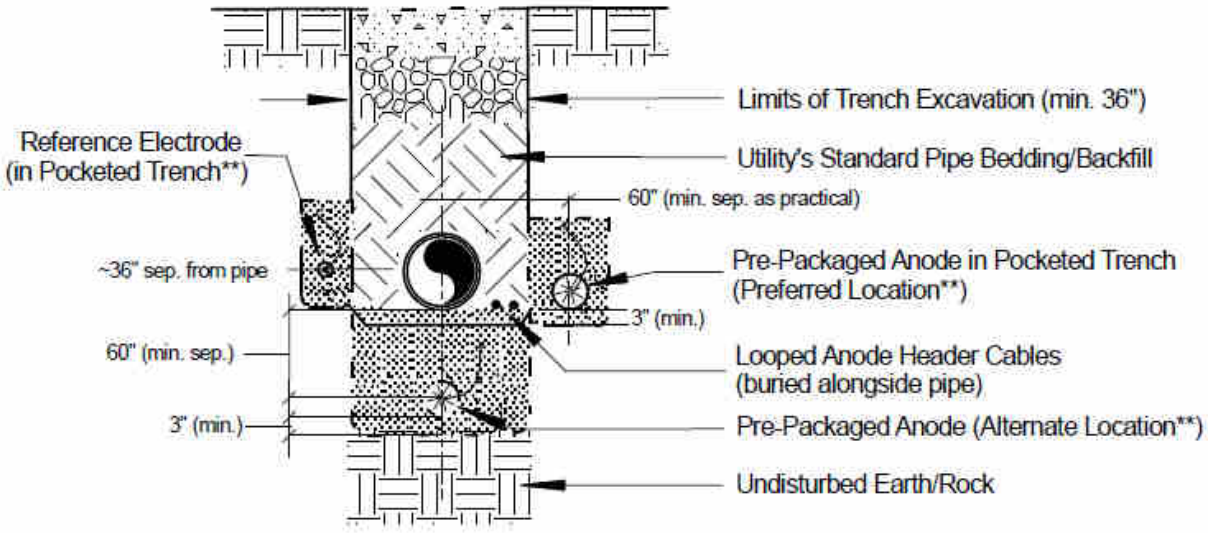


5. Apply cold-applied mastic/cap to cover all exposed copper and bare pipe metal prior to backfilling.

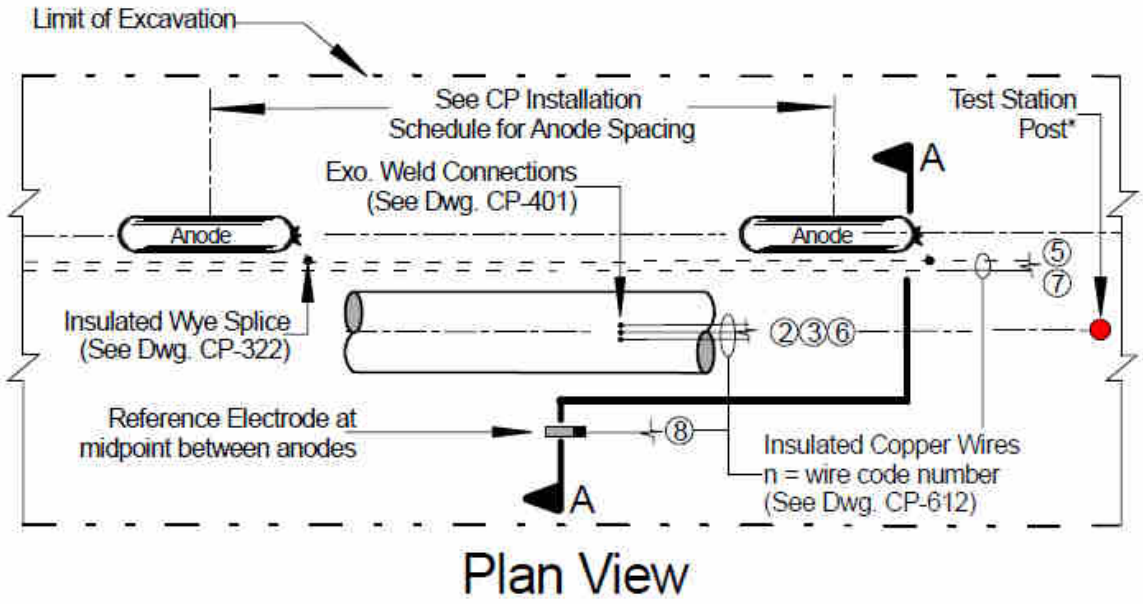


Do not use exothermic weld equipment if the graphite furnace is wet. Follow manufacturer's specific instructions for storage, handling, and use.

DRAWING NO. CP-611
ANODE TEST STATION (ATS)



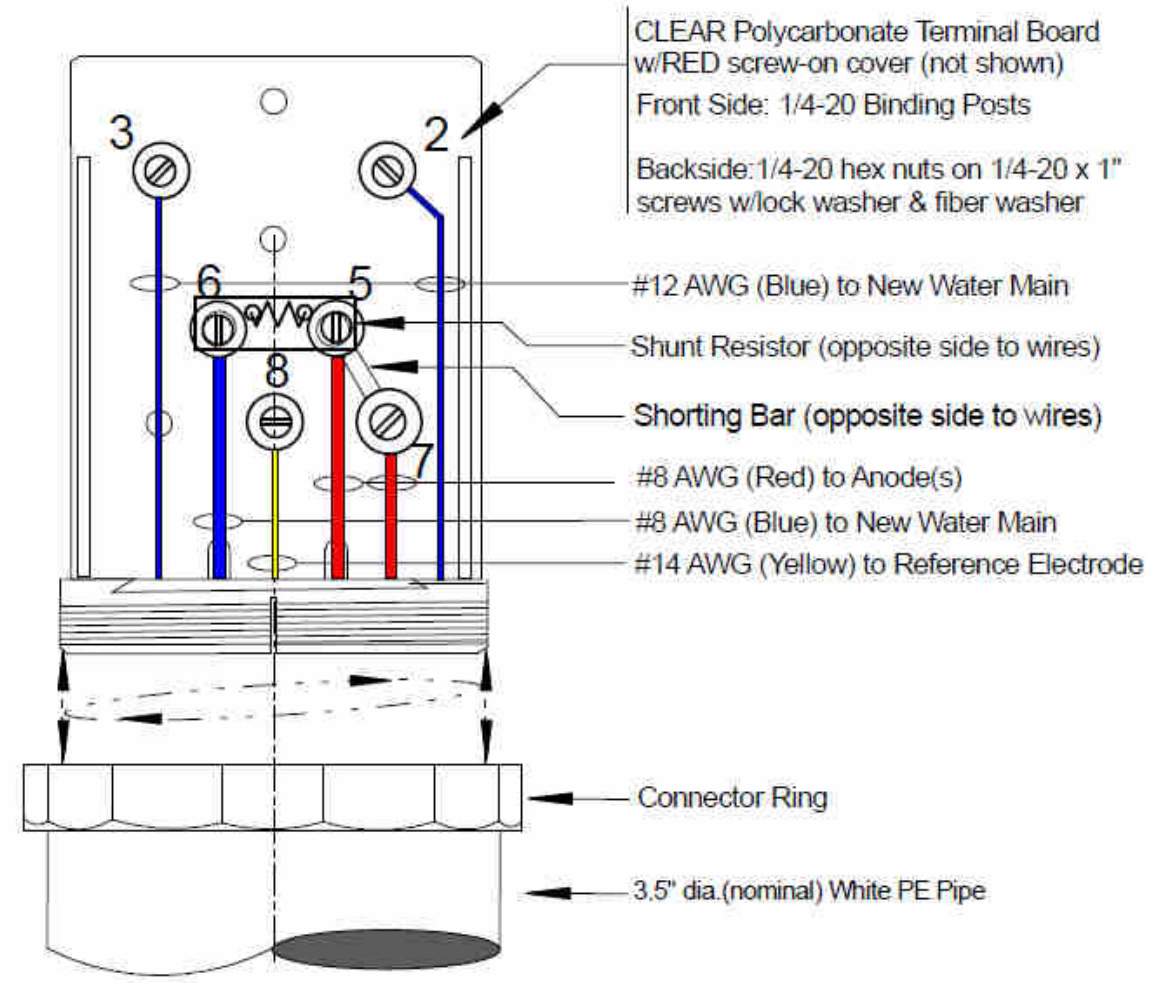
Section A-A



Plan View

**Backfilled with min. 12" Native Soil
* Install all test station types (specified as either post- or flush-type) within 35' of buried reference electrode

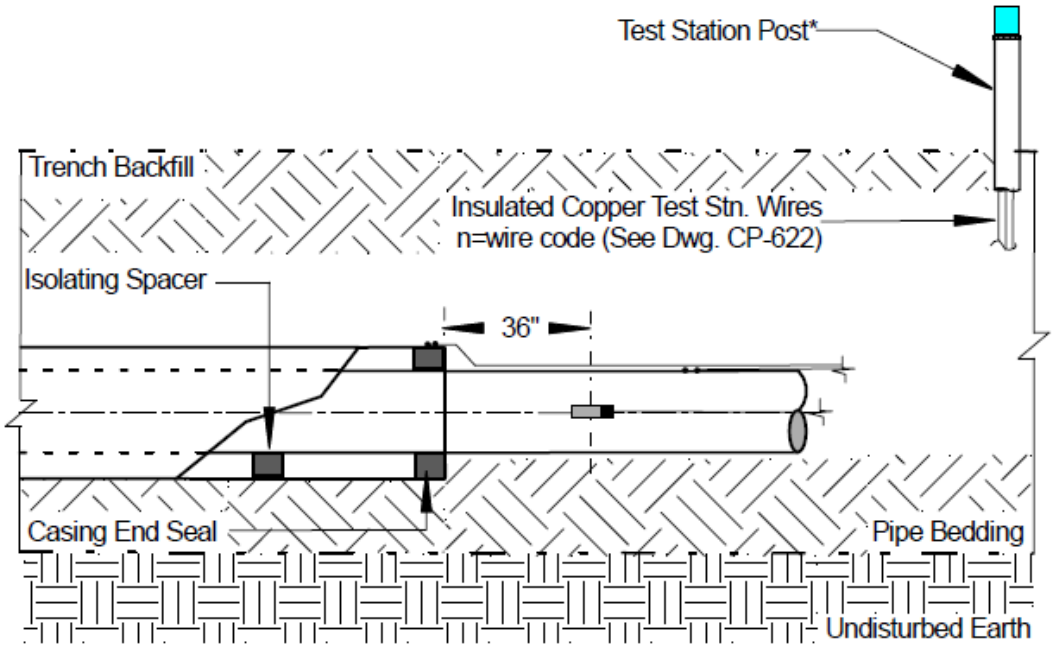
DRAWING NO. CP-612
ATS TERMINAL BOARD INSTALLATION DETAILS



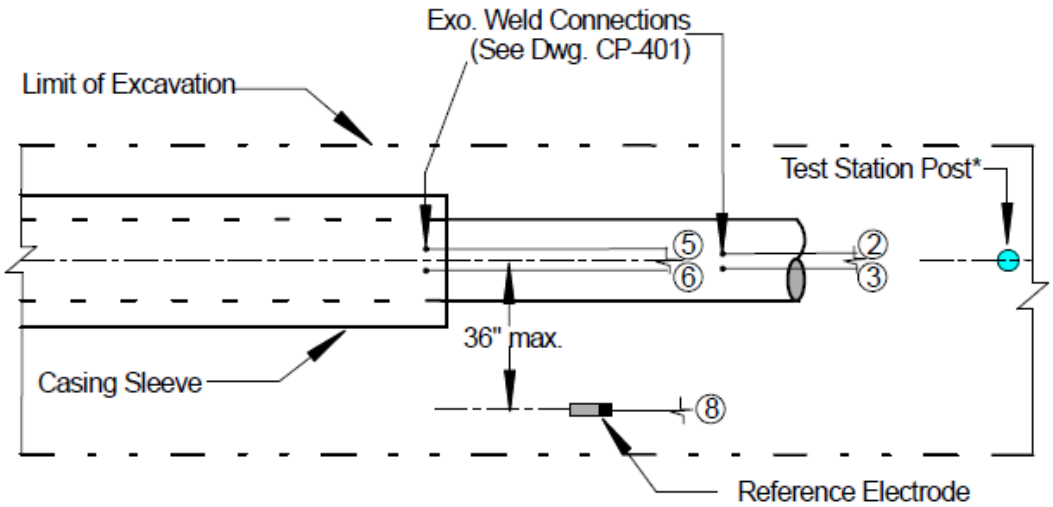

Side 1: Wire and Cable Binding Post Connections


Side 2: Shunt & Shorting Bar Connections


Terminal Board Cover Removed



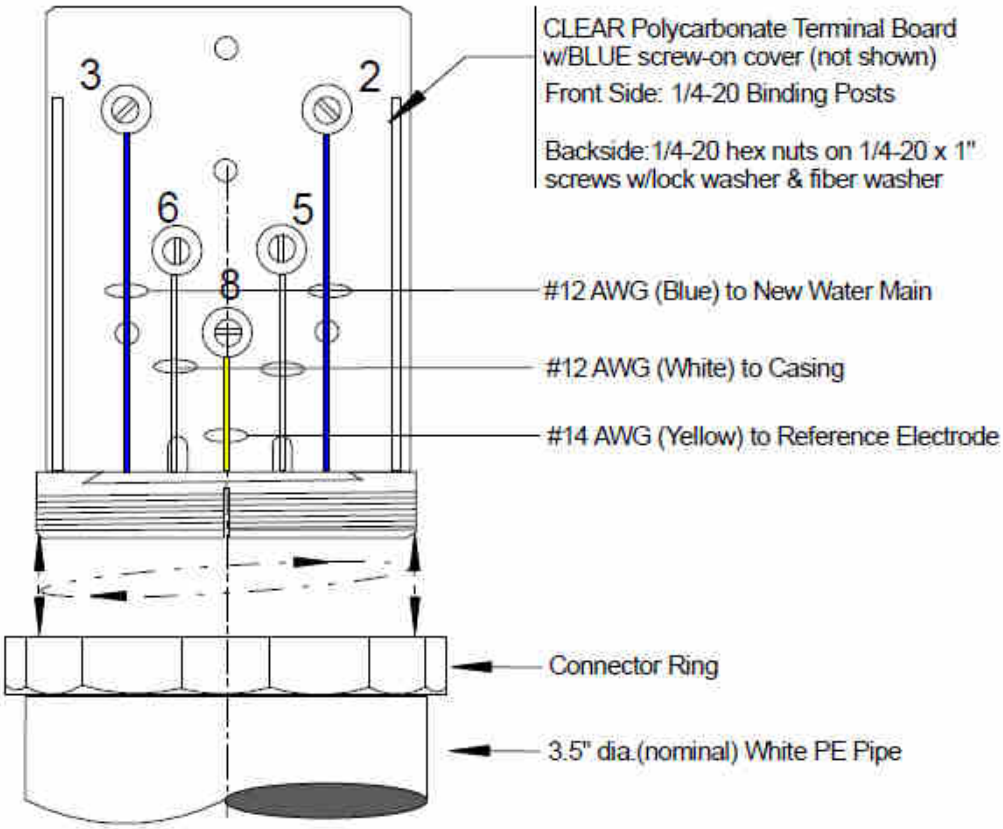
Elevation



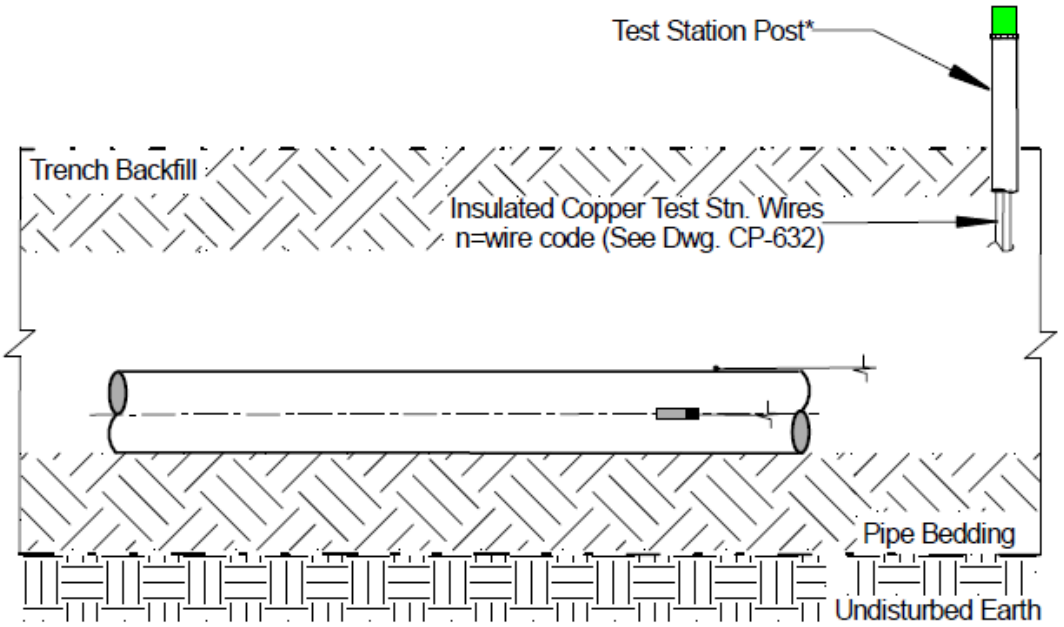
Plan View

* Install all test station types (specified as either post- or flush-type) within 35' of buried reference electrode

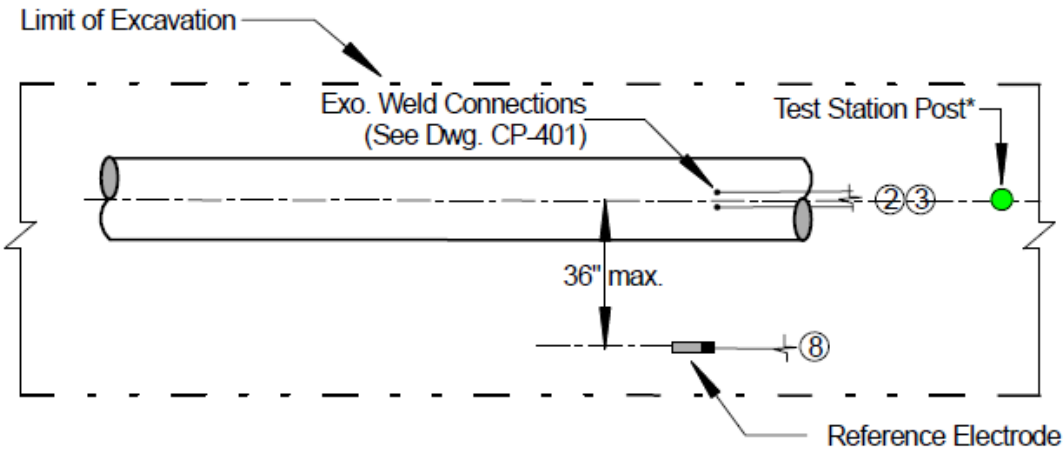
DRAWING NO. CP-622
CTS TERMINAL BOARD INSTALLATION DETAILS



DRAWING NO. CP-631
POTENTIAL TEST STATION (PTS)



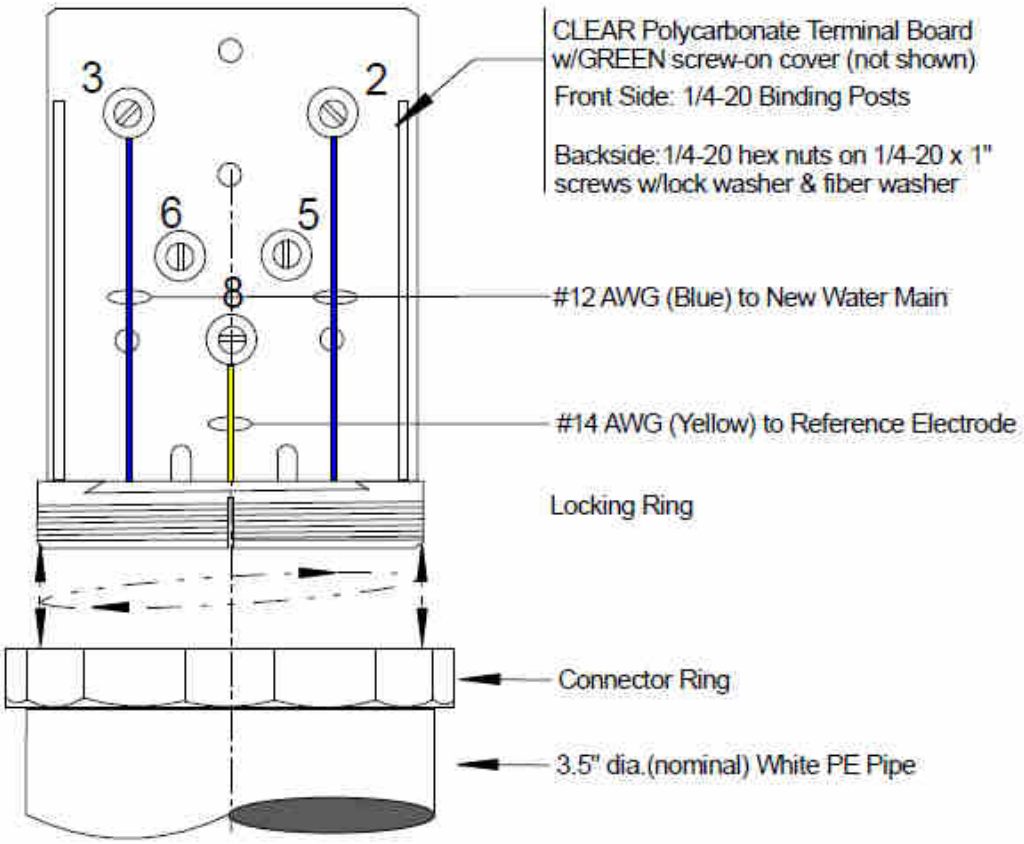
Elevation



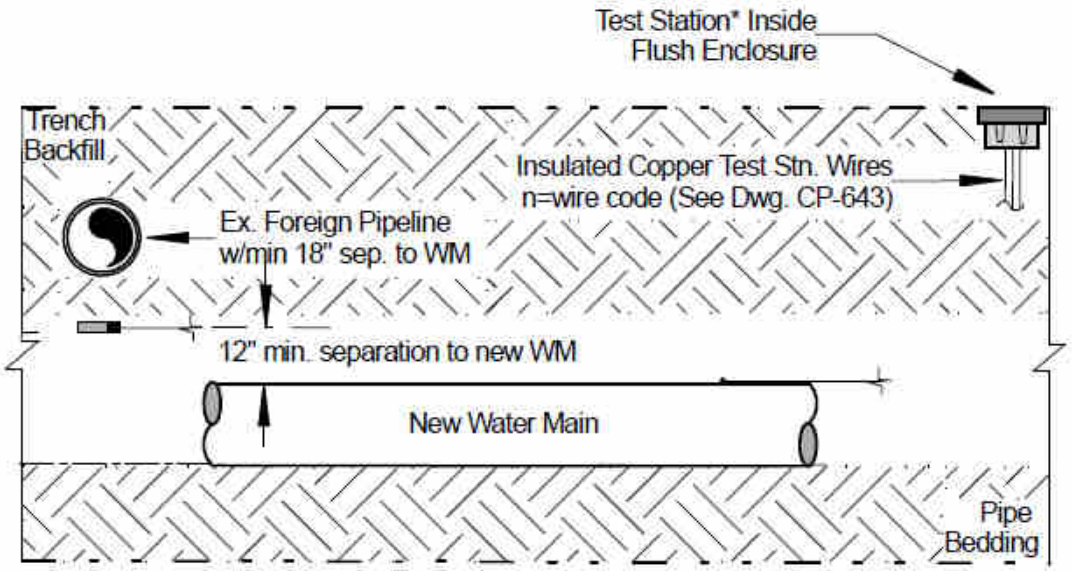
Plan View

* Install all test station types (specified as either post- or flush-type) within 35' of buried reference electrode

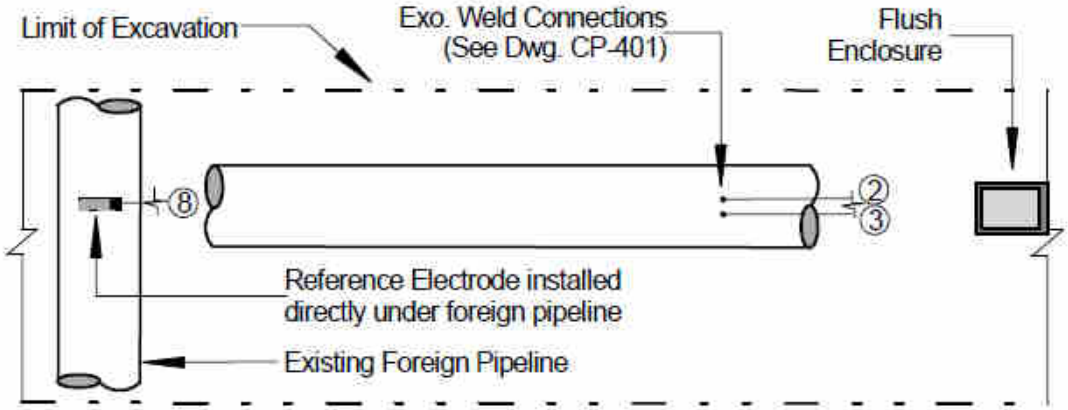
DRAWING NO. CP-632
PTS TERMINAL BOARD INSTALLATION DETAILS



DRAWING NO. CP-641
FOREIGN CROSSING (OVER WM) TEST STATION (FTS)



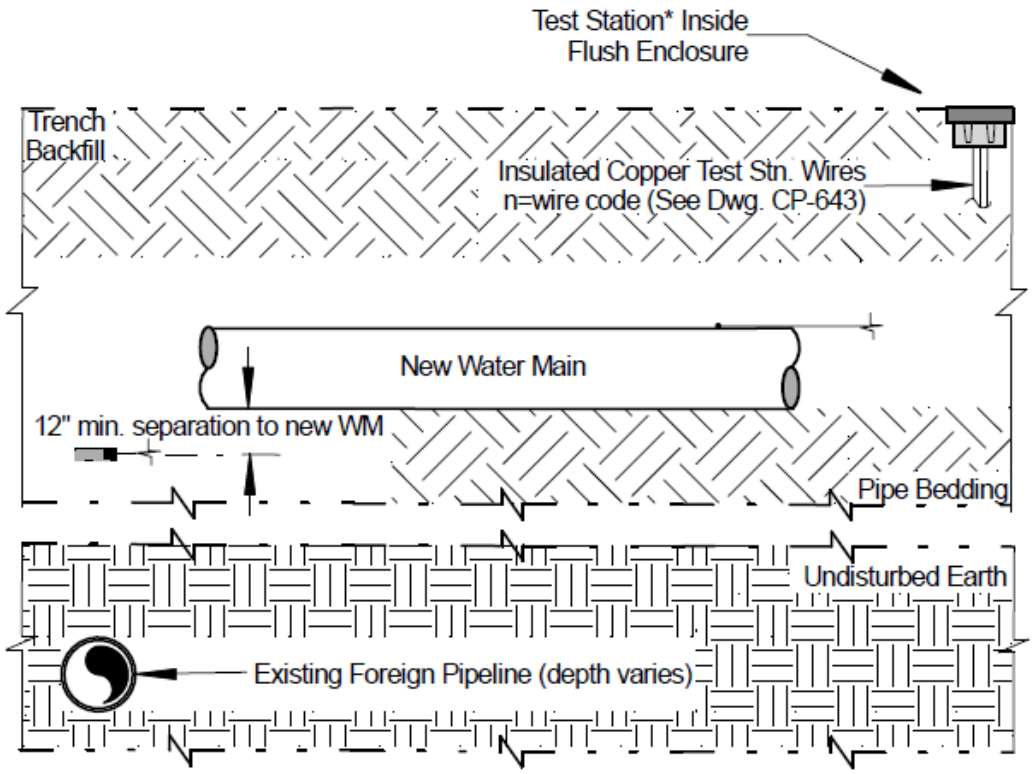
Elevation



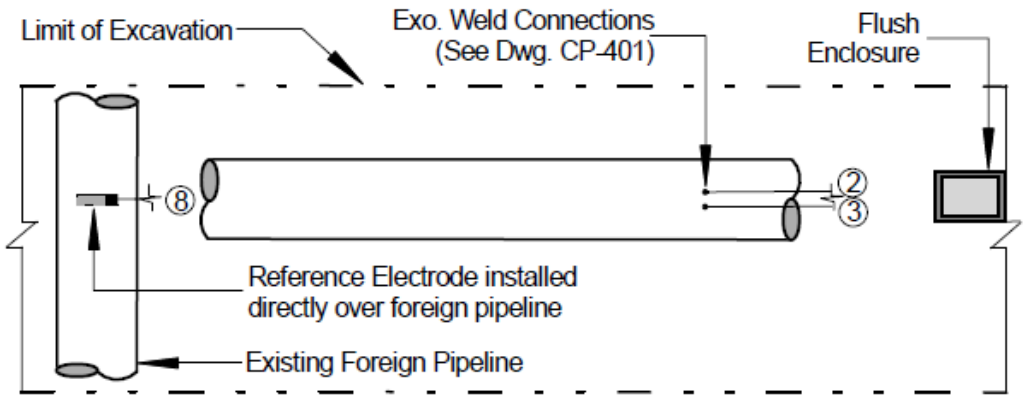
Plan View

* Install flush test station enclosure within 35' of buried reference electrode

DRAWING NO. CP-642
FOREIGN CROSSING (UNDER WM) TEST STATION (FTS)



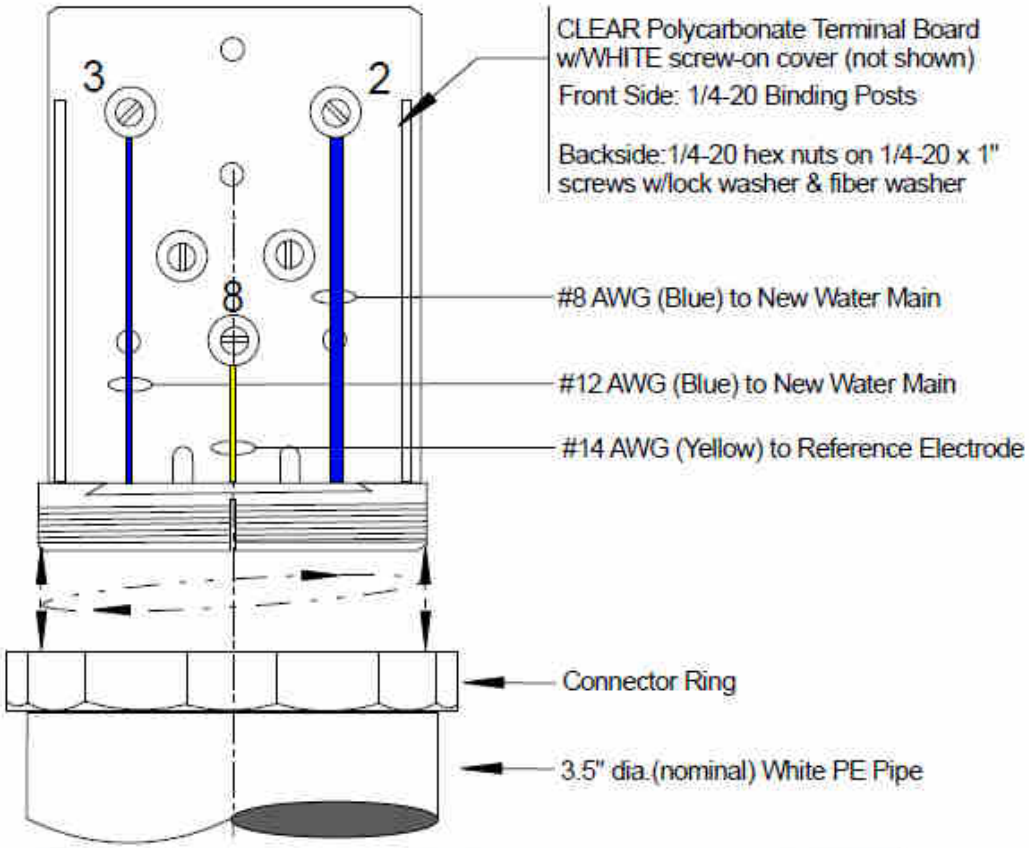
Elevation



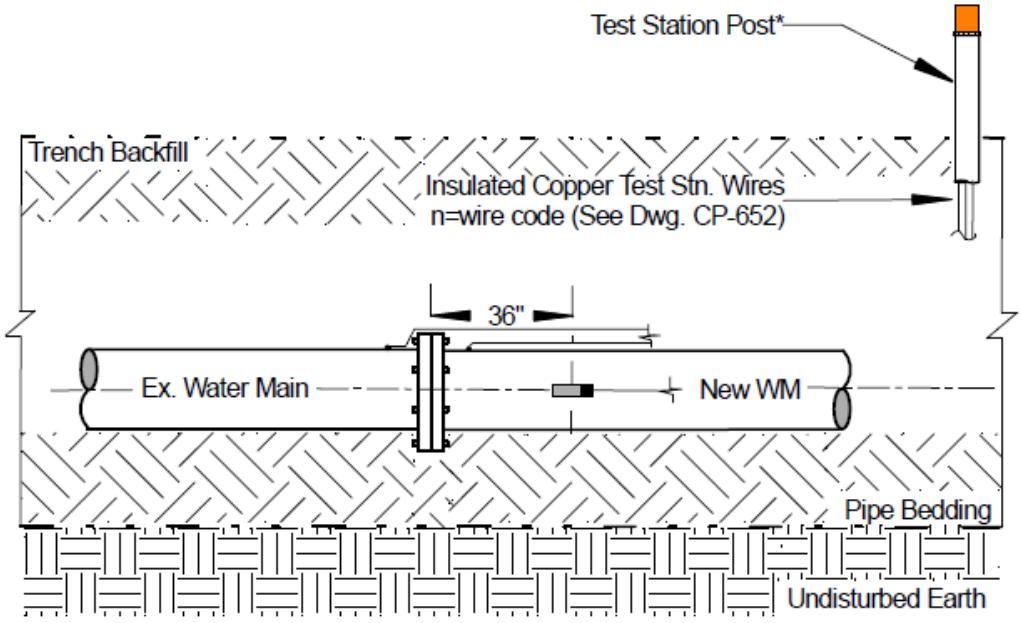
Plan View

* Install flush test station enclosure within 35' of buried reference electrode

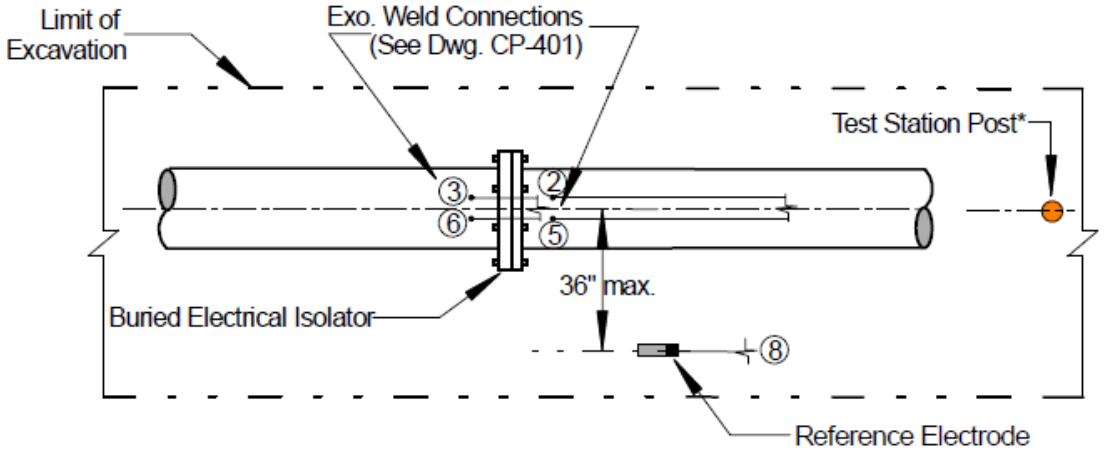
DRAWING NO. CP-643
FTS TERMINAL BOARD INSTALLATION DETAILS



DRAWING NO. CP-651
ISOLATION TEST STATION (ITS)



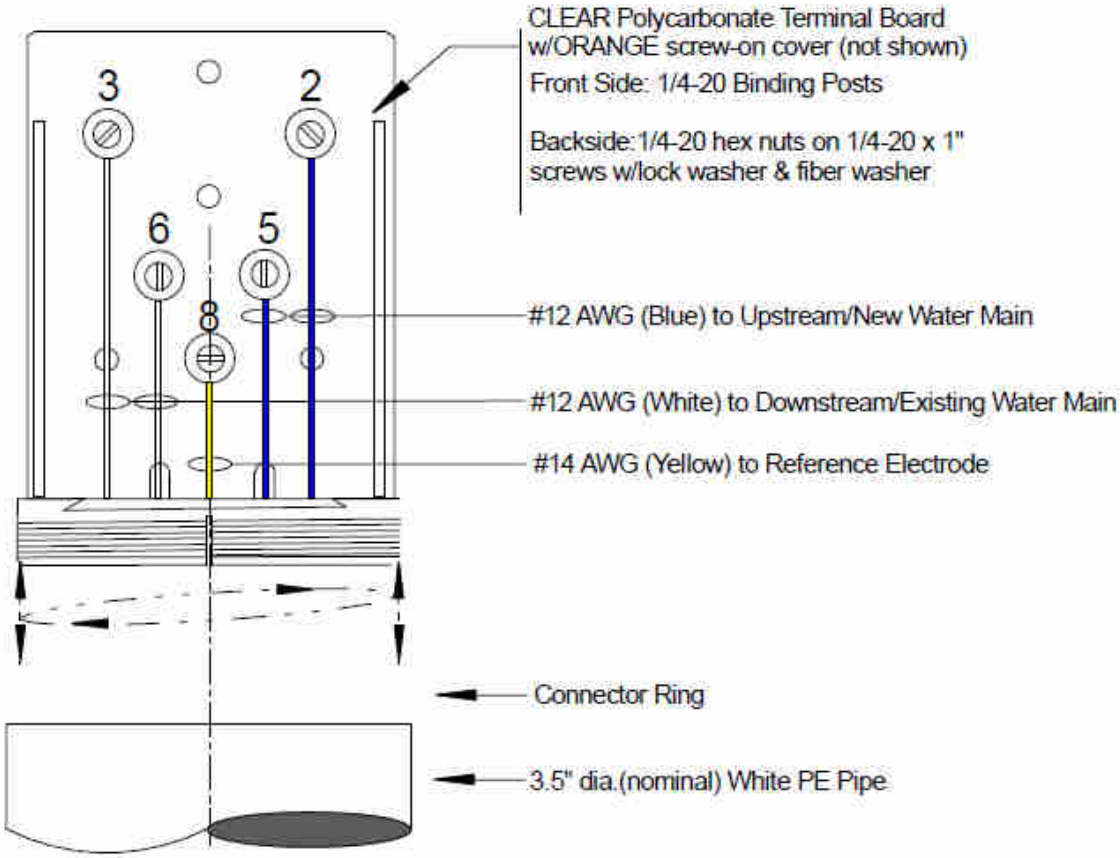
Elevation



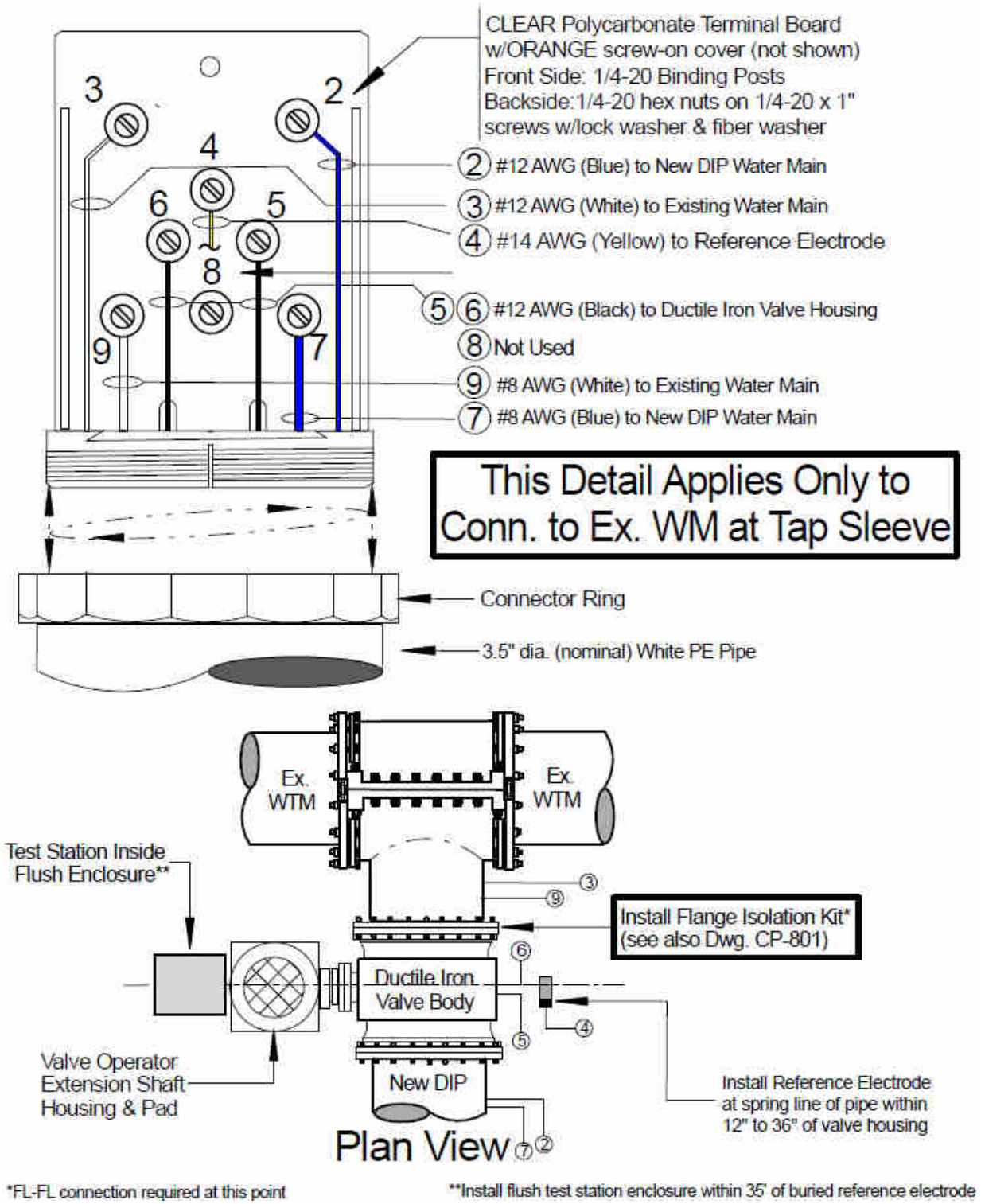
Plan View

* Install all test station types (specified as either post- or flush-type) within 35' of buried reference electrode

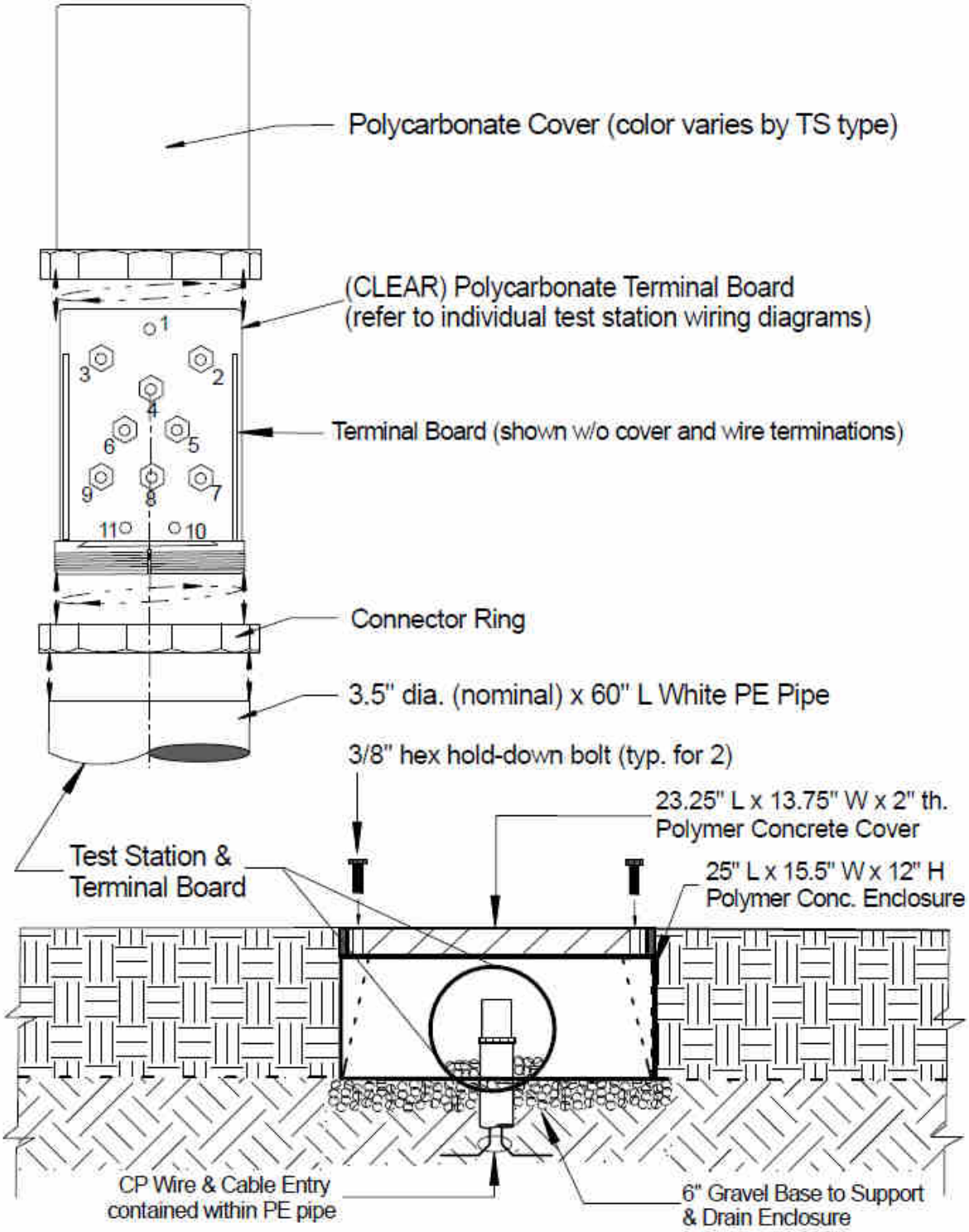
DRAWING NO. CP-652
ITS TERMINAL BOARD INSTALLATION DETAILS



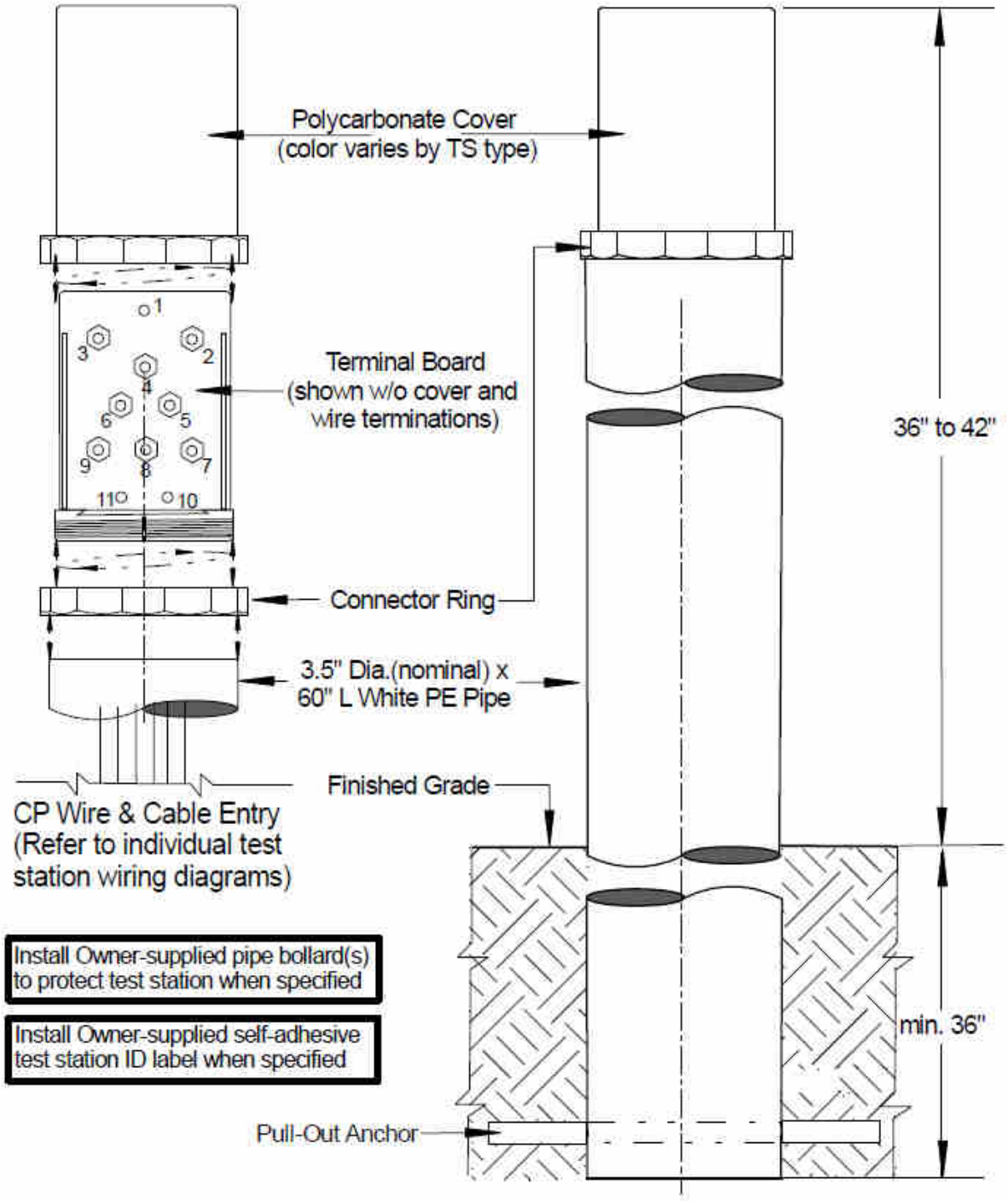
DRAWING NO. CP-653
ISOLATION TEST STATION AT TAPPING SLEEVE (ITS-TAP)



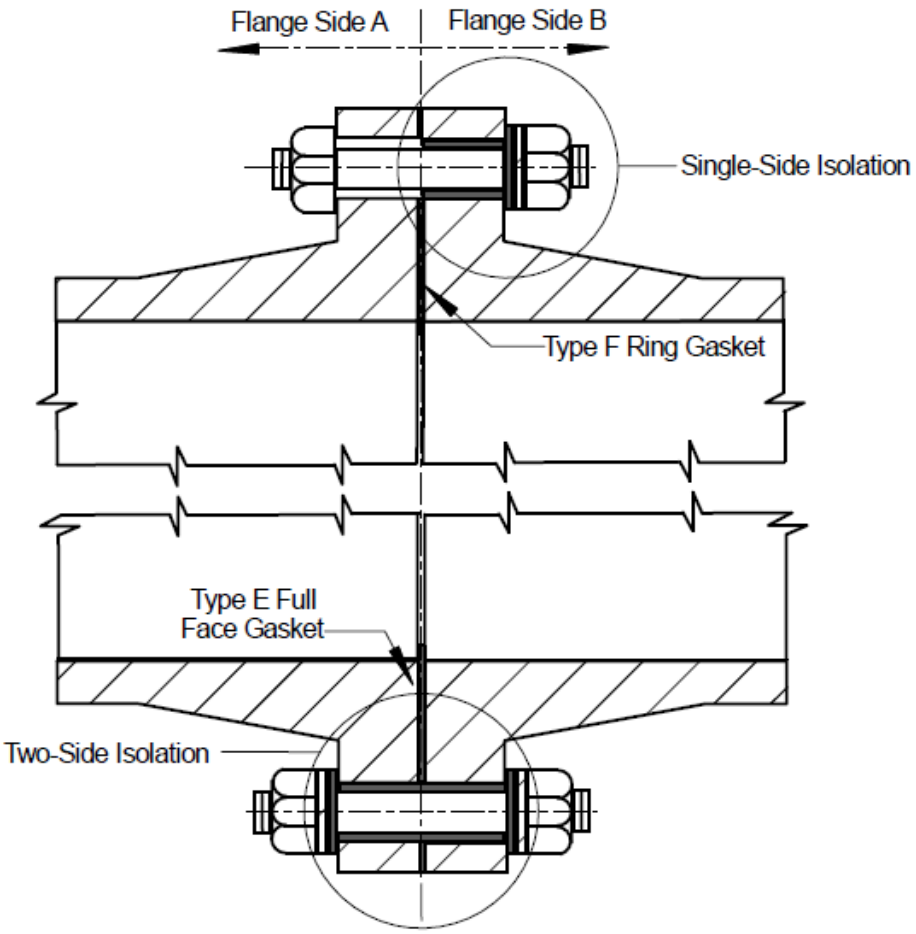
DRAWING NO. CP-691
FLUSH-MOUNTED ENCLOSURE FOR TEST STATION TERMINAL BOARD & WIRES



DRAWING NO. CP-692
POST-MOUNTED TEST STATION FOR TERMINAL BOARD & WIRES



DRAWING NO. CP-801
FLANGE ISOLATION KIT (FIK)

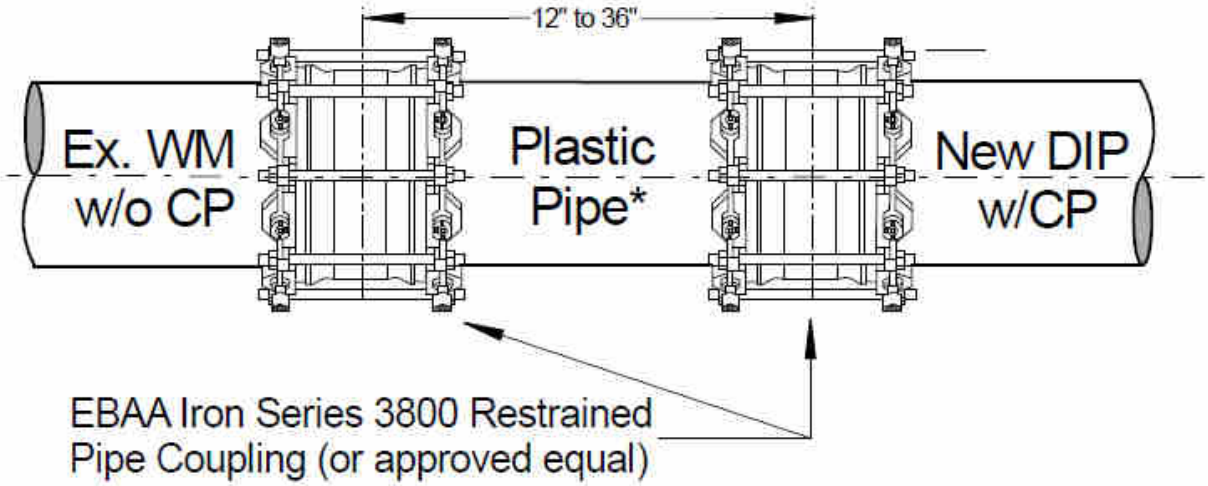


Note: ANSI-AWWA companion flanges are required. FIK cannot be installed on M.J. joints.

Required Information to Properly Size a Flange Isolation Kit

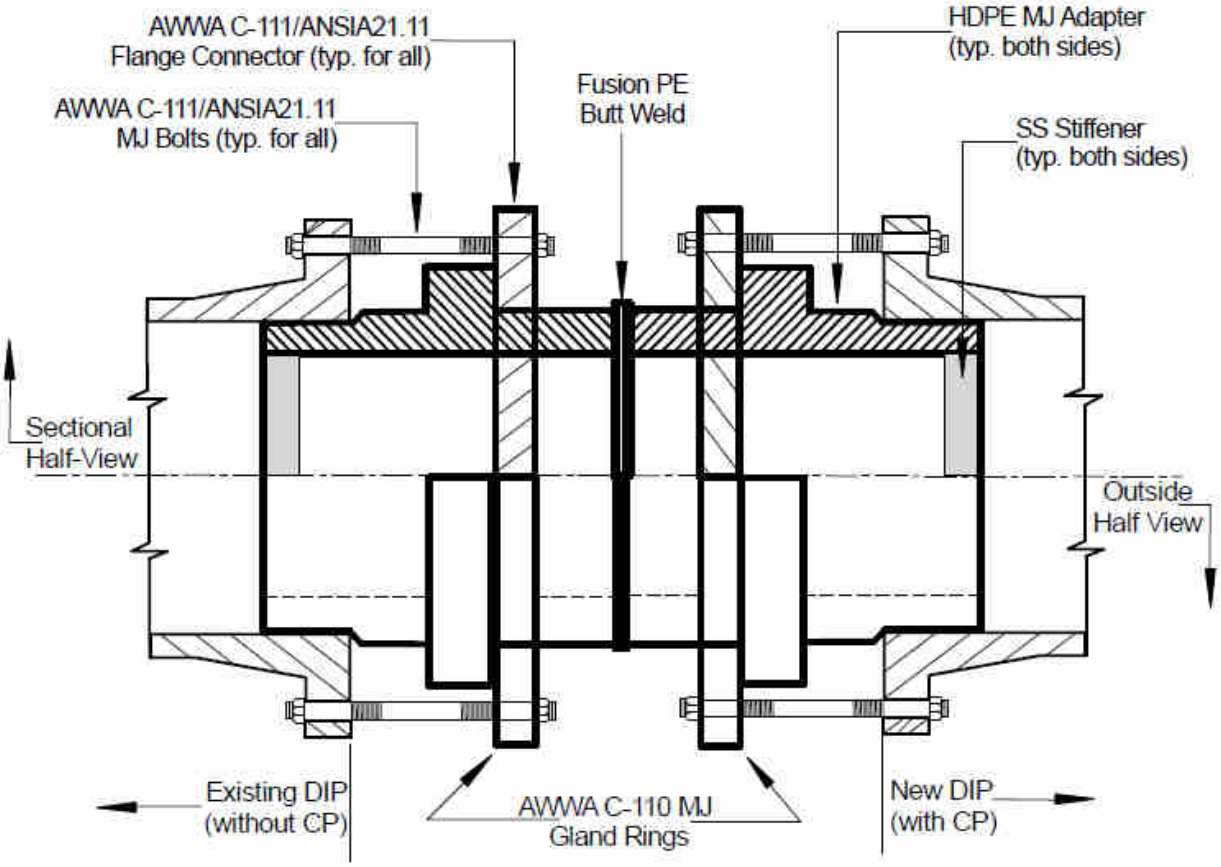
Flange Spec.	_____
Flange Size	_____
Flange Rating	_____
Flange O.D.	_____
Flange I.D.	_____
Bolt Circle Ø	_____
Qty. Bolt Holes	_____
Flange Bolt Ø	_____
Bolt Hole Ø	_____
Flange Thickness (A)	_____
Flange Thickness (B)	_____

DRAWING NO. CP-804
POLYVINYL CHLORIDE PIPE INSERT (PVPI)



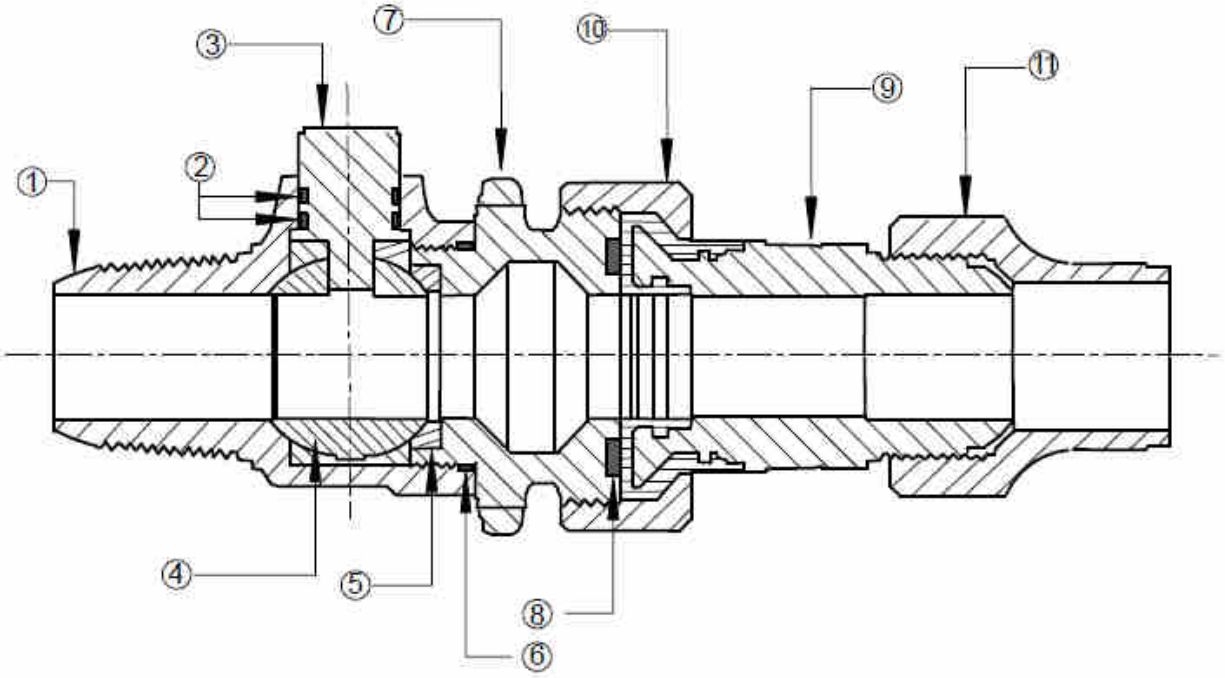
Nominal Pipe Size (in.)	PVC Pipe Specification*	
	C900 PVC	C905 PVC
Minimum	4	14
Maximum	12	24

DRAWING NO. CP-805
HIGH DENSITY POLYETHYLENE PIPE INSERT (HDPI)



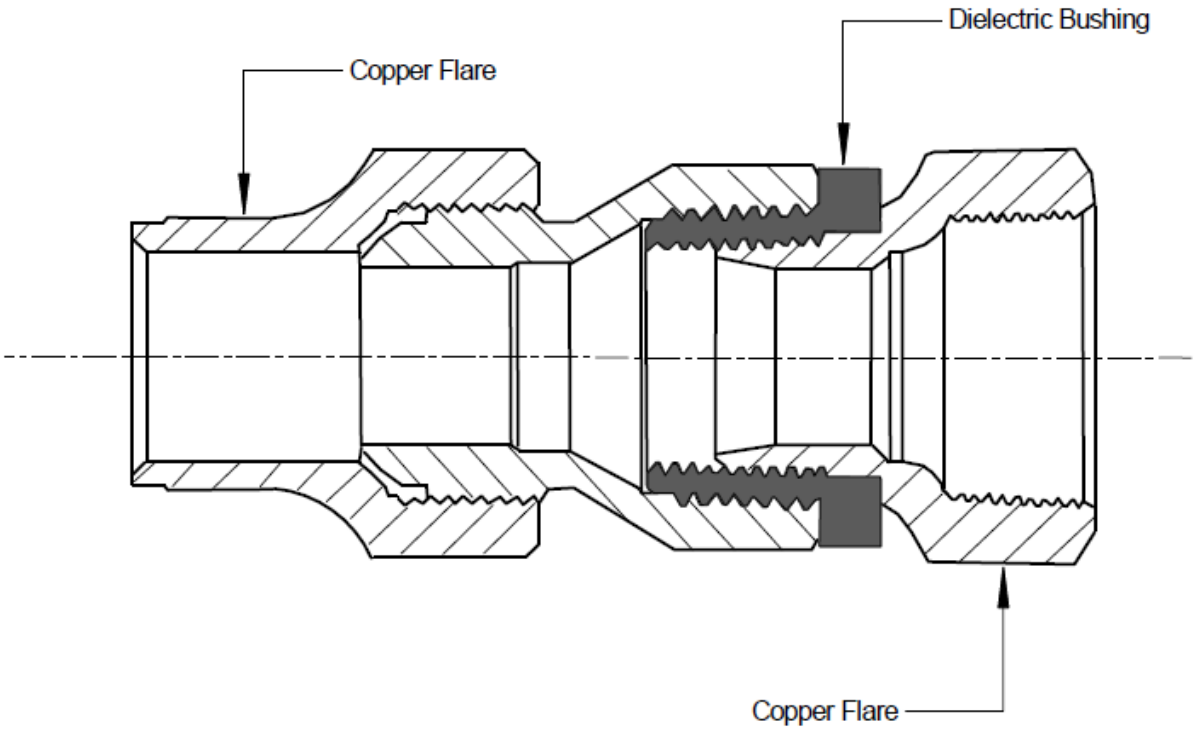
DRAWING NO. CP-806
ISOLATION (BALL TYPE) CORPORATION STOP (ICS)

COMPONENT LIST FOR BALL CORP VALVE LLB ASSEMBLY CC X CS				
MARK	DESCRIPTION	MATERIAL	ASTM	ALLOY or TYPE
1	BODY	BRASS	CAST LOW LEAD ALLOY	
2	D-RING	RUBBER	D-2000	EP
3	STEM	BRASS	CAST LOW LEAD ALLOY	
4	BALL	BRASS	CAST LOW LEAD ALLOY	
5	GASKET	RUBBER	D-2000	NITRILE
6	D-RING	RUBBER	D-2000	EP
7	END PIECE	BRASS	CAST LOW LEAD ALLOY	
8	D-RING	RUBBER	D-2000	NITRILE
9	INSULATED TAIL PC.	BRASS w/NYLON	CAST LOW LEAD ALLOY	
10	COUP. NUT	BRASS	B-62	ALLOY C83600
11	TUBE NUT	BRASS	B-62	ALLOY C83600
MUELLER MODEL N35000N SHOWN (other models are similar)				



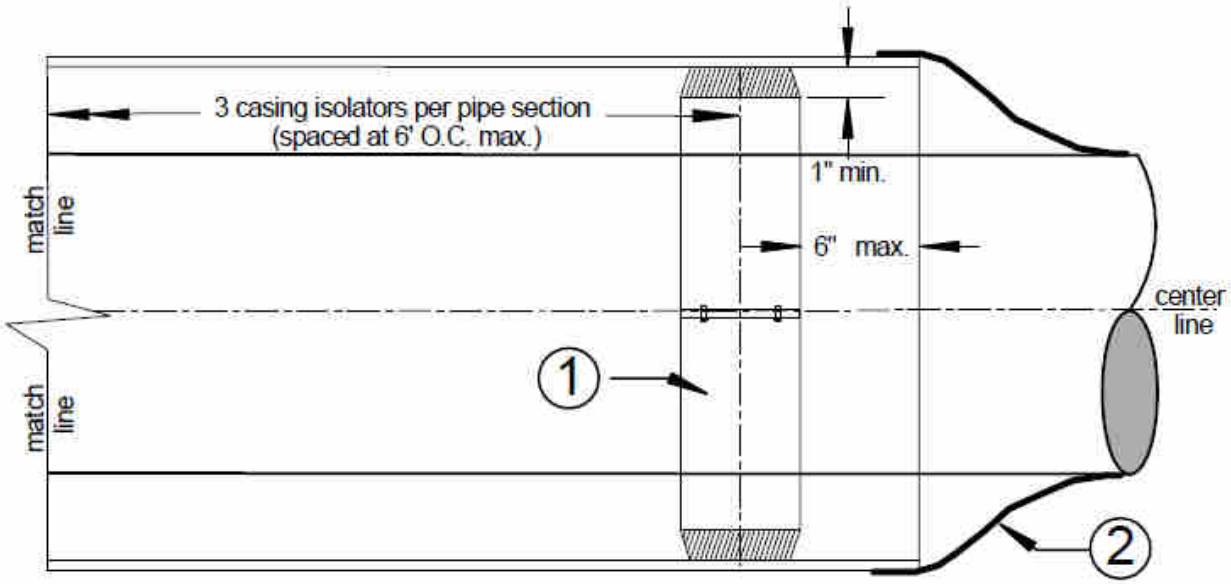
DRAWING NO. CP-807
ISOLATION SERVICE FITTING (COPPER FLARE) FOR ¾" TO 2" PIPE (ISF)

Follow the manufacturer's installation instructions.
Do NOT to tighten across the dielectric bushing.
NOTE: These fittings are NOT field serviceable.

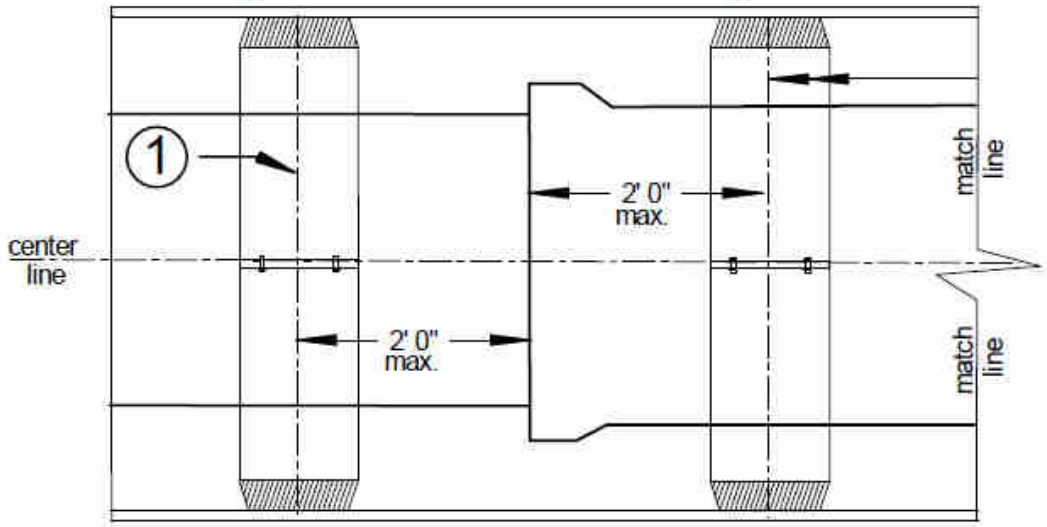


A.Y. McDonald Model 747-55DB Shown (other manufacturers' products are similar)

DRAWING NO. CP-808
ELECTRICAL ISOLATION DEVICES FOR METALLIC CASING SLEEVES



Casing Isolator and Casing End Seal



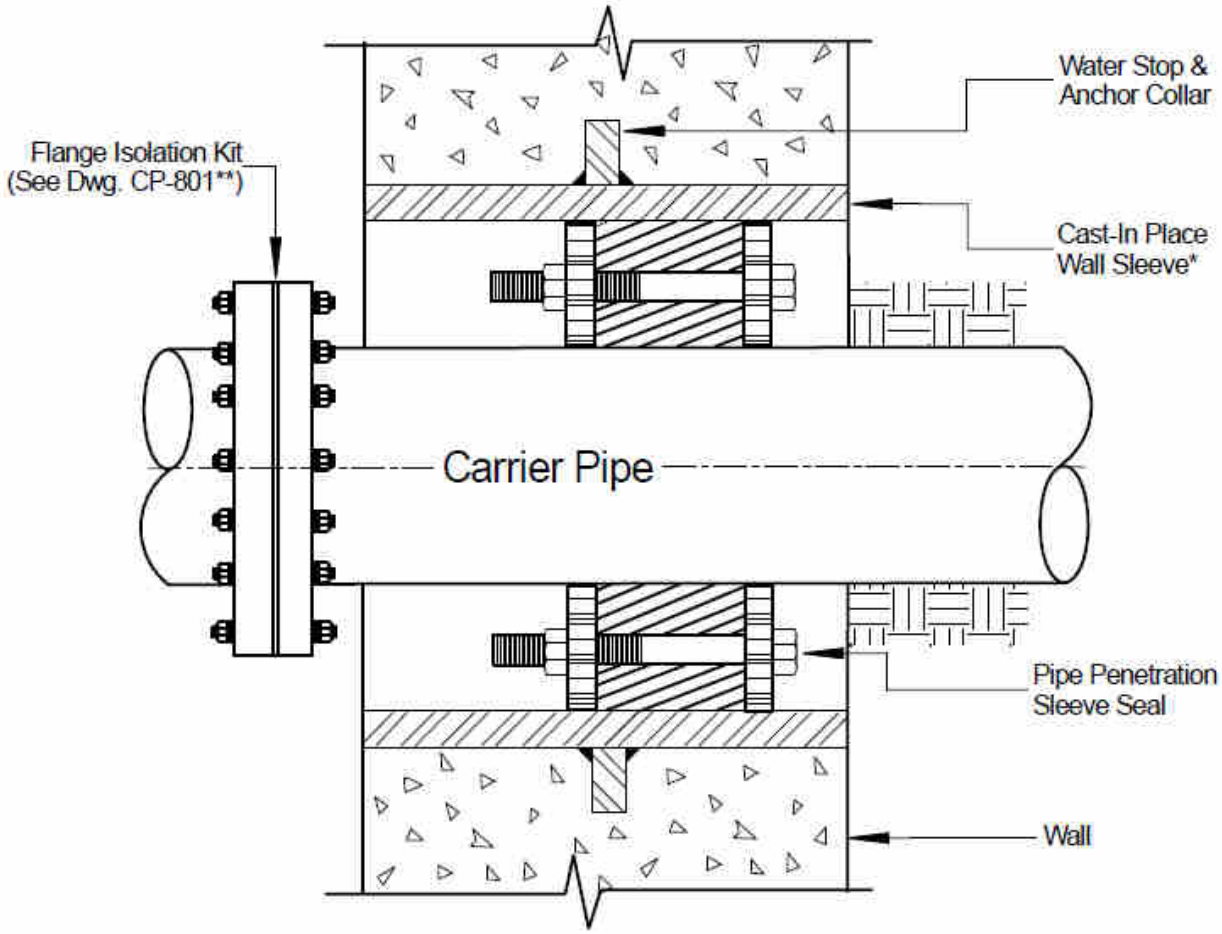
Casing Isolators Installed at Pipe Joint

1 Stainless Steel Band Casing Isolator w/Dielectric Runners

2 Wrap-Around Casing Boot End Seal (pipe not req'd to be centered)

Note: Ductile Iron Pipe is shown - casing isolators for welded steel pipe are similar

DRAWING NO. CP-809
ELECTRICAL ISOLATION AT PIPE ENTRY WITHIN REINFORCED CONCRETE WALL



* Wall may be cored as an alternative to using wall sleeve
** Do not ground pipe between FIK and wall

NEBRASKA

DEPT. OF ENVIRONMENT AND ENERGY

23-006 August 2023

Water Main and Sanitary/Storm Sewer Separations

The Department recognizes the challenges and difficulties in designing and installing distribution mains, especially in areas fraught with existing utilities. This guide is developed to assist design engineers with sewers and water main separation design and installation. In the design and installation of water mains, design engineers must strive to achieve the separation distances required for water mains and fire hydrants from sanitary sewer, storm sewer and other potential sources of contamination as per the Recommended Standards for Water Works, 2007 Edition (RSFWW). In cases where it is ***impractical*** to achieve those separations required in the RSFWW, the protocols provided in this document should be followed to be considered substantial conformance by the Department.

I. Sanitary Sewer and Water Main Separations

A. Sanitary sewer and water main <u>horizontal separations</u> for parallel installations.

1. Scenario 1
    - **a.** A 10-foot radial separation is considered equivalent to the 10-foot horizontal separation requirement if the water main is above the sanitary sewer and not within 5 feet horizontally.

2. Scenario 2
    - **a.** If the horizontal separation is **greater than 8 feet but less than 10 feet**, the installation would be acceptable if the following is provided:
        - **i.** Engineer's professional opinion that the water quality in the water main will not be impacted based on an evaluation of the proposed installation and soil conditions; **<u>and</u>**
        - **ii.** Reasons are provided as to why it is not practical to provide the 10 feet of separation.

3. Scenario 3
    - **a.** If the horizontal separation is **greater than 4 feet but less than 8 feet**, the installation would be acceptable if the following is provided:
        - **i.** Engineer's professional opinion that the water quality in the water main will not be impacted based on an evaluation of the proposed installation and soil conditions;
        - **ii.** Reasons are provided as to why at least 8 feet of separation cannot be provided; **<u>and</u>**
        - **iii.** The water main is laid in a separate trench or on an undisturbed earth shelf located on one side of the sewer at such an elevation that the bottom of the water main is at least 18 inches above the top of the sewer **<u>or</u>**
        - **iv.** The engineer may encase either the water or sewer pipe for protection (rigid welded piping or cement/concrete-at least 4 to 6 inches thick etc.) at locations where the separation cannot be met **<u>or</u>**
        - **v.** The sewer pipe needs to be water works grade 150 psi pressure rated pipe meeting AWWA Standards and pressure tested to ensure water tightness **<u>or</u>**
        - **vi.** An alternate method of protection with approval from the Department prior to construction.

4. Scenario 4
    a. If the horizontal separation **is less than 4 feet, written approval from the Department is required prior to installation.**

B. Sanitary sewer and water main vertical separations at crossings.

1. Scenario 1
    a. If the water main **is above** the sanitary sewer pipe and the vertical separation is **greater than 12 inches but less than 18 inches**, the installation would be acceptable if the following is provided:
        i. Engineer's professional opinion that the water quality in the water main will not be impacted based on an evaluation of the proposed installation and soil conditions;
        ii. Reasons are provided as to why the 18-inch separation cannot be met; **and**
        iii. One full length of water pipe needs to be located so that both joints will be as far from the sanitary sewer crossing as possible.

2. Scenario 2
    a. If the water main **is above** the sanitary sewer pipe and the vertical separation is **greater than 6 inches but less than 12 inches**, the installation would be acceptable if the following is provided:
        i. Engineer's professional opinion that the water quality in the water main will not be impacted based on an evaluation of the proposed installation and soil conditions;
        ii. Reasons are provided as to why at least 12 inches separation cannot be met;
        iii. One full length of water pipe needs to be located so that both joints will be as far from the sanitary sewer crossing as possible;
        iv. Proper support is provided to prevent settlement and breaking pipe; **and**
        v. The engineer may encase either the water or sewer pipe for protection (rigid welded piping or cement/concrete-at least 4 to 6 inches thick etc.) for at least 12 feet on each side of the crossing with the ends sealed **or**
        vi. The sewer pipe needs to be water works grade 150 psi pressure rated pipe meeting AWWA Standards and be pressure tested to ensure water tightness **or**
        vii. An alternate method of protection with approval from the Department prior to construction.

3. Scenario 3
    a. If the water main **is below** the sanitary sewer, and the vertical separation is **greater than 6 inches but less than 18 inches**, the installation would be acceptable if the following is provided:
        i. Engineer's professional opinion that the water quality in the water main will not be impacted based on an evaluation of the proposed installation and soil conditions;
        ii. Reasons are provided as to why at least 18 inches separation cannot be met;
        iii. One full length of water pipe needs to be located so that both joints will be as far from the sanitary sewer crossing as possible;
        iv. Proper support is provided to prevent settlement and breaking pipe; **and**
        v. The engineer may encase either the water or sewer pipe for protection (rigid welded piping or cement/concrete-at least 4 to 6 inches thick etc.) for at least 12 feet on each side of the crossing with the ends sealed **or**
        vi. The sewer pipe needs to be water works grade 150 psi pressure rated pipe meeting AWWA Standards and be pressure tested to ensure water tightness **or** An alternate method of protection with approval from the Department prior to construction.

4. Scenario 4
    a. If the vertical separation between the sewer line and the water main **will be less than 6 inches, written approval from the Department is required prior to installation.**

II. Storm Sewer and Water Main Separations

In general, the pollution hazards from a storm sewer are not as significant as a sanitary sewer since the storm sewer does not have flow in it year-round. However, during rainstorm events, it may carry surface runoff which contains chemical pollutants, but the pathogenic microbial impact is likely to be less than that of a sanitary sewer. For storm sewer and water main separation, the protocols provided in Sections II.A and II.B must be followed.

A. Storm sewer and water main horizontal separations for parallel installations.

1. Scenario 1
    - **a.** If the horizontal separation is **greater than 4 feet but less than 10 feet**, the installation would be acceptable if the following is provided:
        - **i.** Engineer's professional opinion that the water quality in the water main will not be impacted based on an evaluation of the proposed installation and soil conditions;
        - **ii.** Reasons are provided as to why the 10 feet of separation cannot be met; **and if necessary,**
        - **iii.** Additional protection deemed necessary by the design engineer.

2. Scenario 2
    - **a.** If the horizontal separation **will be less than 4 feet, written approval from the Department is required prior to installation.**

B. Storm sewer and water main vertical separations at crossings.

1. Scenario 1
    - **a.** If the water main **is above** the storm sewer pipe and the vertical separation is **greater than 6 inches but less than 18 inches**, the installation would be acceptable if the following is provided:
        - **i.** Engineer's professional opinion that the water quality in the water main will not be impacted based on an evaluation of the proposed installation and soil conditions;
        - **ii.** Reasons are provided as to why the 18-inch separation cannot be met; **and**
        - **iii.** One full length of water pipe needs to be located so that both joints will be as far from the storm sewer crossing as possible - preference shall be given to keep joints further from any sanitary sewer than a storm sewer.

2. Scenario 2
    - **a.** If the water main **is below** the storm sewer pipe and the vertical separation is **greater than 6 inches but less than 18 inches**, the installation would be acceptable if the following is provided:
        - **i.** Engineer's professional opinion that the water quality in the water main will not be impacted based on an evaluation of the proposed installation and soil conditions;
        - **ii.** Reasons are provided as to why the 18-inch separation cannot be met;
        - **iii.** One full length of water pipe needs to be located so that both joints will be as far from the storm sewer crossing as possible - preference shall be given to keep joints further from any sanitary sewer than a storm sewer;
        - **iv.** Proper support is provided to prevent settlement and breaking pipe; **and**
        - **v.** The engineer may encase either the water or sewer pipe for protection (rigid welded piping or cement/concrete-at least 4 to 6 inches thick etc.) for at least 12 feet on each side of the crossing with the ends sealed **or**
        - **vi.** The sewer pipe needs to be water works grade 150 psi pressure rated pipe meeting AWWA Standards and be pressure tested to ensure water tightness (the storm sewer pipe needs be watertight when pressure tested to at least 10 psi test pressure) **or**
        - **vii.** An alternate method of protection with approval from the Department prior to construction.

3. Scenario 3
    a. If the vertical separation between the storm sewer and the water main **will be less than 6 inches, written approval from the Department is required prior to installation.**

III. Force Main Separations

At least **10 feet of horizontal separation** between water mains and sanitary sewer force mains must be provided. There must be at least **18 inches of vertical separation** at crossings between water mains and force mains and one full length of water pipe shall be located so both joints will be as far from the sewer as possible at the crossing. **Where it is impossible to meet these separation requirements for force mains, the installation must not proceed prior to consulting and obtaining written approval from the Department.**

IV. Fire Hydrants Separations

A. Fire Hydrants and Sanitary Sewer Separations
1. Hydrant drains must not be connected to or located within **10 feet of sanitary sewers. Where it is impossible to provide 10 feet of horizontal separation between sanitary sewer and fire hydrant drains, written approval from the Department is required prior to installation.**

B. Fire Hydrants and Storm Sewer Separations
1. Where it is impractical to meet the 10-foot horizontal separation requirement for storm sewer and hydrant drains, less than 10 feet of horizontal separation would be acceptable if the following is provided:
    a. Engineer's professional opinion that the water quality in the water main will not be impacted based on an evaluation of the proposed installation and soil conditions;
    b. Reasons are provided as to why the 10 feet of horizontal separation cannot be met; **and**
    c. At least 5 feet of horizontal separation is provided.

2. **Where it is impossible to provide at least 5 feet of horizontal separation between storm sewers and hydrant drains, written approval from the Department is required prior to installation.**

Notice of Award

Date: _____

Project: WORTHMAN BOULEVARD WATERMAIN PHASE II	
Owner: City of Seward, Nebraska	Owner's Contract No.: N/A
Contract: Construction	Engineer's Project No.: 09336.00-B
Bidder:	
Bidder's Address:	

You are notified that your Bid dated _____for the above Contract has been considered. You are the Successful Bidder and are awarded a Contract for furnishing all labor, materials and equipment for the improvements to WORTHMAN BOULEVARD WATERMAIN PHASE II in Seward, NE. Work, per the plans and specifications, shall include clearing and grubbing, earthwork, water main construction, seeding, and all incidental work necessary to complete the Project as required by the plans and specifications.

The Contract Price of your Contract is: _____ *Dollars and 00/100* ($_____).

Two (2) copies of the proposed Contract Documents (excluding Drawings and addendums) are provided with this Notice of Award.

Two (2) sets of the Drawings will be delivered separately or otherwise made available to you immediately following execution of the contract.

You must comply with the following conditions precedent within [15] days of the date you receive this Notice of Award.

1. Deliver to the Owner [One] fully executed counterparts of the Contract Documents.
2. Deliver with the executed Contract Documents the Contract security [Bonds] as specified in the Instructions to Bidders (Article 20), General Conditions (Paragraph 5.01), and Supplementary Conditions (Paragraph SC-5.01).
3. Other conditions precedent:

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within ten days after you comply with the above conditions or after receipt of the approved permits, whichever occurs later, Owner will return to you one fully executed counterpart of the Contract Documents.

City of Seward
Owner

By:_____
Authorized Signature

Mayor
Title

Copy to Engineer

Notice to Proceed

Date: _____

Project: WORTHMAN BOULEVARD WATERMAIN PHASE II	
Owner: City of Seward, Nebraska	Owner's Contract No.: N/A
Contract:	Engineer's Project No.: 09336.001-B
Contractor:	
Contractor's Address: *[send Certified Mail, Return Receipt Requested]*	

You are notified that the Contract Times under the above Contract will commence to run on_____. On or before that date, you are to start performing your obligations under the Contract Documents. In accordance with Article 4 of the Agreement, the date of Substantial Completion is_____, and the date of readiness for final payment is _____ [(or) the number of days to achieve Substantial Completion is _____, and the number of days to achieve readiness for final payment is _____].

Before you may start any Work at the Site, Paragraph 2.01.B of the General Conditions provides that you and Owner must each deliver to the other (with copies to Engineer and other identified additional insureds and loss payees) certificates of insurance which each is required to purchase and maintain in accordance with the Contract Documents.

Also, before you may start any Work at the Site, you must:

_____ *[add other requirements].*

_____ _____
Owner

Given by:

_____ _____
Authorized Signature

_____ _____
Title

_____ _____
Date

Copy to Engineer

SCHEMMER

Design with Purpose. Build with Confidence.

Project: Worthman Blvd Water Main
Phase II Cost Estimate

Job No.: SCHEMMER 09336001-B

WORTHMAN BOULEVARD WATER MAIN PHASE II - 100% OPINION OF PROBABLE CONSTRUCTION COSTS

COMPUTED BY: Megan Starner DATE: 3/13/2025

CHECKED BY: Alex Roth DATE: 3/13/2025

UPDATES: DATE:

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	TOTAL COST
0005.01	TRAFFIC CONTROL	1	LS	$5,000.00	$5,000.00
0030.00	MOBILIZATION (8%)	1	LS	$60,000.00	$60,000.00
1009.00	GENERAL CLEARING AND GRUBBING	1	LS	$5,000.00	$5,000.00
1030.00	EARTHWORK MEASURED IN EMBANKMENT (ESTABLISHED QUANTITY)	602	CY	$27.00	$16,254.00
1995.00	STABILIZED CONSTRUCTION EXIT	1	EA	$4,000.00	$4,000.00
3075.32	8" CONCRETE PAVEMENT, CLASS 47B-3500	106	SY	$100.00	$10,600.00
L001.02	SEEDING, TYPE B	2.42	AC	$3,000.00	$7,260.00
	EROSION CONTROL, CLASS 1A	1,121	SY	$3.50	$3,923.11
	REMOVE 12" PLUG	1	EA	$250.00	$250.00
W205.16	16" WATER MAIN PIPE	1,607	LF	$200.00	$321,400.00
W205.12	12" WATER MAIN PIPE	1,788	LF	$120.00	$214,560.00
W219.0	6" GATE VALVE AND BOX	7	EA	$1,800.00	$12,600.00
W219.72	12" GATE VALVE AND BOX	6	EA	$4,000.00	$24,000.00
	16" BUTTERFLY VALVE	4	EA	$6,000.00	$24,000.00
W222.06	6" FIRE HYDRANT	8	EA	$6,000.00	$48,000.00
	6" ANCHORING COUPLING, 18"	9	EA	$325.00	$2,925.00
	16" ANCHORING COUPLING	1	EA	$1,000.00	$1,000.00
	16" RETAINER GLAND	28	EA	$350.00	$9,800.00
	12" RETAINER GLAND	41	EA	$250.00	$10,250.00
	6" RETAINER GLAND	10	EA	$90.00	$900.00
	16"x12" REDUCER, M.J.	1	EA	$1,000.00	$1,000.00
	16"x6" REDUCER, M.J.	1	EA	$750.00	$750.00
	16" PLUG, M.J.	1	EA	$900.00	$900.00
	12" PLUG, M.J.	3	EA	$500.00	$1,500.00
	16"x12" CROSS, M.J.	1	EA	$4,000.00	$4,000.00
W356	12"X6" TEE	3	EA	$800.00	$2,400.00
	12"X12" TEE	1	EA	$1,200.00	$1,200.00
W356	16"X6" TEE	4	EA	$1,200.00	$4,800.00
W356	16"X16" TEE	1	EA	$1,800.00	$1,800.00
W357	12"X11.25 DEG BEND	2	EA	$650.00	$1,300.00
W357	12"X45 DEG BEND	4	EA	$550.00	$2,200.00
	16"X90 DEG BEND	2	EA	$900.00	$1,800.00
	CONC FOR PLUGS AND COLLARS	2.2	C.Y.	$1,000.00	$2,200.00
	STEEL FOR PLUGS AND COLLARS	110.9	LBS	$3.00	$332.70
	CONC FOR THRUST BLOCKS AND ANCHORAGES	11.2	C.Y.	$400.00	$4,464.00
	STEEL FOR THRUST BLOCKS AND ANCHORAGES	436.5	LBS	$3.00	$1,309.50
	SUBTOTAL CONSTRUCTION				$813,678.31
	CONSTRUCTION CONTINGENCIES (10% OF CONSTRUCTION)				$81,367.83
	TOTAL CONSTRUCTION COST				**$895,046.14**
ROW (Approximate Impacts and Costs)					.
	PERMANENT EASEMENT	0	SF	$0.00	$0
	TOTAL RIGHT-OF-WAY COSTS				**$0**
	CONSTRUCTION ENGINEERING & INSPECTION	**12%**			**$107,405.54**
	GRAND TOTAL				**$1,002,451.68**

4. Consideration of a Change Order in the Amount of $15,602.50 to the Construction Contract with General Excavating for the Bradford Street Storm Improvements Project - City Engineer Oneby

SCHEMMER *Design with Purpose. Build with Confidence.*	PROJECT Bradford St. Storm Sewer Improvements PROJECT NO. 09175.001

WORK ORDER NO. 12

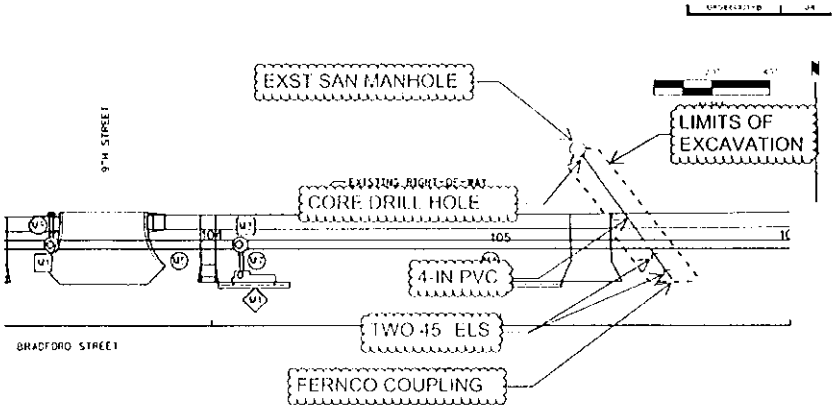
CONTRACT DATE: _____ DATE: 2/28/25

CONTRACTOR: General Excavating OWNER: City of Seward

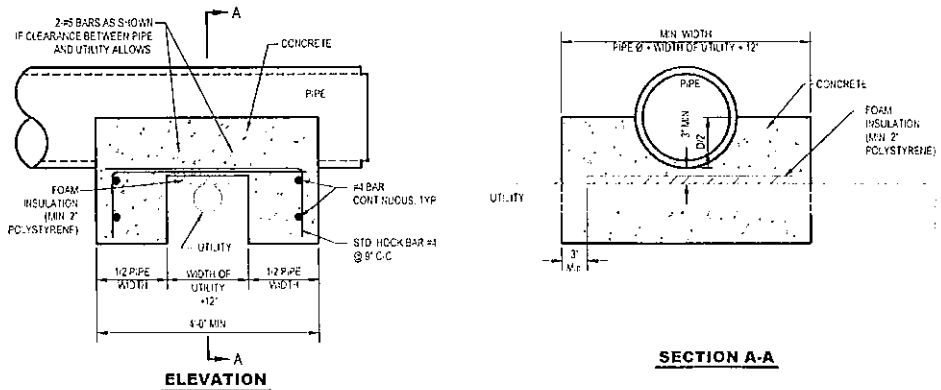
THE FOLLOWING CHANGES ARE HEREBY MADE TO THE CONTRACT DOCUMENTS:

Sanitary sewer service between 8th and 9th Streets

In mid-February of 2025, property owner alerted City of Seward their sewer service line was impacted by the storm sewer construction in October 2023. Upon excavation of this area, it was found that 4" service was cut and obstructed. Contractor provided temporary restoration of service. Final construction shall include coupling to existing line on south end shall be done with Fernco fitting. Lowering of service line shall be done with 45° bends. Manhole in alley shall be tapped to accept new 4" pipe at lower elevation. Existing service pipe opening shall be grouted in manhole.



To support the 36" storm sewer pipe above the 4" sewer service, the contractor shall construct a pipe cradle as shown in the below detail:



CONCRETE CRADLE DETAIL

After constructing pipe cradle, contractor shall place crushed rock bedding around and below exposed 4" sewer service outside of the cradle structure in a manner that prevents settlement during soil backfill.

After final soil backfill of cradle and bedded sewer service, contractor shall CCTV the new sewer service pipe and submit video to City of Seward. The contractor will be responsible for correcting any sags or settlement that affect the flow of the service pipe at their expense.

The following pay items will be used for this work along with contractor's unit pricing:

Item	Estimated Quantity	Unit Price	Extended Price
Remove Walk	11 SY	**$16.73**	**$184.03**
Concrete Class 47B-3500 Sidewalk, 4"	11 SY	**$63.00**	**$693.00**
Lowering 4" Sewer Service at Sta. 108+30	1 LS	**$10,045.14**	**$10,045.14**
Pipe Cradle for 36" RCP	1 LS	**$4105.33**	**$4105.33**
CCTV Sewer Service Pipe	1 LS	**$575.00**	**$575.00**

Acceptance of Work Order	
For the Owner	**For the Contractor**
Signature:	Signature: [signature]
Name:	Name: ROBERT O'CONNOR
Title:	Title: PROJECT MANAGER
Date:	Date: 3/18/2025

5. Consideration of a Professional Services Agreement with Olsson, Inc. for Construction Engineering Services for the 500,000-Gallon Water Tower Project - City Engineer Oneby **(added 3:30P on 3/31/25)**

LETTER AGREEMENT
FOR PROFESSIONAL SERVICES

March 24, 2025

City of Seward, Nebraska
Attn: Michael Oneby, P.E.
142 North 7th Street
Seward, Nebraska 68434

Re: **LETTER AGREEMENT FOR PROFESSIONAL SERVICES**
City of Seward, Nebraska 2025 On-Call Services
Lincoln, Nebraska

Dear Mr. Oneby:

It is our understanding that City of Seward, Nebraska ("Client") requests Olsson, Inc. ("Olsson") to perform the services described herein pursuant to the terms of this Letter Agreement for Professional Services, Olsson's General Provisions and any exhibits attached hereto (all documents constitute and are referred to herein as the "Agreement") for the Project.

Olsson has acquainted itself with the information provided by Client relative to the Project and based upon such information offers to provide the services described below for the Project. Client warrants that it is either the legal owner of the property to be improved by this Project or that Client is acting as the duly authorized agent of the legal owner of such property. Client acknowledges that it has reviewed the General Provisions and any exhibits attached hereto, which are expressly made a part of and incorporated into the Agreement by this reference. In the event of any conflict or inconsistency between this Letter Agreement, and the General Provisions regarding the services to be performed by Olsson, the terms of the General Provisions shall take precedence.

Olsson shall provide the following services ("Scope of Services") to Client for the Project: as more specifically described in "Scope of Services" attached hereto. Should Client request work in addition to the Scope of Services, (Optional Additional Services) Olsson shall invoice Client for such additional services at the standard hourly billing labor rate charged for those employees actually performing the work, plus reimbursable expenses if any. Olsson shall not commence work on Optional Additional Services without Client's prior written approval.

Olsson agrees to provide all of its services in a timely, competent and professional manner, in accordance with applicable standards of care, for projects of similar geographic location, quality and scope.

SCHEDULE FOR OLSSON'S SERVICES

Olsson ready to begin performing our services immediately.

COMPENSATION

Client shall pay to Olsson for the performance of the Scope of Services, the actual time of personnel performing such services, and all actual reimbursable expenses in accordance with the Labor Rate Schedule and the Reimbursable Expense Schedule attached to this Agreement. Olsson shall submit invoices on a monthly basis and payment is due within 30 calendar days of invoice date.

TERMS AND CONDITIONS OF SERVICE

We have discussed with you the risks, rewards and benefits of the Project, the Scope of Services, and our fees for such services and the Agreement represents the entire understanding between Client and Olsson with respect to the Project. The Agreement may only be modified in writing signed by both parties.

Client's designated Project Representative shall be _____.

If this Agreement satisfactorily sets forth your understanding of our agreement, please sign in the space provided below. Retain one original for your files and return an executed original to Olsson. This proposal will be open for acceptance for a period of 30 days from the date set forth above, unless changed by us in writing.

OLSSON, INC.

By _____ By _____

Jessie Beach Taylor Curry

By signing below, you acknowledge that you have full authority to bind Client to the terms of the Agreement. If you accept the terms set forth herein, please sign:

City of Seward, Nebraska

By _____

Name _____

Title _____ Dated _____

If different from above,

_____

Client's Designated Project Representative

Attachments
Scope & Fee
General Provisions

Proposed Scope of Services
City of Seward, NE
Seward Water Tower – Coating Inspection

Scope of Services

Olsson's staff will provide project management, administrative, and coating inspection services for the City of Seward, NE. We propose to provide our observation and testing services in the following manner:

Project Management and Administration – Olsson's project manager, will provide quality review and technical support to the project when needed. He will also manage the financial aspects of the project. He will attend and participate in the pre-construction and all monthly progress meetings with the contractor and owner.

Inspection Services – Olsson will provide a full-time inspector during the entire interior and exterior coating process. Olsson's inspector will be on site for the duration of the coating process, checking all, but not limited to, typical coatings hold points. Those hold points are: Pre surface preparation, post surface preparation, surface conditions for coating application, coating and post coating application, and post curing of the coatings. Olsson's inspector will also be present to monitor proper dehumidification, containment, proper equipment usage, blast profile, pre-coating or pre-painting chemical or ultraviolet testing of blasted surface, and visual inspection and approval. Olsson's inspector shall follow and enforce all industry standards for painting removal and application procedures including, but not limited to ANSI, AWWA, ASTM, NACE, SSPC, and AMPP. Olsson's inspector shall notify the project manager or city inspector immediately of any deviations from the contract documents, schedule or any safety violations.

This fee does not include time and expenses for any re-inspections for failed inspection items.

Final Report - Olsson's field professionals will prepare typed field reports summarizing each day's field observations, presenting test results, and detailing items not in compliance with the contract documents and/or specifications. Draft copies of the field reports will be provided on a daily basis to the designated field representative if requested.

Field reports will be reviewed by our project manager and summarized in a final report. Olsson's responsibility as an inspector is to report our field observations and test results to the Contractor and Client as provided herein. Olsson will prepare a final summary report stating its opinion with regard to whether the portions of the work that were observed, inspected and/or tested were in compliance with the project specifications.

Safety – It is the responsibility of the general contractor or their subcontractors to provide safe access to work requiring observation or testing by the special inspector or tester. When fall protection is needed for Olsson personnel to perform their work, we will supply our personnel with harnesses and lanyards which can be tied off to contractor-provided anchorage points. If the contactor cannot supply an anchorage point for Olsson personnel, we will work with the general contractor to come up with a solution possibly including Olsson providing our own anchorage, which may cause a delay to obtain the equipment needed and will result in additional charges to Olsson's Client.

Proposed Scope of Services
City of Seward, NE
Seward Water Tower – Coating Inspection

Project Management and Administration					
30	Project Manager @	$175.00	/hr	$	5,250.00
5	Administration @	$75.00	/hr	$	375.00
Inspection Services					
560	NACE Level 2 Inspector @	$120.00	/hr	$	67,200.00
140	NACE Level 2 OT @	$180.00	/hr	$	25,200.00
84	Trips @	$55.00	/trip	$	4,620.00
84	Coating Inspection Kit @	$100.00	/day	$	8,400.00
			Total	***$***	***111,045.00***

GENERAL PROVISIONS

These General Provisions are attached to and made a part of the respective Letter Agreement or Master Agreement, dated March 24, 2025 between City of Seward, Nebraska ("Client") and Olsson, Inc. ("Olsson") for professional services in connection with the project or projects arising under such Letter Agreement or Master Agreement (the "Project(s)").

As used herein, the term "this Agreement" refers to these General Provisions, the applicable Letter Agreement or Master Agreement, and any other exhibits or attachments thereto as if they were part of one and the same document.

SECTION 1—OLSSON'S SCOPE OF SERVICES

Olsson's scope of services for the Project(s) is set forth in the applicable Letter Agreement or Master Agreement ("Scope of Services").

SECTION 2—ADDITIONAL SERVICES

2.1 Unless otherwise expressly included, Scope of Services does not include the categories of additional services set forth in Sections 2.2 and 2.3.

2.2 If Client and Olsson mutually agree for Olsson to perform any optional additional services as set forth in this Section 2.2 ("Optional Additional Services"), Client will provide written approval of the agreed-upon Optional Additional Services, and Olsson shall perform or obtain from others such services and will be entitled to an increase in compensation at rates provided in this Agreement. Olsson may elect not to perform all or any of the Optional Additional Services without cause or explanation:

2.2.1 Preparation of applications and supporting documents for governmental financial support of the Project(s); preparation or review of environmental studies and related services; and assistance in obtaining environmental approvals.

2.2.2 Services to make measured drawings of or to investigate existing conditions of facilities.

2.2.3 Services resulting from changes in the general scope, extent or character of the Project(s) or major changes in documentation previously accepted by Client where changes are due to causes beyond Olsson's control.

2.2.4 Services resulting from the discovery of conditions or circumstances which were not contemplated by Olsson at the commencement of this Agreement. Olsson shall notify Client of the newly discovered conditions or circumstances and Client and Olsson shall renegotiate, in good faith, the compensation for this Agreement, if amended terms cannot be agreed upon, Olsson may terminate this Agreement and Olsson shall be paid for its services through the date of termination.

2.2.5 Providing renderings or models.

2.2.6 Preparing documents for alternate bids requested by Client.

2.2.7 Analysis of operations, maintenance or overhead expenses; value engineering; the preparation of rate schedules; earnings or expense statements; cash flow or economic evaluations or; feasibility studies, appraisals or valuations.

2.2.8 Furnishing the services of independent professional associates or consultants for work beyond the Scope of Services.

2.2.9 Services necessary due to the Client's award of more than one prime contract for the Project(s); services necessary due to the construction contract containing cost plus or incentive-savings provisions; services necessary in order to arrange for performance by persons other than the prime contractor; or those services necessary to administer Client's contract(s).

2.2.10 Services in connection with staking out the work of contractor(s).

2.2.11 Services during out-of-town travel or visits to the site beyond those specifically identified in this Agreement.

2.2.12 Preparation of operating and maintenance manuals.

2.2.13 Services to redesign some or all of the Project(s).

2.2.14 Preparing to serve or serving as a consultant or witness or assisting Client with any litigation, arbitration or other legal or administrative proceeding.

2.2.15 Services relating to Construction Observation, Certification, Inspection, Construction Cost Estimating, project observation, construction management, construction scheduling, construction phasing or review of Contractor's performance means or methods.

2.3 Whenever, in its sole discretion, Olsson determines additional services as set forth in this Section 2.3 are necessary to avoid a delay in the completion of the Project(s) ("Necessary Additional Services"), Olsson shall perform or obtain from others such services without waiting for specific instructions from Client, and Olsson will be entitled to an increase in compensation for such services at the standard hourly billing rate charged for those employees performing the services, plus reimbursable expenses, if any:

2.3.1 Services in connection with work directive changes and/or change orders directed by the Client to any contractors.

2.3.2 Services in making revisions to drawings and specifications occasioned by the acceptance of substitutions proposed by contractor(s); services after the award of each contract in evaluating and determining the acceptability of an unreasonable or excessive number of substitutions proposed by contractor(s); or evaluating an unreasonable or extensive number of claims submitted by contractor(s) or others in connection with the Project(s).

2.3.3 Services resulting from significant delays, changes or price increases occurring as a direct or indirect result of material, equipment or energy shortages.

2.3.4 Additional or extended services during construction made necessary by (1) work damaged during construction, (2) a defective, inefficient or neglected work by any contractor, (3) acceleration of the progress schedule involving services beyond normal working hours, or (4) default by any contractor.

SECTION 3—CLIENT'S RESPONSIBILITIES

3.1. Client shall provide all criteria and full information as to Client's requirements for the Project(s); designate and identify in writing a person to act with authority on Client's behalf in respect of all aspects of the Project(s); examine and respond promptly to Olsson's submissions; and give prompt written notice to Olsson whenever Client observes or otherwise becomes aware of any defect in the Olsson's services.

3.2 Client agrees to pay Olsson the amounts due for services rendered and expenses within thirty (30) days after Olsson has provided its invoice for such services. In the event Client disputes any invoice item, Client shall give Olsson written notice of such disputed item within fifteen (15) days after receipt of such invoice and shall pay to Olsson the undisputed portion of the invoice according to the provisions hereof. If Client fails to pay any invoiced amounts when due, interest will accrue on each unpaid amount at the rate of thirteen percent (13%) per annum from the date due until paid according to the provisions of this Agreement. Interest shall not be charged on any disputed invoice item which is finally resolved in Client's favor. Payment of interest shall not excuse or cure any default or delay in payment of amounts due.

3.2.1 If Client fails to make any payment due Olsson for services and expenses within thirty (30) days after receipt of Olsson's statement therefore, Olsson may, after giving seven (7) days written notice to Client, suspend services to Client under this Agreement until Olsson has been paid in full all amounts due for services, expenses and charges and Client will not obtain any license to any Work Product or be entitled to retain or use any Work Product pursuant to Section 7.1 unless and until Olsson has been paid in full and Client has fully satisfied all of its obligations under this Agreement.

3.3 Payments to Olsson shall not be withheld, postponed or made contingent on the construction, completion or success of the Project(s) or upon receipt by the Client of offsetting reimbursements or credit from other parties who may have caused the need for additional services. No withholdings, deductions or offsets shall be made from Olsson's compensation for any reason unless and until Olsson has been found to be legally liable for such amounts.

3.4 Client shall also do the following and pay all costs incident thereto:

3.4.1 Furnish to Olsson any existing and/or required borings, probings or subsurface explorations; hydrographic surveys; laboratory tests or inspections of samples, materials or equipment; appropriate professional interpretations of any of the foregoing; environmental assessment and impact statements; property, boundary, easement, right-of-way, topographic or utility surveys; property descriptions; and/or zoning or deed restrictions; all of which Olsson may rely upon in performing services hereunder.

3.4.2 Guarantee access to and make all provisions for Olsson to enter upon public and private property reasonably necessary to perform its services on the Project(s).

3.4.3 Provide such legal, accounting, independent cost estimating or insurance counseling services as may be required for the Project(s); any auditing service required in respect of contractor(s)' applications for payment; and/or any inspection services to determine if contractor(s) are performing the work legally.

3.4.4 Provide engineering surveys to establish reference points for construction unless specifically included in Olsson's Scope of Services.

3.4.5 Furnish approvals and permits from all governmental authorities having jurisdiction over the Project(s).

3.4.6 If more than one prime contractor is to be awarded the contract for construction, designate a party to have responsibility and authority for coordinating and interfacing the activities of the various prime contractors.

3.4.7 All fees and other amounts payable by Client under this Agreement are exclusive of taxes and similar assessments. Without limiting the foregoing, Client is responsible and liable for all sales, service, use, and excise taxes, and any other similar taxes, duties, and charges of any kind imposed by any federal, state, county or local governmental authority on any amounts payable by Client under this Agreement, other than any taxes imposed on Olsson's income. In the event any governmental authority assesses Olsson for taxes, duties, or charges of any kind in connection with Scope of Services provided by Olsson to Client, Olsson shall be entitled to submit an invoice to Client, its successors or assigns, for the amount of said assessment and related interest and penalties. Client shall pay such invoice in accordance with Olsson's standard payment terms.

3.5 Client shall pay all costs incident to obtaining bids or proposals from contractor(s).

3.6 Client shall pay all permit application review costs for government authorities having jurisdiction over the Project(s).

3.7 Contemporaneously with the execution of this Agreement, Client shall designate in writing an individual to act as its duly authorized Project(s) representative.

3.8 Client shall bear sole responsibility for:

3.8.1 Jobsite safety. Neither the professional activities of Olsson, nor the presence of Olsson or its employees or sub-consultants at the Project shall impose any duty on Olsson relating to any health or safety laws, regulations, rules, programs or procedures.

3.8.2 Notifying third parties including any governmental agency or prospective purchaser, of the existence of any hazardous or dangerous materials located in or around the Project(s) site.

3.8.3 Providing and updating Olsson with accurate information regarding existing conditions, including the existence of hazardous or dangerous materials, proposed

Project(s) site uses, any change in Project(s) plans, and all subsurface installations, such as pipes, tanks, cables and utilities within the Project(s) site.

3.8.4 Providing and assuming all responsibility for: interpretation of contract documents; Construction Observations; Certifications; Inspections; Construction Cost Estimating; project observations; construction management; construction scheduling; construction phasing; and review of Contractor's performance, means and methods. Client waives any claims against Olsson and releases Olsson from liability relating to or arising out of such services and agrees, to the fullest extent permitted by law, to indemnify and hold Olsson harmless from any and all damages, liabilities or costs, including reasonable attorneys' fees and defense costs, relating to such actions and services.

3.9 Client releases Olsson from liability for any incorrect advice, judgment or decision based on inaccurate information furnished by Client or others.

3.10 If reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including hazardous materials, encountered on the site, Olsson may immediately stop work in the affected area and report the condition to Client. Client shall be solely responsible for retaining independent consultant(s) to determine the nature of the material and to abate or remove the material. Olsson shall not be required to perform any services or work relating to or in the area of such material until the material has been removed or rendered harmless and only after approval, if necessary of the government agency with jurisdiction.

SECTION 4—MEANING OF TERMS

4.1 The "Cost of Construction" of the entire Project(s) (herein referred to as "Cost of Construction") means the total cost to Client of those portions of the entire Project(s) designed and specified by Olsson, but it will not include Olsson's compensation and expenses, the cost of land, rights-of-way, or compensation for or damages to, properties unless this Agreement so specifies, nor will it include Client's legal, accounting, insurance counseling or auditing services, or interest and financing charges incurred in connection with the Project(s) or the cost of other services to be provided by others to Client pursuant to Section 3.

4.2 The "Salary Costs": Used as a basis for payment mean salaries and wages (base and incentive) paid to all Olsson's personnel engaged directly on the Project(s), including, but not limited to, engineers, architects, surveyors, designers, draftsmen, specification writers, estimators, other technical and business personnel; plus the cost of customary and statutory benefits, including, but not limited to, social security contributions, unemployment, excise and payroll taxes, workers' compensation, health and retirement benefits, sick leave, vacation and holiday pay and other group benefits.

4.3 "Certify" or "a Certification": If included in the Scope of Services, such services shall be limited to a statement of Olsson's opinion, to the best of Olsson's professional knowledge, information and belief, based upon its periodic observations and reasonable review of reports and tests created by Olsson or provided to Olsson. Olsson shall not be responsible for constant or exhaustive observation of the work. Client understands and agrees that any certifications based upon discrete sampling observations and that such observations indicate conditions that exist only at the locations and times the observations were performed. Performance of such observation services and certification does not constitute a warranty or guarantee of any type, since even with diligent observation, some construction defects, deficiencies or omissions in the work may occur. Olsson shall have no responsibility for the means, methods, techniques, sequences or procedures selected by the contractor(s) or for the contractor's safety precautions and programs nor for failure by the contractor(s) to comply with any laws or regulations relating to the performance or furnishing of any work by the contractor(s). Client shall hold its contractor(s) solely responsible for the quality and completion of the Project(s), including construction in accordance with the construction documents. Any duty under this Agreement is for the sole benefit of the Client and not for any third party, including the contractor(s) or any subcontractor(s). Olsson shall sign pre-printed form certifications only if (a) Olsson approves the form of such certification prior to the commencement of its services, (b) such certification is expressly included in the Scope of Services, (c) the certification is limited to a statement of professional opinion and does not constitute a warranty or guarantee, express or implied. It is understood that any certification by Olsson shall not relieve the Client or the Client's contractors of any responsibility or obligation they may have by industry custom or under any contract.

4.4 "Opinion of Probable Cost": An opinion of probable construction cost made by Olsson. In providing opinions of probable construction cost, it is recognized that neither the Client nor Olsson has control over the costs of labor, equipment or materials, or over the contractor's methods of determining prices or bidding. The opinion of probable construction costs is based on Olsson's reasonable professional judgment and experience and does not constitute a warranty, express or implied, that the contractor's bids or the negotiated price of the work on the Project(s) will not vary from the Client's budget or from any opinion of probable cost prepared by Olsson.

4.5 "Day": A calendar day of 24 hours. The term "days" shall mean consecutive calendar days of 24 hours each, or fraction thereof.

4.6 "Construction Observation": If included in the Scope of Services, such services during construction shall be limited to periodic visual observation and testing of the work to determine that the observed work generally conforms to the contract documents. Olsson shall not be responsible for constant or exhaustive observation of the work. Client understands and agrees that such visual observations are discrete sampling procedures and that such procedures indicate conditions that exist only at the locations and times the observations were performed. Performance of Construction Observation services does not constitute a warranty or guarantee of any type, since even with diligent observation, some construction defects, deficiencies or omissions in the work may occur. Olsson shall have no responsibility for the means, methods, techniques, sequences or procedures selected by the contractor or for the contractor's safety precautions and programs nor for failure by the contractor to comply with any laws or regulations relating to the performance or furnishing of any work by the contractor. Client shall hold its contractor(s) solely responsible for the quality and completion of the Project(s), including construction in accordance with the construction documents. Any duty under this Agreement is for the sole benefit of the Client and not for

any third party, including the contractor or any subcontractor. Client, or its designees shall notify Olsson at least twenty-four (24) hours in advance of any field tests and observations required by the construction documents.

4.7 "Inspect" or "Inspection": If included in the Scope of Services, such services shall be limited to the periodic visual observation of the contractor's completed work to permit Olsson, as an experienced and qualified professional, to determine that the observed work, generally conforms to the contract documents. Olsson shall not be responsible for constant or exhaustive observation of the work. Client understands and agrees that such visual observations are discrete sampling procedures and that such procedures indicate conditions that exist only at the locations and times the observations were performed. Performance of such observation services does not constitute a warranty or guarantee of any type, since even with diligent observation, some construction defects, deficiencies or omissions in the work may occur. Olsson shall have no responsibility for the means, methods, techniques, sequences or procedures selected by the contractor(s) or for the contractor's safety precautions and programs nor for failure by the contractor(s) to comply with any laws or regulations relating to the performance or furnishing of any work by the contractor(s). Client shall hold its contractor(s) solely responsible for the quality and completion of the Project(s), including construction in accordance with the construction documents. Any duty under this Agreement is for the sole benefit of the Client and not for any third party, including the contractor(s) or any subcontractor(s). Client, or its designees, shall notify Olsson at least twenty-four (24) hours in advance of any inspections required by the construction documents.

4.8 "Record Documents": Drawings prepared by Olsson upon the completion of construction based upon the drawings and other data furnished to Olsson by the Contractor and others showing significant changes in the work on the Project(s) made during construction. Because Record Documents are prepared based on unverified information provided by others, Olsson makes no warranty of the accuracy or completeness of the Record Documents.

SECTION 5—TERMINATION

5.1 Either party may terminate this Agreement, for cause upon giving the other party not less than seven (7) calendar days written notice of default for any of the following reasons; provided, however, that the notified party shall have the same seven (7) calendar day period in which to cure the default:

5.1.1 Substantial failure by the other party to perform in accordance with the terms of this Agreement and through no fault of the terminating party;

5.1.2 Assignment of this Agreement or transfer of the Project(s) by either party to any other entity without the prior written consent of the other party;

5.1.3 Suspension of the Project(s) or Olsson's services by the Client for more than ninety (90) calendar days, consecutive or in the aggregate.

5.2 In the event of a "for cause" termination of this Agreement by either party, the Client shall, within fifteen (15) calendar days after receiving Olsson's final invoice, pay Olsson for all services rendered and all reimbursable costs incurred by Olsson up to the date of termination, in accordance with the payment provisions of this Agreement.

5.2.1 In the event of a "for cause" termination of this Agreement by Client and (a) a final determination of default is entered against Olsson under Section 6.2 and (b) Client has fully satisfied all of its obligations under this Agreement, Olsson shall grant Client a limited license to use the Work Product pursuant to Section 7.1.

5.3 The Client may terminate this Agreement for the Client's convenience and without cause upon giving Olsson not less than seven (7) calendar days written notice. In the event of any termination that is not the fault of Olsson, the Client shall pay Olsson, in addition to payment for services rendered and reimbursable costs incurred, for all expenses reasonably incurred by Olsson in connection with the orderly termination of this Agreement, including but not limited to demobilization, reassignment of personnel, associated overhead costs, any fees, costs or expenses incurred by Olsson in preparing or negotiating any proposals submitted to Client for Olsson's Scope of Services or Optional Additional Services under this Agreement and all other expenses directly resulting from the termination and a reasonable profit of ten percent (10%) of Olsson's actual costs (including overhead) incurred.

SECTION 6—DISPUTE RESOLUTION

6.1. Mediation

6.1.1 All questions in dispute under this Agreement shall be submitted to mediation. On the written notice of either party to the other of the election to submit any dispute under this Agreement to mediation, each party shall designate their representatives and shall meet within ten (10) days after the service of the notice. The parties themselves shall then attempt to resolve the dispute within ten (10) days of meeting.

6.1.2 Should the parties themselves be unable to agree on a resolution of the dispute, and then the parties shall appoint a third party who shall be a competent and impartial party and who shall be acceptable to each party, to mediate the dispute. Any third party mediator shall be qualified to evaluate the performance of both of the parties, and shall be familiar with the design and construction progress. The third party shall meet to hear the dispute within ten (10) days of their selection and shall attempt to resolve the dispute within fifteen (15) days of first meeting.

6.1.3 Each party shall pay the fees and expenses of the third party mediator and such costs shall be borne equally by both parties.

6.2 Arbitration or Litigation

6.2.1 Olsson and Client agree that from time to time, there may be conflicts, disputes and/or disagreements between them, arising out of or relating to the services of Olsson, the Project(s), or this Agreement (hereinafter collectively referred to as "Disputes") which may not be resolved through mediation. Therefore, Olsson and Client agree that all Disputes shall be resolved by binding arbitration or litigation at the sole discretion and choice of Olsson. If Olsson chooses arbitration, the arbitration proceeding shall proceed in accordance with the Construction Industry Arbitration Rules of the AAA.

6.2.2 Client hereby agrees that Olsson shall have the right to include Client, by consolidation, joinder or other manner, in any arbitration or litigation involving Olsson and a subconsultant or subcontractor of Olsson or Olsson and any other person or entity, regardless of who originally initiated such proceedings.

6.2.3 If Olsson chooses arbitration or litigation, either may be commenced at any time prior to or after completion of the Project(s), provided that if arbitration or litigation is commenced prior to the completion of the Project(s), the obligations of the parties under the terms of this Agreement shall not be altered by reason of the arbitration or litigation being conducted. Any arbitration hearings or litigation shall take place in Lincoln, Nebraska, the location of Olsson's home office.

6.2.4 Except to the extent prohibited by law, the prevailing party in any arbitration or litigation relating to any Dispute shall be entitled to recover from the other party those reasonable attorney fees, costs and expenses incurred by the prevailing party in connection with the Dispute. In the event of a Dispute involving a Claim (as hereinafter defined) against Olsson, Olsson shall be considered the "prevailing party" if Client is awarded materially less than the full amount of damages claimed by the Client in connection with the Dispute. In all other Disputes, "prevailing party" shall mean the party (if any) who obtains all, or substantially all, of the relief requested by that party in connection with the Dispute.

6.3 Certification of Merit

Client agrees that it will not assert any claim, including but not limited to, professional negligence, negligence, breach of contract, misconduct, error, omission, fraud, or misrepresentation ("Claim") against Olsson, or any Olsson subconsultant, unless Client has first provided Olsson with a sworn certificate of merit affidavit setting forth the factual and legal basis for such Claim (the "Certificate"). The Certificate shall be executed by an independent engineer ("Certifying Engineer") currently licensed and practicing in the jurisdiction of the Project site. The Certificate must contain: (a) the name and license number of the Certifying Engineer; (b the qualifications of the Certifying Engineer, including a list of all publications authored in the previous 10 years and a list of all cases in which the Certifying Engineer testified within the previous 4 years ; (c) a statement by the Certifying Engineer setting forth the factual basis for the Claim; (d) a statement by the Certifying Engineer of each and every act, error, or omission that the Certifying Engineer contends supports the Claim or any alleged violation of any applicable standard of care; (e) a statement by the Certifying Engineer of all opinions the Certifying Engineer holds regarding the Claim or any alleged violation of any applicable standard of care; (f) a list of every document related to the Project reviewed by the Certifying Engineer; and (g) a list of every individual who provided Certifying Engineer with any information regarding the Project. The Certificate shall be provided to Olsson not less than thirty (30) days prior to any arbitration or litigation commenced by Client or not less than ten (10) days prior to the initial response submitted by Client in any arbitration or litigation commenced by someone other than Client. The Certificate is a condition precedent to the right of Client to assert any Claim in any litigation or arbitration and Client's failure to timely provide a Certificate to Olsson will be grounds for automatic dismissal of the Claim with prejudice. In any such instance, Olsson shall be entitled to an award of attorney's fees, costs, and expenses.

SECTION 7—MISCELLANEOUS

7.1 Reuse of Documents

All documents, including drawings, specifications, reports, boring logs, maps, field data, data, test results, information, recommendations, or opinions prepared or furnished by Olsson (and Olsson's independent professional associates and consultants) pursuant to this Agreement ("Work Product"), are all Olsson's instruments of service, do not constitute goods or products, and are copyrighted works of Olsson. Olsson shall retain an ownership and property interest in such Work Product whether or not the Project(s) is completed. If Client has fully satisfied all of its obligations under this Agreement, Olsson shall grant Client a limited license to use the Work Product and Client may make and retain copies of Work Product for use in connection with the Project(s); however, such Work Product is for the exclusive use and benefit of Client or its agents in connection with the Project(s), are not intended to inform, guide or otherwise influence any other entities or persons with respect to any particular business transactions, and should not be relied upon by any entities or persons other than Client or its agents for any purpose other than the Project(s). Such Work Product is not intended or represented to be suitable for reuse by Client or others on extensions of the Project(s) or on any other Project(s). Client will not distribute or convey such Work Product to any other persons or entities without Olsson's prior written consent which shall include a release of Olsson from liability and indemnification by the third party. Any reuse of Work Product without written verification or adaptation by Olsson for the specific purpose intended will be at Client's sole risk and without liability or legal exposure to Olsson, or to Olsson's independent professional associates or consultants, and Client shall indemnify and hold harmless Olsson and Olsson's independent professional associates and consultants from all claims, damages, losses and expenses including attorneys' fees arising out of or resulting therefrom. Any such verification or adaptation of Work Product will entitle Olsson to further compensation at rates to be agreed upon by Client and Olsson.

7.2 Electronic Files

By accepting and utilizing any electronic file of any Work Product or other data transmitted by Olsson, the Client agrees for itself, its successors, assigns, insurers and all those claiming under or through it, that by using any of the information contained in the attached electronic file, all users agree to be bound by the following terms. All of the information contained in any electronic file is the work product and instrument of service of Olsson, who shall be deemed the author, and shall retain all common law, statutory law and other rights, including copyrights, unless the same have previously been transferred in writing to the Client. The information contained in any electronic file is provided for the convenience to the Client and is provided in "as is" condition. The Client is aware that differences may exist between the electronic files transferred and the printed hard-copy original signed and stamped drawings or reports. In the event of a conflict between the signed original documents prepared by Olsson and the electronic files, which may be transferred, the signed and sealed original documents shall govern. Olsson specifically disclaims all warranties, expressed or implied, including without limitation, and any warranty of merchantability or fitness for a particular purpose with respect to any electronic files. It shall be Client's responsibility to confirm the accuracy of the information contained in the electronic file and that it accurately reflects the information needed by the Client. Client

shall not retransmit any electronic files, or any portion thereof, without including this disclaimer as part of any such transmissions. In addition, Client agrees, to the fullest extent permitted by law, to indemnify and hold harmless Olsson, its officers, directors, employees and sub consultants against any and all damages, liabilities, claims or costs, including reasonable attorney's and expert witness fees and defense costs, arising from any changes made by anyone other than Olsson or from any reuse of the electronic files without the prior written consent of Olsson.

7.3 Opinion of Probable Cost

Since Olsson has no control over the cost of labor, materials, equipment or services furnished by others, or over the contractor(s)' methods of determining prices, or over competitive bidding or market conditions, Olsson's Opinion of Probable Cost provided for herein is made on the basis of Olsson's experience and qualifications and represent Olsson's best judgment as an experienced and qualified professional engineer, familiar with the construction industry. Client acknowledges and agrees that Olsson cannot and does not guarantee proposals or bids and that actual total Project(s) or construction costs may reasonably vary from Olsson's Opinion of Probable Cost. If prior to the bidding or negotiating phase Client wishes greater assurance as to total Project(s) or construction costs, Client shall employ an independent cost estimator as provided in paragraph 3.4.3. If Olsson's Opinion of Probable Cost was performed in accordance with its standard of care and was reasonable under the total circumstances, any services performed by Olsson to modify the contract documents to bring the construction cost within any limitation established by Client will be considered Optional Additional Services and paid for as such by Client. If, however, Olsson's Opinion of Probable Cost was not performed in accordance with its standard of care and was unreasonable under the total circumstances and the lowest negotiated bid for construction of the Project(s) unreasonably exceeds Olsson's Opinion of Probable Cost, Olsson shall modify its work as necessary to adjust the Project(s)' size, and/or quality to reasonably comply with the Client's budget at no additional cost to Client. Under such circumstances, Olsson's modification of its work at no cost shall be the limit of Olsson's responsibility with regard to any unreasonable Opinion of Probable Cost.

7.4 Prevailing Wages

It is Client's responsibility to determine whether the Project(s) is covered under any prevailing wage regulations. Unless Client specifically informs Olsson in writing that the Project(s) is a prevailing wage project and is identified as such in the Scope of Services, Client agrees to reimburse Olsson and to defend, indemnify and hold harmless Olsson from and against any liability, including costs, fines and attorneys' fees, resulting from a subsequent determination that the Project(s) was covered under any prevailing wage regulations.

7.5 Samples

All material testing samples shall remain the property of the Client. If appropriate, Olsson shall preserve samples obtained no longer than forty-five (45) days after the issuance of any document that includes the data obtained from those samples. After that date, Olsson may dispose of the samples or return them to Client at Client's cost.

7.6 Standard of Care

Olsson will strive to perform its services in a manner consistent with that level of care and skill ordinarily exercised by members of Olsson's profession providing similar services in the same locality under similar circumstances at the time Olsson's services are performed. This Agreement creates no other representation, warranty or guarantee, express or implied.

7.7 Force Majeure

Any delay in the performance of any of the duties or obligations of either party hereto (except the payment of money) shall not be considered a breach of this Agreement and the time required for performance shall be extended for a period equal to the period of such delay, provided that such delay has been caused by or is the result of any acts of God, acts of the public enemy, insurrections, riots, embargoes, labor disputes, including strikes, lockouts, job actions, boycotts, fires, explosions, floods, shortages of material or energy, or other unforeseeable causes beyond the control and without the fault or negligence of the party so affected. The affected party shall give prompt notice to the other party of such cause, and shall take promptly whatever reasonable steps are necessary to relieve the effect of such cause.

7.8 Equal Employment Opportunity

Olsson and any sub-consultant or subcontractor shall abide by the requirements of 41 CFR 60-1.4(a), 60-300.5(a) and 60-741.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities, and prohibit discrimination against all individuals based on their race, color, religion, sex, sexual orientation, gender identity or national origin or any other protected characteristic under applicable law. Moreover, these regulations require that covered prime contractors and subcontractors take affirmative action to employ and advance in employment individuals without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability or veteran status or any other protected characteristic under applicable law. Olsson and any sub-consultant or subcontractor certify that they do not operate any programs that promote DEI in a way that violates applicable federal anti-discrimination laws.

7.9 Confidentiality

In performing this Agreement, the parties may disclose to each other written, oral, electronic, graphic, machine-readable, tangible or intangible, non-public, confidential or proprietary data or information in any form or medium, including but not limited to: (1) information of a business, planning, marketing, conceptual, design, or technical nature; (2) models, tools, hardware, software or source code; and (3) any documents, videos, photographs, audio files, data, studies, reports, flowcharts, works in progress, memoranda, notes, files or analyses that contain, summarize or are based upon any non-public, proprietary or confidential information (hereafter referred to as the "Information"). The Information is not required to be marked as confidential.

7.9.1 Therefore, Olsson and Client agree that the party receiving Information from the other party to this Agreement (the "Receiving Party") shall keep Information confidential and not use the Information in any manner other

than in the performance of this Agreement without prior written approval of the party disclosing Information (the "Disclosing Party") unless Client is a public entity and the release of Information is required by law or legal process.

7.9.2 Prior to the start of construction on the Project, the existence of discussions between the parties, the purpose of this Agreement, and this Agreement shall be considered Information subject to the confidentiality provisions of this Agreement.

7.9.3 Notwithstanding anything to the contrary herein, the Receiving Party shall have no obligation to preserve the confidentiality of any Information which:

7.9.3.1 was previously known to the Receiving Party free of any obligation to keep it confidential; or

7.9.3.2 is or becomes publicly available by other than unauthorized disclosures; or

7.9.3.3 is independently developed by the Receiving Party without a breach of this Agreement; or

7.9.3.4 is disclosed to third parties by the Disclosing Party without restrictions; or

7.9.3.5 is received from a third party not subject to any confidentiality obligations.

7.9.4 In the event that the Receiving Party is required by law or legal process to disclose any of Information of the Disclosing Party, the Receiving Party required to disclose such Information shall provide the Disclosing Party with prompt oral and written notice, unless notice is prohibited by law (in which case such notice shall be provided as early as may be legally permissible), of any such requirement so that the Disclosing Party may seek a protective order or other appropriate remedy.

7.9.5 Notwithstanding anything to the contrary herein (or to the contrary of any existing or future nondisclosure, confidentiality or similar agreement between the parties), Olsson is authorized, to use, display, reproduce, publish, transmit, and distribute Information (including, but not limited to, videos and photographs of the Project) on and in any and all formats and media (including, but not limited to, Olsson's internet website) throughout the world and in all languages in connection with or in any manner relating to the marketing, advertising, selling, qualifying, proposing, commercializing, and promotion of Olsson and/or its services and business and in connection with any other lawful purpose of Olsson. In the event of any conflict or inconsistency between the provisions of this section and any other prior or future nondisclosure, confidentiality or similar agreement between the parties, the terms of this section shall take precedence.

7.9.6 Nothing contained in this Agreement shall be construed as altering any rights that the Disclosing Party has in the Information exchanged with or disclosed to the Receiving Party, and upon request, the Receiving Party will return all Information received in tangible form to the Disclosing Party, or at the Receiving Party's option, destroy all such Information. If the Receiving Party exercises its option to destroy the Information, the Receiving Party shall certify such destruction to the Disclosing Party.

7.9.7 The parties acknowledge that disclosure or use of Information in violation of this Agreement could cause irreparable harm for which monetary damages may be difficult to ascertain or constitute an inadequate remedy. Each party therefore agrees that the Disclosing Party shall be entitled in addition to its other rights to seek injunctive relief for any violation of this Agreement.

7.9.8 The obligations of confidentiality set forth herein shall survive termination of this Agreement but shall only remain in effect for a period of one (1) year from the date the Information is first disclosed.

7.10 Damage or Injury to Subterranean Structures or Utilities, Hazardous Materials, Pollution and Contamination

7.10.1 To the extent that work pursuant to this Agreement requires any sampling, boring, excavation, ditching or other disruption of the soil or subsurface at the Site, Olsson shall confer with Client prior to such activity and Client will be responsible for identifying, locating and marking, as necessary, any private subterranean structures or utilities and Olsson shall be responsible for arranging investigation of public subterranean structures or utilities through an appropriate utility one-call provider. Thereafter, Olsson shall take all reasonable precautions to avoid damage or injury to subterranean structures or utilities which were identified by Client or the one-call provider. Olsson shall not be responsible for any damage, liability or costs, for any property damage, injury or economic loss arising or allegedly arising from damages to subterranean structures or utilities caused by subsurface penetrations in locations approved by Client and/or the one call provider or not correctly shown on any plans, drawings or utility clearance provided to Olsson, except for damages caused by the negligence of Olsson in the use of such information.

7.10.2 It is understood and agreed that any assistance Olsson may provide Client in the disposal of waste materials shall not result in Olsson being deemed as a generator, arranger, transporter or disposer of hazardous materials or hazardous waste as defined under any law or regulation. Title to all samples and waste materials remains with Client, and at no time shall Olsson take title to the above material. Client may authorize Olsson to execute Hazardous Waste Manifest, Bill of Lading or other forms as agent of Client. If Client requests Olsson to execute such documents as its agent, the Hazardous Waste Manifest, Bill of Lading or other similar documents shall be completed in the name of the Client. Client agrees to indemnify and hold Olsson harmless from any and all claims that Olsson is a generator, arranger, transporter, or disposer of hazardous waste as a result of any actions of Olsson, including, but not limited to, Olsson signing a Hazardous Waste Manifest, Bill of Lading or other form on behalf of Client.

7.10.3 At any time, Olsson can request in writing that Client remove samples, cuttings and hazardous substances generated by the Project(s) from the project site or other location. Client shall promptly comply with such request, and pay and be responsible for the removal and lawful disposal of samples, cuttings and hazardous substances, unless other arrangements are mutually agreed upon in writing.

7.10.4 Client shall release Olsson of any liability for, and shall defend and indemnify Olsson against any and all claims, liability and expense resulting from operations under this Agreement on account of injury to, destruction of, or loss or

impairment of any property right in or to oil, gas, or other mineral substance or water, if at the time of the act or omission causing such injury, destruction, loss or impairment, said substance had not been reduced to physical possession above the surface of the earth, and for any loss or damage to any formation, strata, reservoir beneath the surface of the earth.

7.10.5 Notwithstanding anything to the contrary contained herein, it is understood and agreed by and between Olsson and Client that the responsibility for pollution and contamination shall be as follows:

7.10.5.1 Unless otherwise provided herein, Client shall assume all responsibility for, including control and removal of, and protect, defend and save harmless Olsson from and against all claims, demands and causes of action of every kind and character arising from pollution or contamination (including naturally occurring radioactive material) which originates above the surface of the land or water from spills of fuels, lubricants, motor oils, pipe dope, paints, solvents, ballast, bilge and garbage, except unavoidable pollution from reserve pits, wholly in Olsson's possession and control and directly associated with Olsson's equipment.

7.10.5.2 In the event a third party commits an act or omission which results in pollution or contamination for which either Olsson or Client, for whom such party is performing work, is held to be legally liable, the responsibility therefore shall be considered as between Olsson and Client, to be the same as if the party for whom the work was performed had performed the same and all of the obligations regarding defense, indemnity, holding harmless and limitation of responsibility and liability, as set forth herein, shall be specifically applied.

7.11 Controlling Law and Venue

The parties agree that this Agreement and any legal actions concerning its validity, interpretation or performance shall be governed by the laws of the State of Nebraska. It is further agreed that any legal action between the parties arising out of this Agreement or the performance of services shall be brought in a court of competent jurisdiction in Nebraska.

7.12 Subconsultants

Olsson may utilize as necessary in its discretion subconsultants and other subcontractors. Olsson will be paid for all services rendered by its subconsultants and other subconsultants as set forth in this Agreement.

7.13 Assignment

7.13.1 Client and Olsson each are hereby bound and the partners, successors, executors, administrators and legal representatives of Client and Olsson (and to the extent permitted by paragraph 7.13.2 the assigns of Client and Olsson) are hereby bound to the other party to this Agreement and to the partners, successors, executors, administrators and legal representatives (and said assigns) of such other party, in respect of all covenants, agreements and obligations of this Agreement.

7.13.2 Neither Client nor Olsson shall assign, sublet or transfer any rights under or interest in (including, but without limitation, moneys that may become due or moneys that are due) this Agreement without the written consent of the other, except to the extent that any assignment, subletting or transfer is mandated by law or the effect of this limitation may be restricted by law. Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under this Agreement. Nothing contained in this paragraph shall prevent Olsson from employing such subconsultants and other subcontractors as Olsson may deem appropriate to assist in the performance of services under this Agreement.

7.13.3 Nothing under this Agreement shall be construed to give any rights or benefits in this Agreement to anyone other than Client and Olsson, and all duties and responsibilities undertaken pursuant to this Agreement will be for the sole and exclusive benefit of Client and Olsson and not for the benefit of any other party. There are no third-party beneficiaries of this Agreement.

7.14 Indemnity

Olsson and Client mutually agree, to the fullest extent permitted by law, to indemnify and hold each other harmless from any and all damages, liabilities or costs, including reasonable attorneys' fees and defense costs, relating to third party personal injury or third party property damage and arising from their own negligent acts, errors or omissions in the performance of their services under this Agreement, but only to the extent that each party is responsible for such damages, liabilities or costs on a comparative basis of fault.

7.15 Limitation on Damages

7.15.1 Notwithstanding any other provision of this Agreement, and to the fullest extent permitted by law, neither party's individual employees, principals, officers or directors shall be subject to personal liability or damages arising out of or connected in any way to the Project(s) or to this Agreement.

7.15.2 Notwithstanding any other provision of this Agreement, and to the fullest extent permitted by law, neither Client nor Olsson, their respective officers, directors, partners, employees, contractors or subconsultants shall be liable to the other or shall make any claim for any delay damages, any punitive damages or any incidental, indirect or consequential damages arising out of or connected in any way to the Project(s) or to this Agreement. This mutual waiver of delay damages and consequential damages shall include, but is not limited to, disruptions, accelerations, inefficiencies, increased construction costs, increased home office overhead, loss of use, loss of profit, loss of business, loss of income, loss of reputation or any other delay or consequential damages that either party may have incurred from any cause of action including, but not limited to, negligence, statutory violations, misrepresentation, fraud, deceptive trade practices, breach of fiduciary duties, strict liability, breach of contract and/or breach of strict or implied warranty. Both the Client and Olsson shall require similar waivers of consequential damages protecting all the entities or persons named herein in all contracts and subcontracts with others involved in the Project(s).

7.15.3 Notwithstanding any other provision of this Agreement, Client agrees that, to the fullest extent permitted by law, Olsson's total liability to the Client for any and all injuries, claims, losses, expenses, damages, attorneys' fees or claims expenses of any kind arising from any services provided by or through Olsson under this Agreement, shall not exceed the

amount of Olsson's fee earned under this Agreement. Client acknowledges that such causes include, but are not limited to, negligence, statutory violations, misrepresentation, fraud, deceptive trade practices, breach of fiduciary duties, strict liability, breach of contract and/or breach of strict or implied warranty. This limitation of liability shall apply to all phases of Olsson's services performed in connection with the Project(s), whether subsequent to or prior to the execution of this Agreement.

7.16 Entire Agreement/Severability

This Agreement supersedes all prior communications, understandings and agreements, whether oral or written. Amendments to this Agreement must be in writing and signed by the Client and Olsson. If any part of this Agreement is found to conflict with applicable law, such part alone shall be null and void and considered stricken, but the remainder of this Agreement shall be given full force and effect.

6. Update on the Volunteer Emergency Responder Incentive Program - City Administrator Butcher
   A. Consideration of an Ordinance to Amend Local Implementation of the Program

ORDINANCE NO. 2025-9

AN ORDINANCE TO AMEND THE CITY OF SEWARD VOLUNTEER EMERGENCY RESPONDER INCENTIVE PROGRAM; REPEALING ALL ORDINANCES AND PARTS OF ORDINANCES IN CONFLICT HEREWITH; TO PROVIDE FOR AN EFFECTIVE DATE; AND ORDERING THE PUBLICATION OF THE ORDINANCE IN PAMPHLET FORM.

BE IT ORDAINED BY THE MAYOR AND CITY COUNCIL OF THE CITY OF SEWARD AS FOLLOWS:

1) That the Seward Emergency Responder Incentive Program is hereby amended as follows:

SECTION THREE: Certification Administrator.

a) The Fire Chief shall designate one (1) member of the Seward Volunteer Fire Department (hereinafter "Department") to serve as Certification Administrator. Such designation shall be confirmed and approved by the City Council.
b) The Certification Administrator shall keep and maintain records on the activities of all volunteer members and award points for such activities based upon the standard criteria for qualified active service as defined by the Act and outlined herein.
c) No later than July 15 each year, ~~The~~ the Certification Administrator shall provide each volunteer member with notice of the total points he or she has accumulated during each six-month period during each year. ~~No later than~~After January 10, of each calendar year ~~of service~~, the Certification Administrator shall forward to the City ~~Council~~ Clerk a written report specifying the name of each volunteer member of the Department, the number of points accumulated by each volunteer during the year of service, and the names of those volunteers who have qualified as active emergency responders, active rescue squad members, or active volunteer firefighters. No later than February 1 of each year, the Certification Administrator shall provide each volunteer member with a written certification stating the total number of points accumulated by the volunteer member during the immediately preceding calendar year of service and whether they have qualified for the incentive. Such certification may be sent electronically or by mail. ~~At the time of the filing of the report, the Certification Administrator shall notify each volunteer member of the Department whose name does not appear on the list of qualified volunteers of such fact in writing by mailing the notification by first-class United States mail, postage prepaid, to the last-known address of such volunteer member.~~

SECTION FIVE: Certified List.

a) After January 10, of each calendar year, the ~~City Council~~Certification Administrator shall ~~certify~~ provide to the City Clerk, ~~the~~ a list of those volunteers who have qualified as active emergency responders, active rescue squad members, or active volunteer firefighters in the preceding year.
b) The ~~City Clerk~~Certification Administrator shall file with the Nebraska Department of Revenue the certified list of those volunteers who have qualified as active emergency responders, active rescue squad members, or active volunteer firefighters for the immediately preceding calendar year of service no later than February 15. Such list shall contain: the legal name and address of the each volunteer member who has qualified during their year of service;~~, as such name appears on their Nebraska Income Tax Filing; the home address of the volunteer; and~~ the last four digits of the volunteer's social security number, and the number of points the member accumulated.

2) REPEAL. All ordinances or parts of ordinances in conflict herewith are hereby repealed.

3) WHEN OPERATIVE; PUBLICATION IN PAMPHLET FORM. This ordinance shall be published in pamphlet form and shall be in full force from and after its passage, approval and publication or posting as required by law.

Dated this 1st day of April 2025.

CITY OF SEWARD, NEBRASKA

_____
Joshua Eickmeier, Mayor

ATTEST: _____
Derek Bargmann, City Clerk

B. Consideration to Appoint Tayler Mifflin, Fire Chief, as the Certification Administrator of the Seward Volunteer Emergency Incentive Program

7. Consideration to Adopt a Revised Section 504 Policy Related to The Americans with Disabilities Act - City Administrator Butcher

City of Seward

Section 504 – Rehabilitation Act of 1973 & Americans with Disabilities Act of 1990

ADA POLICY STATEMENT

THE ADA COVERS NOT ONLY AMERICANS WITH DISABILITIES, BUT ALL INDIVIDUALS WITH DISABILITIES IN THIS COUNTRY, REGARDLESS OF THEIR ETHNIC OR NATIONAL ORIGIN AND REGARDLESS OF THEIR CITIZENSHIP STATUS.

POLICY STATEMENT

The City of Seward will ensure that no qualified individual shall, solely on the basis of his or her disability, be excluded from the participation in, be denied the benefits of, or be subject to discrimination under any of its programs, services, or activities as provided by Section 50 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 (ADA). The City of Seward further ensures that every effort will be made to provide nondiscrimination in all of its programs or activities regardless of the funding source.

For our purposes, a disabled person is defined as any person who

> Has a physical or mental impairment that substantially limits one or more major life activities,
>
> Has a record of such impairment, or
>
> Is regarding as having such an impairment

AUTHORITIES

Section 504 of the Rehabilitation Act of 1973, as amended, provides that "No otherwise qualified disabled individual in the United States, as defined in section 7 (6), shall, solely by reason of his disability, be excluded for the participation in, be denied the benefits of, or be subjected to discrimination under any program of activity receiving Federal financial assistance."

29 USC 794 (October 29, 1992 to the Rehabilitation Act of 1973) substitutes "a disability" for "handicaps" and "disability" for "handicap".

49 CFR Part 27.13 (Nondiscrimination on the Basis of Disability in Programs and Activities Receiving or Benefiting from Federal Financial Assistance) states, "This part applies to each recipient of Federal financial assistance from the Department of Transportation and to each program or activity that receives or benefits from such assistance".

49 CFR Part 28.102 (Enforcement of Nondiscrimination on the Basis of Disability in Programs or Activities Conducted by the Department of Transportation) states, "This part applies to all programs or activities conducted by the Department of Transportation except for programs and activities conducted outside the United States that do not involve individuals with disabilities in the United States."

28 CFR Part 35 (Judicial Administration) states that: "The purpose of this part is to effectuate

Subtitle A of Title II of the ADA which prohibits discrimination on the basis of disabilities by public entities."

49 CFR Part 27 (Nondiscrimination on the Basis of Disability in Programs and Activities Receiving or Benefitting from Federal Financial Assistance), states "The purpose of this part is to carry out the intent of Section 504 of the Rehabilitation Act of 1973 (29 USC 794) as amended, to the end that no otherwise qualified disabled individual in the United States shall, solely by reason of his or her disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.
49 CFR Part 28-140 (Employment) states that "(a) No qualified individual with disabilities shall, on the basis of disability, be subjected to discrimination in employment under any program of activity conducted by the Department," and "(b) The definitions, requirements, and procedures of Section 504 of the Rehabilitation Act of 1973 (29 USC 791), as established by the Equal Employment Opportunity Commission in 29 CFR Part 1613, shall apply to employment in federally conducted programs or activities."

29 CFR Part 1613 (Equal Employment Opportunity in the Federal Government), states that: "It is the policy of the Government of the United States....to provide equal opportunity in employment for all persons to prohibit discrimination in employment because of race, color, religion, sex, or national origin and to promote the full realization of equal employment opportunity through a continuing affirmative program in each agency."

42 USC Part 12101-12213 (The Americans with Disabilities Act of 1990), states that: "No cover entity shall discriminate against a qualified individual with a disability because of the disability of such individual in regard to job application procedures, the hiring, advancement, or discharge of employees, employee compensation, job training, and other terms, conditions, and privileges of employment."

ORGANIZATION

City of Seward ADA Coordinator - Brett Baker, City Aministrator

City of Seward ADA Compliance Officer - John M. Hughes, Public Properties, Capital Project Director

Review Committee - The review Committee shall be made up of 4 individuals who have different disabilities, other interested persons from your community, and staff from the city, or organization.

SECTION 504/ADA COORDINATIOR RESPONSIBILITES

- The coordinator will make sure the Self-Evaluation and Transition Plan are completed and that recommendations are implemented.
- The coordinator will help put together and coordinate your review committee.
- The coordinator will draft a Notice of Nondiscrimination and ensure that it is posted regularly.
- The coordinator will develop a grievance procedure and ensure that it is made available to the public and employees.
- The coordinator will receive and investigate grievances on city programs, services, and employment practices.

- The coordinator will help organize training activities on Section 504 and the ADA.

- The coordinator shall monitor and prevent potential discrimination acts.

- The coordinator can help keep you up to date on 504/ADA regulations.

- The coordinator is a contact person for individuals with disabilities who is available and knowledgeable on 504/ADA issues.

SECTION 504/ADA NOTICE TO PUBLIC

The City of Seward does not discriminate on the basis of disability in admission of its programs, services, or activities, in access to them, in treatment of individuals with disabilities, or in any aspect of their operations. The City of Seward also does not discriminate on the basis of disability in its hiring or employment practices.

This notice is provided as required by Title II of the Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973. Questions, complaints, or requests for additional information or accommodation regarding ADA and Section 504 may be forwarded to the ADA and Section 504 compliance Coordinator:

Brett Baker City Administrator
Phone: 402 643-2928
Office Address: 537 Main Street , Seward NE 68434
Hours: 8 a.m. to 4 p.m. Monday through Friday

SECTION 504/ADA SELF-EVALUATION

The City of Seward is in the process if completing a Self-Evaluation questionnaire to assist in the review of City programs, policies, and procedures. This questionnaire and its results will constitute the City of Seward Self-Evaluation. The Self-Evaluation questions are organized into five areas:

1) Program Policy and Procedures;

2) Employment;

3) Effective Communication;

4) Notice of Nondiscrimination;

5) Grievance Procedure. Mark Yes, No, or NA for each question.

Note: See enclosed Checklist for contents of the uncompleted completed Self-Evaluation. The City of Seward will have the Self-Evaluation completed no later than August 31, of 2013

SECTION 504/ADA TRANSITION PLAN

Under the ADA, Title II, the City of Seward having 50 or more employees shall have a written Transition Plan. The Transition Plan begins with conducting a walk-through of all of an entity's facilities in which it offers programs, services and activities. Facilities include buildings,

playgrounds, parks, etc. The purpose of the walk-through is to identify all physical (structural) barriers that limit or prevent access to programs, services, and activities.

- After all barriers are identified, an evaluation is conducted to identify those which, for now or forever, can be overcome through non-structural changes. These barriers and changes shall be noted and a record Kept in a three-ringed binder so that they are identified as alternatives to structural changes.

- For each facility needing structural changes to overcome structural barriers to permit access to programs, services, and activities a Transition Plan is then written. The required information shall be noted on the ADA/504 Transition Plan Outline, and Accessibility Check list.

Under the ADA, the City of Seward is responsible for or has authority over streets, roads, or walkways, the Transition Plan shall include a schedule for providing curb ramps or other sloped areas where pedestrian walks cross curbs. When developing the schedule, the ADA stipulates a priority list; government offices and facilities; transportation; places of public accommodation; and employees, followed by walkways serving other areas. The City shall have the Transition Plan completed no later than October 31, of 2013

GRIEVANCE PROCEDURE FOR THE CITY OF SEWARD

The following grievance procedure is established to meet the requirements of Section 504 of the Rehabilitation Act as amended and the Americans with Disabilities Act of 1990 (ADA).

According to these laws, the City of Seward certifies that all citizens shall have the right to submit a grievance on the basis of disability in policies or practices regarding employment, services, activities, facilities, or benefits provided by City of Seward.

When filing a grievance, citizens must provide detailed information to allow an investigation, including the date, location and description of the problem. The grievance must be in writing and must include the name, address, and telephone number of the complainant. *Upon request, alternative means of filing complaints, such as personal interviews or a tape recording, will be made available for individuals with disabilities upon request.* The complaint should be submitted by the complainant or his/her designee as soon as possible, but no later than 90 days after the alleged violation. Complaints must be signed and sent to:

504/ADA Coordinator - Brett Baker
537 Main Street
Seward, NE 68434

Within 15 calendar days after receiving the complaint, The 504/ADA Coordinator will meet with the complainant to discuss the complaint and possible resolution. Within 15 calendar days after the meeting the 504/ADA Coordinator will respond in writing. Where appropriate, the response shall be in a format accessible to the complainant (such as large print or audio tape). The response will explain the position of City of Seward and offer options for resolving the complaint.

If the response by the ADA Coordinator does not satisfactorily resolve the issue, the complainant or his/her designee may appeal the decision of the 504/ADA coordinator. Appeals must be made within 15 calendar days after receipt of the response. Appeals must be directed to the chief elected official or his or her designee.

Within 15 calendar days after receiving the appeal, the chief elected official or his or her designee will meet with the complainant to discuss the complaint and to discuss possible resolutions. Within 15 calendar days after the meeting, the chief elected official or his or her designee will

provide a response in writing. Where appropriate, the response shall be in a format accessible to the complainant. The response shall be accompanied by a final resolution of the complaint. The 504/ADA Coordinator shall maintain the files and records of the City of Seward pertaining to the complaints filed for a period of three years after the grant is closed out.

REASONABLE ACCOMIDATION PROCEDURES

The City of Seward in accordance with the adopted Section 504/ADA Policy shall not deny the benefits of its programs, activities, services to individuals with disabilities because its facilities are inaccessible. When viewed in their entirety, the City of Seward services, programs, or activities, shall be accessible to and usable by individuals with disabilities. The goal of the City of Seward is to meet the standard known as “Program Accessibility.” This standard applies to all existing facilities (buildings, parks, etc.) of the City of Seward. However, the City of Seward is not necessarily required to make each of their facilities accessible. In many cases, providing access through structural changes may be the most effective way of providing program access. BUT, program accessibility may be provided in ways other than structural modifications. When choosing a method for providing program access, the City of Seward must give priority to the method that results in the most integrated setting appropriate to encourage interaction among all users, including individuals with disabilities.

Provision of Effective Communication - Individuals requiring physical or sensory accommodations, individual interpreter service, Braille, large print or recorded material, shall make written requests to the 504/ADA Coordinator - Brett Baker, 537 Main Street, Seward, Nebraska 68434, telephone (402) 643-2928. The request may be made by a family member, health professional, or other representative acting on the individual's behalf with the individuals consent.

The 504/ADA Coordinator may request medical documentation only when the individuals need for accommodations is not apparent and there is not other medical information already on record which demonstrates that need. Failure to provide this information may result in denial of the accommodation request.

Once it has been determined that the request is for a reasonable accommodation, the City Officials shall respond quickly. This procedure shall include (1) an analysis of the individuals particular request or employee's job to determine its purpose and essentials functions, (2) a consultation with the individual or employee to ascertain the precise limitations or job-related limitations imposed by the individuals disability and how those limitations could be overcome with reasonable accommodation, (3) an identification of potential accommodations and in conjunction with the individual, an assessment of the effectiveness of those accommodations in enabling the employee to perform the essential functions of the job or of the individual performing their essential functions, (4) consideration of the preference of the employee and selection and implementation of the accommodation that is appropriate for the employee and employer and consideration of the individuals' needs if requested by an individual; and (5) the overall needs of the office. The accommodation need not be the most costly solution, nor must it be exactly what the individual requests, but it must be effective.

Should a request for reasonable accommodation is denied, it must be in writing and outline the reasons for the denial by using Department of Justice form 100C. The official denying the request also must inform the individual of the right to any available informal dispute resolutions avenues.

All requests for accommodations, along with any medical or documentation provided, shall be kept in file. The 504/ADA Coordinator shall maintain the files after the decision maker makes a final determination on the request. Access to these files shall be limited to those with an identifiable need to review the information.

ASSURANCES

Pursuant to the requirements of Section 504 of the Rehabilitation Act of 1973 (29 USC 794), the City of Seward, desiring to avail itself of federal financial assistance for the US Department of Transportation, hereby gives assurance that no qualified disabled person shall, solely by reason of his disability, be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination, including discrimination in employment, under any program or activity that receives or benefits form this federal financial assistance.

The City of Seward further assures that its programs will be conducted, and its facilities operated, in compliance with all requirements imposed by or pursuant to 49 CFR Part 27, 28 CFR Part 35 and 42 USC 12101-12213.

Adopted this 2nd day of July, 2013 at Seward, Nebraska.
The City Council of the City of Seward

Sid Kamprath	Dean Fritz
Barbara Pike	John Singleton
Brett Smith	Charles Lieske
Chris Schmit	Richard Hans

Prepared By: John M. Hughes
Title: ADA Compliance Officer

NDOR USE ONLY

Date Received: _____

Questionnaire Review:

NDOR Employee: _____

Title: _____

Date: _____

Next Step:

Letter of Compliance: _____

Further Review Required: _____

_____

_____

_____

_____

P.O. Box 38, 537 Main Street, Seward, Nebraska 68434. Phone: 402-643-2928. Fax: 402-643-6491. www.CityofSewardNE.gov

Section 504 Policy – Rehabilitation Act of 1973 Americans with Disabilities Act of 1990

POLICY STATEMENT

The City of Seward will ensure that no qualified disabled individual shall, solely on the basis of his or her disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any of its programs, services, or activities as provided by Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 (ADA). The City of Seward further ensures that every effort will be made to provide nondiscrimination in all of its programs or activities regardless of the funding source.

For our purposes, a disabled person is defined as any person who:

- Has a physical or mental impairment that substantially limits one or more major life activities,
- Has a record of such impairment, or
- It is regarded as having such an impairment.

AUTHORITIES

Section 504 of the Rehabilitation Act of 1973, as amended, provides that "No otherwise qualified disabled individual in the United States, as defined in section 7(6), shall, solely by reason of his disability, be excluded for the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

29 USC 794 (October 29, 1992 to the Rehabilitation Act of 1973) substitutes "a disability" for "handicaps" and "disability" for "handicap".

49 CFR Part 27.13 (Nondiscrimination on the Basis of Disability in Programs and Activities Receiving or Benefiting from Federal Financial Assistance) states, "This part applies to each recipient of Federal financial assistance from the Department of Transportation and to each program or activity that receives or benefits from such assistance".

49 CFR Part 28.102 (Enforcement of Nondiscrimination on the Basis of Disability in Programs or Activities Conducted by the Department of Transportation) states, "This part applies to all programs or activities conducted by the Department of Transportation except for programs and activities conducted outside the United States that do not involve individuals with disabilities in the United States."

28 CFR Part 35 (Judicial Administration) states that: "The purpose of this part is to effectuate Subtitle A of Title II of the ADA which prohibits discrimination on the basis of disabilities by public entities."

49 CFR part 27 (Nondiscrimination on the Basis of Disability in Programs and Activities Receiving or Benefiting from Federal Financial Assistance) states, "The purpose of this part is to carry out the intent of Section 504 of the Rehabilitation Act of 1973 (29 USC 794) as amended, to the end that no otherwise qualified disabled individual in the United States shall, solely by reason of his or her disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

49 CFR Part 28-140 (Employment) states that, "(a) No qualified individual with disabilities shall, on the basis of disability, be subjected to discrimination in employment under any program or activity conducted by the Department," and "(b) The definitions, requirements, and procedures of Section 504 of the Rehabilitation Act of 1973

(29 USC 791), as established by the Equal Employment Opportunity Commission in 29 CFR part 1613, shall apply to employment in federally conducted programs or activities."

29 CFR Part 1614.101 (Equal Employment Opportunity in the Federal Government) states that: "It is the policy of the Government of the United States . . . to provide equal opportunity in employment for all persons, to prohibit discrimination in employment because of race, color, religion, sex, or national origin and to promote the full realization of equal employment opportunity through a continuing affirmative program in each agency."

42 USC Part 12101-12213 (The Americans with Disabilities Act of 1990) states that: "No covered entity shall discriminate against a qualified individual with a disability because of the disability of such individual in regard to job application procedures, the hiring, advancement, or discharge of employees, employee compensation, job training, and other terms, conditions, and privileges of employment."

ORGANIZATION

- City of Seward ADA Coordinator: City Administrator (current)
- City of Seward ADA Compliance Officer: Building/Zoning & Code Enf. Director (current)
- ADA Review Committee: Will be comprised of total of five individuals, including individuals with differing disabilities or their representative, other affected or interested persons within the community, and City staff.

SECTION 504/ADA COORDINATOR RESPONSIBILITIES

The City Administrator, who serves as ADA Coordinator, shall have oversight of the following items related to the Section 504 / ADA policies:

- The coordinator will make sure the Self-Evaluation and Transition Plan are completed and that recommendations are implemented.
- The coordinator will help put together and coordinate the ADA Review Committee.
- The coordinator will ensure a current Notice of Nondiscrimination is posted regularly.
- The coordinator will oversee a grievance procedure that it is made available to the public and employees.
- The coordinator will receive and investigate grievances on city programs, services, and employment practices.
- The coordinator will help organize training activities related to the implementation of Section 504 and ADA policies.
- The coordinator shall monitor and prevent potential discrimination acts.
- The coordinator shall, at all times, keep current with Section 504/ADA regulations and identify changes needed to City policies for compliance.
- The coordinator will serve as the main point of contact person for individuals with disabilities and make him/herself available to meet with those who have concerns with Section 504/ADA implementation in Seward.

SECTION 504/ADA NOTICE TO PUBLIC

The City of Seward does not discriminate on the basis of disability in admission of its programs, services, or activities, in access to them, in treatment of individuals with disabilities, or in any aspect of their operations. The City of Seward also does not discriminate on the basis of disability in its hiring or employment practices.

This notice is provided as required by Title II of the Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973. Questions, complaints, or requests for additional information or accommodation regarding the ADA and Section 504 may be forwarded to the designated ADA and Section 504 compliance coordinator:

City Administrator (current)
402-643-2928, info@cityofsewardne.gov
PO Box 38, 537 Main Street, Seward, NE 68434
Hours: M – F, 8A – 4P

SECTION 504/ADA SELF-EVALUATION

The City of Seward is in the process of undertaking a Section 504/ADA self-evaluation to update the City's transition plan to remain in compliance. The self-evaluation will assist in identifying the degree of accessibility to programs, activities, and facilities so that staff can plan for and achieve full program accessibility. To that end, the following items will be considered in the self-evaluation:

- *The extent to which programs and activities are readily accessible and usable by person with disabilities.*
- *The extent to which the delivery of benefits and services are free from discriminatory effects on persons with disabilities.*
- *The extent to which contractual agreements are free from subjecting persons with disabilities to discrimination.*

The self-evaluation process will include the following actions:

a. A review of the inventory of programs and activities conducted by the City.
b. Collection and documentation of the policies and practices that govern the administration of the City's programs and activities, both formally and informally identified.
c. Analyzation of how the policies and practices affect individuals with disabilities who seek to participate in the City's programs and activities, including what the current policies/practices contain and what is lacking.
d. Implementation and documentation of changes to City policies and practices that do not meet Section 504 requirements.
e. Obtaining comments from individuals with disabilities and other interested persons about the City's policies and practices and limitations they've experienced.

The objectives of the self-evaluation process are as follows:

1. Increased Awareness through Effective Communication – ensuring that all beneficiaries and employees are aware of their rights under Section 504. This is achieved through meetings and trainings as are needed.
2. Revision of Policies and Procedures in Conflict – ensuring that all City policies and procedures are non-discriminatory based on disability existing in employment or access to services. This will be accomplished through administrative review and inclusion of relevant City staff in making these updates.
3. Access to Reasonable Accommodations – ensuring that persons with a disability have equal access to all the City's programs and services which do not constitute an 'undue financial and administrative burden' to be placed upon the City. This will be accomplished through identifying the process for the request of a reasonable accommodation as well as the process to review and grant such requests.
4. Program Services Accessibility – ensuring that all qualified persons with disabilities have equal opportunity to participate in or benefit from services or activities offered by the City. This will be accomplished by a comprehensive review of all services and activities and elimination of such barriers to equal opportunity.
5. Emergency Procedures – ensuring adequate policies/methods are in place to accommodate individuals with disabilities in the event of an emergency. This will be accomplished through review of current policies/methods or establishment if they are not already in place.

It is expected that the City will complete its self-evaluation by September 30, 2025.

SECTION 504/ADA TRANSITION PLAN

Upon completion of the Self-Evaluation, the City will complete an updated Transition Plan. The Plan will begin by conducting a walk-through of all City's facilities. The purpose of the walk-through will be to identify all physical (structural) barriers that limit or prevent access to programs, services, and activities. After all barriers are identified, an evaluation will be conducted to identify those which, for now or forever, can be overcome through non-structural changes. These barriers and changes shall be noted and a record kept ~~in a three-ringed binder~~ so that they are identified as alternatives to structural changes.

For each facility requiring structural changes to overcome structural barriers to permit access to programs, services, and activities, a ~~Transition Plan~~ proposed solution or correction will be ~~written~~ identified with an assigned priority level, estimated cost, and estimated completion date. ~~The required information shall be noted on the ADA/504 Transition Plan Outline, and Accessibility Check list. Under the ADA, the City of Seward is responsible for or has authority over streets, roads, or walkways, the Transition Plan shall include a schedule for providing curb ramps or other sloped areas where pedestrian walks cross curbs. When developing the schedule, the ADA stipulates a~~ Higher priority ~~list;~~ may

be assigned to government offices and facilities; transportation; places of public accommodation; and employees, followed by walkways serving other areas. The City shall have the Transition Plan completed no later than December 31, 2025.

COMPLAINT PROCEDURES

The City has adopted the subsequent grievance procedure providing for prompt and equitable resolution of complaints alleging any action prohibited by Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794) and the Americans with Disabilities Act of 1990 (42 U.S.C. 12131).

- ***Part 1 - Policy***

It is the policy of the City of Seward to ensure:

1. That all services and programs, including grants and contracts, are available to people with disabilities in the same manner as accorded to all other residents of the City of Seward; and
2. That complaints will be processed in an orderly fashion, allowing a complete and impartial investigation and resolution within a reasonable period of time; and
3. That information and assistance will be provided to disabled persons, resulting in the orderly processing of the complaint(s).

This grievance policy shall apply to anyone who wishes to file a complaint alleging discrimination based on disability in the provision of services, activities, programs, or benefits by the City and should be directed to the ADA Coordinator.

- ***Part 2 - Procedure:***

Any person with a disability who believes he/she has been subjected to discrimination based on disability may file a complaint under this procedure. It is unlawful for the City to retaliate against anyone who files a complaint or cooperates in the investigation of a complaint.

1. A complaint should be filed in writing with the following included: name, address, and telephone number of the person filing the complaint; and a description of the alleged violation of the regulations, including time/date, location, and action requested to be taken by the City. Written complaints must be signed by the complainant and/or their representative. The City provides an ADA Grievance Form which contains all requested information—it is available at City Hall or on the City's website. Alternative means of filing complaints such as personal interviews, or a tape recording of the complaint, will be made for persons with disabilities upon request.
2. A complaint should be filed as soon as possible, but no later than sixty (60) days after the alleged violation. (Processing of allegations of discrimination which occurred before this grievance procedure was in place will be considered on a case-by-case basis.)
3. Within fifteen (15) calendar days after receipt of the complaint, the ADA Coordinator (or their designee) may meet with the complainant and/or their representative to discuss the complaint, review evidence, and possible resolutions. An investigation shall follow by the ADA Coordinator and relevant staff members. The Mayor will be informed of the complaint and possible remedies.
4. Within thirty (30) calendar days of receiving the complaint, the ADA Coordinator (or their designee) will respond in writing, and where appropriate, in a format accessible to the complainant, such as large print, Braille, or audio tape. The response will explain the position of the City and offer options for substantive resolution of the complaint.
5. The complainant can request a reconsideration of the case in instances where they are dissatisfied with the resolution. The request for reconsideration shall be made to the Mayor and shall occur within fifteen (15) calendar days after receipt of the written determination from the ADA Coordinator or their designee.
6. Within 15 calendar days after receipt of the appeal, the ADA Coordinator and Mayor will meet with the complainant to discuss the complaint and possible resolutions. Within 15 calendar days after the meeting, the Mayor and/or City Attorney will respond in writing, and, where appropriate, in a format accessible to the complainant, with a final resolution of the complaint.

All written complaints received by the City shall be retained by the City for at least three (3) years. These rules shall be construed to protect the substantive rights of the interested persons to provide timely notice of any impediment to

access City programs, services or activities, and to assure that the City of Seward, Nebraska, complies with Section 504 of the Rehabilitation Act, ADA and implementing regulations.

REASONABLE ACCOMMODATION PROCEDURES

The City of Seward, in accordance with the adopted Section 504/ADA Policy, shall not deny the benefits of its programs, activities, services to individuals with disabilities because its facilities are inaccessible. When viewed in their entirety, the City of Seward services, programs, or activities, shall be accessible to and usable by individuals with disabilities. The goal of the City of Seward is to meet the standard known as "Program Accessibility." This standard applies to all existing facilities (buildings, parks, etc.) of the City of Seward. ~~However, the City of Seward is not necessarily required to make each of their facilities accessible. In many cases, providing access through structural changes may be the most effective way of providing program access. BUT, program accessibility may be provided in ways other than structural modifications.~~ When choosing a method for providing program access, the City of Seward ~~must~~ will give priority to the method that results in the most integrated setting appropriate ~~to encourage interaction among~~ for all users, including individuals with disabilities.

Provision of Effective Communication - Individuals requiring physical or sensory accommodations, individual interpreter service, Braille, large print or recorded material, shall make written requests to the 504/ADA Coordinator: City Administrator, 537 Main Street, Seward, Nebraska 68434, telephone (402) 643-2928. The request may be made by a family member, health professional, or other representative acting on the individual's behalf with the individual's consent. The 504/ADA Coordinator may request medical documentation only when the individuals' need for accommodations is not apparent and there is no other medical information already on record which demonstrates that need. Failure to provide this information may result in denial of the accommodation request.

Once it has been determined that the request is for reasonable accommodation, City officials shall respond as quickly as possible. This procedure shall include (1) an analysis of the individuals particular request or employee's job to determine its purpose and essentials functions; (2) a consultation with the individual or employee to ascertain the precise limitations or job-related limitations imposed by the individual's disability and how those limitations could be overcome with reasonable accommodation; (3) an identification of potential accommodations and in conjunction with the individual, an assessment of the effectiveness of those accommodations in enabling the employee to perform the essential functions of the job, or of the individual performing their essential functions; (4) consideration of the preference of the employee and selection and implementation of the accommodation that is appropriate for ~~the employee and employer and consideration of~~ the individuals' needs ~~if requested by an individual~~ and ~~(5)~~ the overall needs of the office. The accommodation need not be the costliest solution, nor must it be exactly what the individual requests, but it must be effective.

Should a request for reasonable accommodation be denied, it ~~must~~ will be made in writing on Department of Justice Form 100C and outline the reasons for the denial. The official denying the request also must inform the individual of the right to any available ~~informal~~ dispute resolutions ~~avenues~~.

All requests for accommodation, along with any medical or documentation provided, shall be kept in file. The 504/ADA Coordinator shall maintain the files after the decision maker makes a final determination on the request. Access to these files shall be limited to those with an identifiable need to review the information.

ASSURANCES

Pursuant to the requirements of Section 504 of the Rehabilitation Act of 1973 (29 USC 794), the City of Seward, desiring to avail itself of federal financial assistance from the US Department of Transportation, hereby gives assurance that no qualified disabled person shall, solely by reason of his disability, be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination, including discrimination in employment, under any program or activity that receives or benefits from this federal financial assistance.

The City of Seward further assures that its programs will be conducted, and its facilities operated, in compliance with all requirements imposed by or pursuant to 49 CFR Part 27, 28 CFR Part 35 and 42 USC 12101-12213.

Adopted this 1st day of April 2025, at Seward, Nebraska.

The City Council of the City of Seward, Nebraska:

Zane Francescato	Megan Kahler
Jessica Kolterman	Karl Miller
John Singleton	Matt Stryson
Tatum Tonniges	Rich Wergin

Prepared by: Derek Bargmann

Title: City Clerk

P.O. Box 38, 537 Main Street, Seward, Nebraska 68434. Phone: 402-643-2928. Fax: 402-643-6491. www.CityofSewardNE.gov

Section 504 Policy – Rehabilitation Act of 1973 Americans with Disabilities Act of 1990

POLICY STATEMENT

The City of Seward will ensure that no qualified disabled individual shall, solely on the basis of his or her disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any of its programs, services, or activities as provided by Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 (ADA). The City of Seward further ensures that every effort will be made to provide nondiscrimination in all of its programs or activities regardless of the funding source.

For our purposes, a disabled person is defined as any person who:

- Has a physical or mental impairment that substantially limits one or more major life activities,
- Has a record of such impairment, or
- It is regarded as having such an impairment.

AUTHORITIES

Section 504 of the Rehabilitation Act of 1973, as amended, provides that "No otherwise qualified disabled individual in the United States, as defined in section 7(6), shall, solely by reason of his disability, be excluded for the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

29 USC 794 (October 29, 1992 to the Rehabilitation Act of 1973) substitutes "a disability" for "handicaps" and "disability" for "handicap".

49 CFR Part 27.13 (Nondiscrimination on the Basis of Disability in Programs and Activities Receiving or Benefiting from Federal Financial Assistance) states, "This part applies to each recipient of Federal financial assistance from the Department of Transportation and to each program or activity that receives or benefits from such assistance".

49 CFR Part 28.102 (Enforcement of Nondiscrimination on the Basis of Disability in Programs or Activities Conducted by the Department of Transportation) states, "This part applies to all programs or activities conducted by the Department of Transportation except for programs and activities conducted outside the United States that do not involve individuals with disabilities in the United States."

28 CFR Part 35 (Judicial Administration) states that: "The purpose of this part is to effectuate Subtitle A of Title II of the ADA which prohibits discrimination on the basis of disabilities by public entities."

49 CFR part 27 (Nondiscrimination on the Basis of Disability in Programs and Activities Receiving or Benefiting from Federal Financial Assistance) states, "The purpose of this part is to carry out the intent of Section 504 of the Rehabilitation Act of 1973 (29 USC 794) as amended, to the end that no otherwise qualified disabled individual in the United States shall, solely by reason of his or her disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

49 CFR Part 28-140 (Employment) states that, "(a) No qualified individual with disabilities shall, on the basis of disability, be subjected to discrimination in employment under any program or activity conducted by the Department," and "(b) The definitions, requirements, and procedures of Section 504 of the Rehabilitation Act of 1973

(29 USC 791), as established by the Equal Employment Opportunity Commission in 29 CFR part 1613, shall apply to employment in federally conducted programs or activities."

29 CFR Part 1614.101 (Equal Employment Opportunity in the Federal Government) states that: "It is the policy of the Government of the United States . . . to provide equal opportunity in employment for all persons, to prohibit discrimination in employment because of race, color, religion, sex, or national origin and to promote the full realization of equal employment opportunity through a continuing affirmative program in each agency."

42 USC Part 12101-12213 (The Americans with Disabilities Act of 1990) states that: "No covered entity shall discriminate against a qualified individual with a disability because of the disability of such individual in regard to job application procedures, the hiring, advancement, or discharge of employees, employee compensation, job training, and other terms, conditions, and privileges of employment."

ORGANIZATION

- City of Seward ADA Coordinator: City Administrator (current)
- City of Seward ADA Compliance Officer: Building/Zoning & Code Enf. Director (current)
- ADA Review Committee: Will be comprised of total of five individuals, including individuals with differing disabilities or their representative, other affected or interested persons within the community, and City staff.

SECTION 504/ADA COORDINATOR RESPONSIBILITIES

The City Administrator, who serves as ADA Coordinator, shall have oversight of the following items related to the Section 504 / ADA policies:

- The coordinator will make sure the Self-Evaluation and Transition Plan are completed and that recommendations are implemented.
- The coordinator will help put together and coordinate the ADA Review Committee.
- The coordinator will ensure a current Notice of Nondiscrimination is posted regularly.
- The coordinator will oversee a grievance procedure that it is made available to the public and employees.
- The coordinator will receive and investigate grievances on city programs, services, and employment practices.
- The coordinator will help organize training activities related to the implementation of Section 504 and ADA policies.
- The coordinator shall monitor and prevent potential discrimination acts.
- The coordinator shall, at all times, keep current with Section 504/ADA regulations and identify changes needed to City policies for compliance.
- The coordinator will serve as the main point of contact person for individuals with disabilities and make him/herself available to meet with those who have concerns with Section 504/ADA implementation in Seward.

SECTION 504/ADA NOTICE TO PUBLIC

The City of Seward does not discriminate on the basis of disability in admission of its programs, services, or activities, in access to them, in treatment of individuals with disabilities, or in any aspect of their operations. The City of Seward also does not discriminate on the basis of disability in its hiring or employment practices.

This notice is provided as required by Title II of the Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973. Questions, complaints, or requests for additional information or accommodation regarding the ADA and Section 504 may be forwarded to the designated ADA and Section 504 compliance coordinator:

City Administrator (current)
402-643-2928, info@cityofsewardne.gov
PO Box 38, 537 Main Street, Seward, NE 68434
Hours: M – F, 8A – 4P

SECTION 504/ADA SELF-EVALUATION

The City of Seward is in the process of undertaking a Section 504/ADA self-evaluation to update the City's transition plan to remain in compliance. The self-evaluation will assist in identifying the degree of accessibility to programs, activities, and facilities so that staff can plan for and achieve full program accessibility. To that end, the following items will be considered in the self-evaluation:

- The extent to which programs and activities are readily accessible and usable by person with disabilities.
- The extent to which the delivery of benefits and services are free from discriminatory effects on persons with disabilities.
- The extent to which contractual agreements are free from subjecting persons with disabilities to discrimination.

The self-evaluation process will include the following actions:

a. A review of the inventory of programs and activities conducted by the City.
b. Collection and documentation of the policies and practices that govern the administration of the City's programs and activities, both formally and informally identified.
c. Analyzation of how the policies and practices affect individuals with disabilities who seek to participate in the City's programs and activities, including what the current policies/practices contain and what is lacking.
d. Implementation and documentation of changes to City policies and practices that do not meet Section 504 requirements.
e. Obtaining comments from individuals with disabilities and other interested persons about the City's policies and practices and limitations they've experienced.

The objectives of the self-evaluation process are as follows:

1. Increased Awareness through Effective Communication – ensuring that all beneficiaries and employees are aware of their rights under Section 504. This is achieved through meetings and trainings as are needed.
2. Revision of Policies and Procedures in Conflict – ensuring that all City policies and procedures are non-discriminatory based on disability existing in employment or access to services. This will be accomplished through administrative review and inclusion of relevant City staff in making these updates.
3. Access to Reasonable Accommodations – ensuring that persons with a disability have equal access to all the City's programs and services which do not constitute an 'undue financial and administrative burden' to be placed upon the City. This will be accomplished through identifying the process for the request of a reasonable accommodation as well as the process to review and grant such requests.
4. Program Services Accessibility – ensuring that all qualified persons with disabilities have equal opportunity to participate in or benefit from services or activities offered by the City. This will be accomplished by a comprehensive review of all services and activities and elimination of such barriers to equal opportunity.
5. Emergency Procedures – ensuring adequate policies/methods are in place to accommodate individuals with disabilities in the event of an emergency. This will be accomplished through review of current policies/methods or establishment if they are not already in place.

It is expected that the City will complete its self-evaluation by September 30, 2025.

SECTION 504/ADA TRANSITION PLAN

Upon completion of the Self-Evaluation, the City will complete an updated Transition Plan. The Plan will begin by conducting a walk-through of all City's facilities. The purpose of the walk-through will be to identify all physical (structural) barriers that limit or prevent access to programs, services, and activities. After all barriers are identified, an evaluation will be conducted to identify those which, for now or forever, can be overcome through non-structural changes. These barriers and changes shall be noted and a record kept so that they are identified as alternatives to structural changes.

For each facility requiring structural changes to overcome structural barriers to permit access to programs, services, and activities, a proposed solution or correction will be identified with an assigned priority level, estimated cost, and estimated completion date. Higher priority may be assigned to government offices and facilities; transportation; places of public accommodation; and employees, followed by walkways serving other areas. The City shall have the Transition Plan completed no later than December 31, 2025.

COMPLAINT PROCEDURES

The City has adopted the subsequent grievance procedure providing for prompt and equitable resolution of complaints alleging any action prohibited by Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794) and the Americans with Disabilities Act of 1990 (42 U.S.C. 12131).

- ***Part 1 - Policy***

It is the policy of the City of Seward to ensure:

1. That all services and programs, including grants and contracts, are available to people with disabilities in the same manner as accorded to all other residents of the City of Seward; and
2. That complaints will be processed in an orderly fashion, allowing a complete and impartial investigation and resolution within a reasonable period of time; and
3. That information and assistance will be provided to disabled persons, resulting in the orderly processing of the complaint(s).

This grievance policy shall apply to anyone who wishes to file a complaint alleging discrimination based on disability in the provision of services, activities, programs, or benefits by the City and should be directed to the ADA Coordinator.

- ***Part 2 - Procedure:***

Any person with a disability who believes he/she has been subjected to discrimination based on disability may file a complaint under this procedure. It is unlawful for the City to retaliate against anyone who files a complaint or cooperates in the investigation of a complaint.

1. A complaint should be filed in writing with the following included: name, address, and telephone number of the person filing the complaint; and a description of the alleged violation of the regulations, including time/date, location, and action requested to be taken by the City. Written complaints must be signed by the complainant and/or their representative. The City provides an ADA Grievance Form which contains all requested information—it is available at City Hall or on the City's website. Alternative means of filing complaints such as personal interviews, or a tape recording of the complaint, will be made for persons with disabilities upon request.
2. A complaint should be filed as soon as possible, but no later than sixty (60) days after the alleged violation. (Processing of allegations of discrimination which occurred before this grievance procedure was in place will be considered on a case-by-case basis.)
3. Within fifteen (15) calendar days after receipt of the complaint, the ADA Coordinator (or their designee) may meet with the complainant and/or their representative to discuss the complaint, review evidence, and possible resolutions. An investigation shall follow by the ADA Coordinator and relevant staff members. The Mayor will be informed of the complaint and possible remedies.
4. Within thirty (30) calendar days of receiving the complaint, the ADA Coordinator (or their designee) will respond in writing, and where appropriate, in a format accessible to the complainant, such as large print, Braille, or audio tape. The response will explain the position of the City and offer options for substantive resolution of the complaint.
5. The complainant can request a reconsideration of the case in instances where they are dissatisfied with the resolution. The request for reconsideration shall be made to the Mayor and shall occur within fifteen (15) calendar days after receipt of the written determination from the ADA Coordinator or their designee.
6. Within 15 calendar days after receipt of the appeal, the ADA Coordinator and Mayor will meet with the complainant to discuss the complaint and possible resolutions. Within 15 calendar days after the meeting, the Mayor and/or City Attorney will respond in writing, and, where appropriate, in a format accessible to the complainant, with a final resolution of the complaint.

All written complaints received by the City shall be retained by the City for at least three (3) years. These rules shall be construed to protect the substantive rights of the interested persons to provide timely notice of any impediment to access City programs, services or activities, and to assure that the City of Seward, Nebraska, complies with Section 504 of the Rehabilitation Act, ADA and implementing regulations.

REASONABLE ACCOMMODATION PROCEDURES

The City of Seward, in accordance with the adopted Section 504/ADA Policy, shall not deny the benefits of its programs, activities, services to individuals with disabilities because its facilities are inaccessible. When viewed in their entirety, the City of Seward services, programs, or activities, shall be accessible to and usable by individuals with disabilities. The goal of the City of Seward is to meet the standard known as "Program Accessibility." This standard applies to all existing facilities (buildings, parks, etc.) of the City of Seward. When choosing a method for providing program access, the City of Seward will give priority to the method that results in the most integrated setting appropriate for all users, including individuals with disabilities.

Provision of Effective Communication - Individuals requiring physical or sensory accommodations, individual interpreter service, Braille, large print or recorded material, shall make written requests to the 504/ADA Coordinator: City Administrator, 537 Main Street, Seward, Nebraska 68434, telephone (402) 643-2928. The request may be made by a family member, health professional, or other representative acting on the individual's behalf with the individual's consent. The 504/ADA Coordinator may request medical documentation only when the individuals' need for accommodations is not apparent and there is no other medical information already on record which demonstrates that need. Failure to provide this information may result in denial of the accommodation request.

Once it has been determined that the request is for reasonable accommodation, City officials shall respond as quickly as possible. This procedure shall include (1) an analysis of the individuals particular request or employee's job to determine its purpose and essentials functions; (2) a consultation with the individual or employee to ascertain the precise limitations or job-related limitations imposed by the individual's disability and how those limitations could be overcome with reasonable accommodation; (3) an identification of potential accommodations and in conjunction with the individual, an assessment of the effectiveness of those accommodations in enabling the employee to perform the essential functions of the job, or of the individual performing their essential functions; (4) consideration of the preference of the employee and selection and implementation of the accommodation that is appropriate for the individuals' needs and the overall needs of the office. The accommodation need not be the costliest solution, nor must it be exactly what the individual requests, but it must be effective.

Should a request for reasonable accommodation be denied, it will be made in writing on Department of Justice Form 100C and outline the reasons for the denial. The official denying the request also must inform the individual of the right to any available dispute resolutions.

All requests for accommodation, along with any medical or documentation provided, shall be kept in file. The 504/ADA Coordinator shall maintain the files after the decision maker makes a final determination on the request. Access to these files shall be limited to those with an identifiable need to review the information.

ASSURANCES

Pursuant to the requirements of Section 504 of the Rehabilitation Act of 1973 (29 USC 794), the City of Seward, desiring to avail itself of federal financial assistance from the US Department of Transportation, hereby gives assurance that no qualified disabled person shall, solely by reason of his disability, be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination, including discrimination in employment, under any program or activity that receives or benefits from this federal financial assistance.

The City of Seward further assures that its programs will be conducted, and its facilities operated, in compliance with all requirements imposed by or pursuant to 49 CFR Part 27, 28 CFR Part 35 and 42 USC 12101-12213.

Adopted this 1st day of April 2025, at Seward, Nebraska.

The City Council of the City of Seward, Nebraska:

Zane Francescato	Megan Kahler
Jessica Kolterman	Karl Miller
John Singleton	Matt Stryson
Tatum Tonniges	Rich Wergin

Prepared by: Derek Bargmann
Title: City Clerk

8. Items Related to Pool Staffing - City Administrator Butcher **(added 3:30P on 3/31/25)**
   A. Consideration of an Ordinance to Amend Pay Rates for Dowding & Wellness Center Pool Staffing

ORDINANCE NO. 2025-9

AN ORDINANCE TO PROVIDE FOR ANNUAL CLASSIFICATION OF OFFICERS AND EMPLOYEES OF THE CITY OF SEWARD, NEBRASKA; TO PROVIDE FOR LONGEVITY PAY AND PAYMENT OF PART-TIME EMPLOYEES; TO PROVIDE FOR A DATE SUCH CLASSIFICATION AND PAY RANGES OF COMPENSATION SHALL BECOME EFFECTIVE; TO PROVIDE FOR PUBLICATION IN PAMPHLET FORM; TO PROVIDE FOR A TIME WHEN THIS ORDINANCE SHALL TAKE EFFECT.

BE IT ORDAINED BY THE MAYOR AND COUNCIL OF THE CITY OF SEWARD, NEBRASKA:

Section 1. CLASSIFICATION, RANGES OF COMPENSATION. The classification of officers and employees of the City of Seward, Nebraska, pay grades and ranges of compensation for such classification are as follows:

2024-2025 SALARY SCHEDULE PAY RANGE RATES

A. CLERICAL (HOURLY)	**MIN**	**MAX**
Payroll Clerk	20.71	27.99
Utility Billing/Account Clerk	18.40	25.86
Administrative Assistant	17.81	25.09
Admin Assistant – Municipal Bldg	16.87	22.99
Library Assistant II	19.04	25.05
Library Assistant I	14.55	17.00
Library Clerk	11.77	14.67
Aging Services Commission Assistant	17.75	25.52
Clubhouse Bartender	15.45	18.54
Golf Shop Seasonal Employee	11.58	14.04

B. LABOR & TRADES (HOURLY)	**MIN**	**MAX**
Civic Center Assistant	11.55	13.48
Custodian	14.96	22.28
Electric Line Crew Chief	45.08	56.15
Electric Journeyman Lineman	39.83	53.68
Electric Lineman	39.83	53.68
Electric Seasonal Groundman	22.02	25.97
Meter Maintenance Utility Worker	20.37	26.78
Utilities Locator	19.75	36.94
Assistant Public Properties Director	24.49	30.85
Public Properties Maintenance Worker	17.47	25.81
Child Care Director	21.15	25.77
Child Watch Attendant	13.50	14.50
Facility Director	20.19	24.60
Wellness Center Lifeguard	**13.50**	**14.50**
Wellness Center Lead Attendant	14.50	15.50
Wellness Center Attendant	13.50	14.50
Street Foreman	26.67	34.48
Street Maintenance Worker III	21.52	28.21

Street Maintenance Worker II	19.19	25.88
Street Maintenance Worker I	18.60	23.26
Burn Site Assistant	11.81	16.96
Recycling Center Worker	11.81	16.96
Facility Maintenance Supervisor	27.70	36.78
WW Treatment/Sanitary System Operator	23.06	30.67
Senior Utility Maintenance Worker II	25.39	34.14
Utility Maintenance Worker II	24.07	33.02
Utility Maintenance Worker I	21.84	29.11
Summer Seasonal Laborer	15.02	15.61
Pool Manager	**16.09**	**18.67**
Assistant Pool Manager	**14.17**	**16.44**
Swim Program Coordinator	**13.87**	**16.03**
Lifeguard	**13.50**	**14.50**
Pool Office/Concession Work	**12.00**	**13.00**
Water Safety Instructor	**13.50**	**14.50**
Water Safety Instructor Aide	**8.00**	**9.00**

C. PUBLIC SAFETY (HOURLY)	**MIN**	**MAX**
Police Sergeant	30.22	39.54
Police Officer II	29.02	35.41
Police Officer I	26.69	33.21
Administrative Secretary/Records Clerk	18.62	25.61
Community Service Officer	16.23	22.97

D. SUPERVISORY, TECHNICAL & ADMINISTRATIVE (MONTHLY)	**MIN**	**MAX**
City Administrator	11,253	13,582
Chief of Police	7,706	9,530
City Engineer	7,032	9,375
Police Captain	6,752	8,016
Electric Superintendent	8,241	10,291
Public Properties Director	6,001	7,461
City Clerk/Human Resources Director	5,916	8,214
Water/Wastewater Director	5,689	8,453
Street Superintendent	5,871	7,512
Finance Director/Treasurer	7,577	9,702
Library Director	5,204	6,456
Deputy Treasurer	4,998	6,112
Golf Course Superintendent	4,998	5,828
Building/Zoning/Code Enforcement Director	5,094	6,356
Executive Director of Wellness Center	4,998	5,828
Recreation Director	3,632	5,348
Golf Shop Manager	3,494	4,545
Assistant Library Director	3,486	4,713
Civic Center Manager	3,698	4,098

Section 2. LONGEVITY PAY. Each employee, who has completed their introductory period, will, for each year of service to the City, receive three dollars and forty-seven cents ($3.47) per month if classified as exempt, or two cents ($0.02) per hour if classified as non-exempt. This pay will be in addition to the established base pay in their classification as set forth in Section One of this ordinance.

Section 3. COMPENSATION PAYABLE BIWEEKLY. The compensation and salary fixed for the respective officers and employees of the City by this ordinance shall be paid biweekly.

Section 4. PART-TIME EMPLOYEES. Persons employed by the City on a part- time or occasional basis shall be paid on an hourly rate and at such time as shall be fixed by the Mayor and Council by motion.

Section 5. REPEAL. Any City of Seward ordinance, resolution, or employee handbook or part of any ordinance, resolution, or employee handbook of the City of Seward, Nebraska in conflict with this Ordinance is hereby repealed to the extent of such conflict.

Section 6. WHEN OPERATIVE. This ordinance shall be effective after its approval, passage and publication as required by law and the ordinances of the City.

Passed and approved this 1st day of April, 2025.

THE CITY OF SEWARD, NEBRASKA

_____

ATTEST: Joshua Eickmeier, Mayor

_____

Derek Bargmann, City Clerk

(SEAL)

2024-2025 (EFFECTIVE 1ST FULL PAY PERIOD FOLLOWING OCTOBER 1, 2024)

CLERICAL (HOURLY)

POSITION	1	2	3	4	5	6	7	8	9
PAYROLL CLERK	20.71	21.62	22.53	23.44	24.35	25.26	26.17	27.08	27.99
UTIL BILLING/ACCOUNT CLERK	18.40	19.33	20.26	21.20	22.13	23.06	24.00	24.93	25.86
ADMIN ASSISTANT	17.81	18.72	19.63	20.54	21.45	22.36	23.27	24.18	25.09
ADMIN ASSISTANT - MUNI BUILDLING	16.87	17.64	18.40	19.17	19.93	20.70	21.46	22.22	22.99
LIBRARY ASSISTANT II	19.04	19.80	20.55	21.30	22.05	22.80	23.55	24.30	25.05
LIBRARY ASSISTANT I	14.55	14.86	15.16	15.47	15.77	16.08	16.38	16.69	17.00
LIBRARY CLERK	11.77	12.13	12.50	12.86	13.22	13.58	13.94	14.31	14.67
AGING SERV. COMM. ASSISTANT	17.75	18.72	19.69	20.66	21.64	22.61	23.58	24.55	25.52
CLUBHOUSE BARTENDER	15.45	15.84	16.22	16.61	17.00	17.38	17.77	18.15	18.54
GOLF SHOP SEASONAL EMPLOYEE	11.58	11.88	12.19	12.50	12.81	13.12	13.42	13.73	14.04

LABOR & TRADES (HOURLY)

POSITION	1	2	3	4	5	6	7	8	9
CIVIC CENTER ASSISTANT	11.55	11.79	12.03	12.27	12.51	12.76	13.00	13.24	13.48
CUSTODIAN	14.96	15.87	16.79	17.70	18.62	19.53	20.45	21.36	22.28
ELECTRIC LINE CREW CHIEF	45.08	46.47	47.85	49.23	50.61	52.00	53.38	54.76	56.15
ELECTRIC JOURNEYMAN LINEMAN	39.83	41.56	43.29	45.03	46.76	48.49	50.22	51.95	53.68
ELECTRIC LINEMAN	39.83	41.56	43.29	45.03	46.76	48.49	50.22	51.95	53.68
ELECTRIC SEASONAL GROUNDMAN	22.02	22.51	23.01	23.50	23.99	24.49	24.98	25.47	25.97
METER MAINTENANCE UTILITY WORKER	20.37	21.17	21.98	22.78	23.58	24.38	25.18	25.98	26.78
UTILITIES LOCATOR	19.75	21.89	24.04	26.19	28.34	30.49	32.64	34.79	36.94
ASSIST. PUBLIC PROP. DIRECTOR	24.49	25.29	26.08	26.88	27.67	28.47	29.26	30.05	30.85
PUBLIC PROP. MAINTENANCE WORKER	17.47	18.51	19.55	20.60	21.64	22.68	23.73	24.77	25.81
SUMMER SEASONAL LABORER	15.02	15.61							
POOL MANAGER	**16.09**	**16.41**	**16.74**	**17.06**	**17.38**	**17.70**	**18.03**	**18.35**	**18.67**
ASST. POOL MANAGER	**14.17**	**14.45**	**14.74**	**15.02**	**15.31**	**15.59**	**15.87**	**16.16**	**16.44**
SWIM PROGRAM COORDINATOR	**13.87**	**14.14**	**14.41**	**14.68**	**14.95**	**15.22**	**15.49**	**15.76**	**16.03**
POOL LIFEGUARD	**13.50**	**14.50**							
POOL OFFICE/CONCESSIONS	**12.00**	**13.00**							
WATER SAFETY INSTR.	**13.50**	**14.50**							
WATER SAFETY INSTR. AIDE	**8.00**	**9.00**							
CHILD CARE DIRECTOR	21.15	21.73	22.31	22.89	23.46	24.04	24.62	25.20	25.77
FACILITY DIRECTOR	20.19	20.74	21.29	21.84	22.40	22.95	23.50	24.05	24.60
CHILD WATCH ATTENDANT	13.50	14.50							
WELLNESS CENTER LIFEGUARD	**13.50**	**14.50**							
WELLNESS CENTER LEAD ATTENDANT	14.50	15.50							
WELLNESS CENTER ATTENDANT	13.50	14.50							
STREET FOREMAN	26.67	27.64	28.62	29.60	30.58	31.55	32.53	33.51	34.48
STREET MAINT. WORKER III	21.52	22.35	23.19	24.03	24.86	25.70	26.54	27.37	28.21
STREET MAINT. WORKER II	19.19	20.03	20.86	21.70	22.54	23.37	24.21	25.05	25.88
STREET MAINT. WORKER I	18.60	19.18	19.77	20.35	20.93	21.51	22.09	22.68	23.26

RECYCLING WORKER	11.81	12.46	13.10	13.75	14.39	15.03	15.68	16.32	16.96
BURN SITE ASSISTANT	11.81	12.46	13.10	13.75	14.39	15.03	15.68	16.32	16.96
FACILITY MAINTENANCE SUPERV	27.70	28.83	29.97	31.10	32.24	33.37	34.51	35.65	36.78
WW TRMT / SANITARY SYS OPER	23.06	24.01	24.96	25.92	26.87	27.82	28.77	29.72	30.67
SENIOR UTIL. MAINT. WORKER II	25.39	26.48	27.58	28.67	29.77	30.86	31.96	33.05	34.14
UTIL MAINT. WORKER II	24.07	25.19	26.31	27.43	28.55	29.67	30.78	31.90	33.02
UTIL MAINT. WORKER I	21.84	22.74	23.65	24.56	25.47	26.38	27.29	28.20	29.11

POLICE (HOURLY)

POSITION	1	2	3	4	5	6	7	8	9
POLICE SERGEANT	30.22	31.39	32.55	33.72	34.88	36.05	37.21	38.38	39.54
POLICE OFFICER II	29.02	29.81	30.61	31.41	32.21	33.01	33.81	34.61	35.41
POLICE OFFICER I	26.69	27.50	28.32	29.13	29.95	30.76	31.58	32.39	33.21
ADM/SEC RECORDS CLK PD	18.62	19.50	20.37	21.24	22.11	22.99	23.86	24.73	25.61
COMMUNITY SERVICE OFFICER	16.23	17.07	17.92	18.76	19.60	20.44	21.28	22.13	22.97

ʀVISORY, TECHNICAL, ADMINISTRATIVE (MONTHLY)

POSITION	1	2	3	4	5	6	7	8	9
CITY ADMINISTRATOR	11,253	11,544	11,835	12,126	12,417	12,708	12,999	13,290	13,582
CHIEF OF POLICE	7,706	7,934	8,162	8,390	8,618	8,846	9,074	9,302	9,530
CITY ENGINEER	7,032	7,325	7,618	7,911	8,203	8,496	8,789	9,082	9,375
POLICE CAPTAIN	6,752	6,910	7,068	7,226	7,384	7,542	7,700	7,858	8,016
ELECTRIC SUPERINTENDENT	8,241	8,497	8,753	9,010	9,266	9,522	9,778	10,035	10,291
PUBLIC PROPERTIES DIRECTOR	6,001	6,183	6,366	6,548	6,731	6,914	7,096	7,279	7,461
CITY CLERK/HR DIRECTOR	5,916	6,204	6,491	6,778	7,065	7,353	7,640	7,927	8,214
W/WWTW DIRECTOR	5,689	6,034	6,380	6,725	7,071	7,417	7,762	8,108	8,453
STREET SUPERINTENDENT	5,871	6,076	6,281	6,486	6,691	6,896	7,102	7,307	7,512
FINANCE DIRECTOR/TREASURER	7,577	7,842	8,108	8,374	8,639	8,905	9,170	9,436	9,702
LIBRARY DIRECTOR	5,204	5,360	5,517	5,673	5,830	5,986	6,143	6,299	6,456
DEPUTY TREASURER	4,998	5,137	5,276	5,415	5,555	5,694	5,833	5,973	6,112
GOLF COURSE GROUNDS SUPERINTENDENT	4,998	5,101	5,205	5,309	5,413	5,516	5,620	5,724	5,828
BLDG/ZONING/CODE ENFORCEMENT	5,094	5,252	5,410	5,568	5,725	5,883	6,041	6,198	6,356
EXECUTIVE DIRECTOR WELLNESS CENTER	4,998	5,101	5,205	5,309	5,413	5,516	5,620	5,724	5,828
RECREATION DIRECTOR	3,632	3,846	4,061	4,275	4,490	4,704	4,919	5,133	5,348
GOLF SHOP MANAGER	3,494	3,625	3,757	3,888	4,020	4,151	4,282	4,414	4,545
ASST LIBRARY DIRECTOR	3,486	3,639	3,792	3,946	4,099	4,253	4,406	4,560	4,713
CIVIC CENTER MANAGER	3,698	3,748	3,798	3,848	3,898	3,948	3,998	4,048	4,098

B. Discussion and Possible Action Related to Reimbursement of Lifeguard Employees for Certification

9. Update on the Wellness Center - Executive Director Brase
   A. Consideration of a Memorandum of Understanding (MOU) with the Seward County Chamber & Development Partnership (SCCDP) to Create and Sustain a Substitute Pool Network of Early Child Education Providers **(added 3:30P on 3/31/25)**

Memorandum of Understanding

This Memorandum of Understanding (MOU) sets forth the terms and understanding between **Seward County Chamber & Development Partnership** (SCCDP), a combined chamber of commerce and economic development organization serving Seward County, Nebraska, located at 616 Bradford St, Seward, NE 68434, and **City of Seward**, a city of the first class in the state of Nebraska, located at 537 Main St, Seward, NE 68434 (collectively referred to as the "Parties").

The purpose of this MOU is to establish a good-faith foundation between the Parties for future collaboration to create and sustain an early childhood education workforce substitute pool network in Seward County, Nebraska.

Background

Through the feedback and direction of local licensed childcare facilities, the SCCDP seeks to create a substitute pool network of early childhood education providers to aid in the recruitment of talented individuals to the workforce and the sustainability of Seward County's licensed childcare facilities. The City of Seward will supply the Sub Pool Coordinator who will work collaboratively with SCCDP and partners to establish the substitute pool network, reach a point of viability, and transition the project to a regional partner.

Implementation

The Sub Pool Coordinator will:

- Oversee the operation of the substitute pool.
- Collaborate with interested licensed childcare facilities to develop overall project goals and rules.
- Work with licensed childcare facilities to set hourly rates for substitutes to be paid by providers.
- Be responsible for marketing and outreach to potential substitutes and onboarding them to the project if qualified (e.g. pass a background check and complete required orientation training).
- Oversee use of a technology platform that matches program job postings to available substitutes.
- Adhere to all applicable state licensing standards related to staff who work in a licensed childcare facility.

Reporting

The SCCDP will meet weekly with the Sub Pool Coordinator to determine weekly benchmarks and assess progress towards overall project goals.

Funding

The SCCDP will provide $20,000 to the City of Seward during the MOU period. Beginning April 30, 2025, monthly stipend checks of $2,222.22 ($2,222.24 in December) will be issued on the last day of each month to the City of Seward.

Duration

This MOU is at-will and may be modified by mutual consent of authorized officials from the Parties. This MOU shall become effective upon signature by the authorized officials from the Parties and will remain in effect until modified or terminated by any one of the Parties by mutual consent. In the absence of mutual agreement by the authorized officials from the Parties, this MOU shall end on December 31, 2025.

Contact Information

Seward County Chamber & Development Partnership
Authorized Official: Jonathan Jank
Title: President & CEO
Address: 616 Bradford St, Seward, NE 68434
Phone: (402) 643-4189
Email: jonathan@cultivatesewardcounty.com

City of Seward
Authorized Official: Joshua Eickmeier
Title: Mayor
Address: 537 Main St, Seward, NE 68434
Phone: (402) 643-2928
Email: Josh.Eickmeier@cityofsewardne.gov

Signatures

_____ Date:_____

Jonathan Jank
Seward County Chamber & Development Partnership

_____ Date:_____

Joshua Eickmeier
City of Seward

10. Update on Proclaimed Blizzard Disaster from 3/18/25 - City Administrator Butcher

CITY ADMINISTRATOR'S REPORT

CITY ADMINISTRATORS REPORT – 4/1/25

The departments are working on the following projects to name a few:

- Monitoring a number of street projects including: East Seward (final items), design on East Hillcrest, drainage near Park Street & Bradford Street (punch list), Highway 15 Watermain (punch items) and Highway 15 Reconstruction (construction/winter shutdown); design of 5th and Bradford/Roberts Drainage, Design of Lindell and Jackson Reconstruction.
- Water Tower project underway, paint coat issues have led to substantial delays. Painting has resumed.
- Working with Wellness Center Executive Director Brase on numerous items and follow ups, final construction meeting held.
- Worked with Kelly Hoffschneider to work on a number of real estate items related to the Rail Campus, tower leases, and related legal matters.
- Caselle accounting system project conversion implementation. Met with utility meter teams on numerous issues with billing.
- Met with Electric Department Line Crew Chief regarding open positions.
- Review significant items related to LB 840 application for 6th Street Café. Completed additional follow up items.
- Check in meeting with Building and Zoning Staff.
- Attended Turf project meeting with Dave Kumm and Dr. Josh Fields to begin group planning and design/construction selection process.
- Audit follow up items back to the auditor.
- Numerous items related to the Emergency Declaration of the 2025 Blizzard.
- Assisted with Mutual Aid request to Beatrice for electric lineman.
- Met with County Commissioners on Emergency Response.
- Conducted 6 month evaluations with Department Heads.
- CDBG Requirements Meeting for Worthman Blvd project.
- Budgeting Training with Caselle and City Finance Director.
- Reviewed City Ordinance Related to Fire Department Tax Program with City Clerk.
- Zoom meeting with DARI project on status update.
- Zoom meeting with DARI project and wastewater teams specifically about wastewater pretreatment.
- Reviewed February Financials with City Finance Director.
- Met with JEO Project Engineer on Levee Project next steps.
- Discussion on bonding street and electric projects for 2025.
- Office closed on Wednesday 3/19/25 at 9am due to blizzard conditions.

Police Department

- 4th of July Committee Meeting Monday
- Active Intruder Roundtable Tuesday
- Command Staff Meeting
- Project Lifesaver Meeting
- Evaluations

City Clerk/Human Resources/City Hall

- 2025 Clerk's Academy: Completing Assessments for Credit
- Surplus Auction: Accepting bids through 4/11
- 10/1/24 – 3/31/25 Evaluations
- Establish Policy for Barricades, Trash Cans, Picnic Tables
- Fire Department Bylaws: Awaiting return comments from Chief Mifflin
- Hazard Mitigation Funds: Work on request for Siren Funding
- Coordinate with Wellness Center for Lifeguard and Other Hires

Water/Wastewater Department

- Meter Replacement Appointments
- Water Tower Exterior Coating Restart
- Annual Whole Effluent Toxicity Testing
- 2024 Water Quality Report Posting and Submittal
- Soil Surcharch Project to Restart
- West, Southwest and RO Plant Generator Refueling

Parks and Rec/Cemetery/Golf/Pool

- Safety Day Meeting
- Home High School games Tuesday, Thursday, Saturday
- Clean up trees from storm and document it
- Ball field Maintenance

Civic Center

- Moving Office to Civic Center
- Moving Ken Morgan into his space at Civic Center
- Still Waiting on Cables and Handrails
- Grand Opening Cancelled due to Fire Marshall
- 90 day plan required on wall carpet
- Civic Center Commission Meeting

Electric Department

- Remove Tree from Blind Alley 2nd and Bek
- Work Meter Issues
- Set 12 Poles West of Town
- Work with Electricians on Ken Luebe Service
- Remove Wire Pole on North End of Augusta
- Purchasing New Trencher
- Quote for Petroleum Pipeline for 200-amp Service West of Town

Street Department

- Storm Tree Trimming
- Push Up Burnsite
- Spring Sweeping
- Clean off Hwy 34 islands and sides and Hwy 15 sidewalk south of City Hall

Library

- Random Reads book group Monday
- NLA Zoom Meeting Monday
- RAN Zoom Meeting Tuesday
- Movie Wednesday
- Material ordering
- Planning for Summer 2025, including finding program sponsors

Building Inspection/Planning Department

- Board of Adjustment – Dan Briggs variance request for 3-acre replat in the ETJ.
- GIS – JEO Teams Meeting to update Zoning Map
- ArcGIS Pro and Map Integration Training
- St. Johns Sidewalk – follow up with response to St. John ask
- 147 Oak St – Junk Complaint

- 416 N 1st Street – Trash & Animal waste complaint
- Café on 6th Street – Working with Fire Marshall and State Electrical on Compliance and Inspections

Engineering

- Levee Pump Station – response to USACE
- 500k Water Tower – coating
- Rail Campus Watermain Extension Phase I – mobilization
- Worthman Blvd – advertise for bids (City Council 4/1)
- Rail Campus Watermain Extension Phase II – advertise for bids (City Council 4/1)
- 500k Water Tower – Agreement w/ Olsson for coating Inspection Services (City Council 4/1)
- East Hillcrest Drive – 75% plan set review, coordination on electric relocation, easements and R.O.W
- GIS Update – ArcGIS Pro Training and Base Map Integration
- WWTP Upgrade – WIFIA submittal, NDEE submittal
- Plum Creek Bridge – public outreach comments
- DARI LLC – coordination with Worthman Blvd incl watermain extension

Finance Department

- Printing Utility Bills
- Payroll Month/Quarter End Reporting
- Continue to resolve Caselle Glitches
- Test NatPay so employees can access pay stubs and W-2s
- Employee Evaluations
- Review February Financials with Greg
- Claim
- New Budget Spreadsheet

Seward Wellness Center

- Training on Front Desk Software
- Training on Front Door Hardware
- Presentation for Young Professionals Group
- State Pool Inspection and Training
- Ribbon Cutting and Public Open House, Sunday 1pm
- Site Update:
    - Final items
    - Cleaning of areas
    - Pool inspection and training
    - Finishing touches and cleaning
    - Landscaping – as soon as weather allows

FUTURE REQUESTS FOR COUNCIL AGENDA ITEMS OR ADMINISTRATIVE ACTION
ANNOUNCEMENT OF UPCOMING EVENTS
MOTION TO ADJOURN

I, Derek Bargmann, the duly appointed qualified and acting City Clerk of the City of Seward, Nebraska, hereby certify that the foregoing Notice of Meeting and Agenda for such meeting has been posted in the following places: Seward City Hall, Seward Municipal Building, Seward County Courthouse, Seward Memorial Library and CityofSewardNE.gov

IN WITNESS WHEREOF, I have hereunto set my hand officially and affixed the seal of the City.

_____ _____

Derek Bargmann, City Clerk Date