

SCOPE OF WORK

For

LYON COUNTY SCHOOL DISTRICT FERNELY'S

EAST VALLEY ELEMENTARY SCHOOL

SHINGLE ROOFING REPLACEMENT FOR EAST VALLEY ELEMENTARY'S ENTIRE BLDG.

- 1.) Tear off the existing asphalt shingles and asphalt base sheet/felts, nails and felt underlayment down to the Plywood deck. Dispose of all roofing materials and associated accessories at an approved dump site. These buildings are on the Lyon County School District's property, and the facilities are restricted to unauthorized visitors. All precautions shall be taken to not damage the buildings interior or exterior components or modify any materials without the written permission from the Lyon County School District.
- 2.) The metal curb flashings will be re-used, so care shall be taken when removing and preparing the metal flange flashings. All metal flange flashings will be re-used unless called out, to be replaced, as this will apply throughout the roofs penetrations. Paint exposed metal flashings and flanges after installation at the pipes and roof vents to match exactly the new asphalt shingles.
- 3.) There are existing gutters on this roof currently and will remain in place and any bracing or supports missing or displaced will be corrected as part of this project. There are four metal water diverters above the doors on the s-w wing and these can be re-used if not damaged during the tear-off.
- 4.) New Ice & water bituthane will be utilized at all penetrations and at all the curbed units base flashings. Ice & water is used generically for the use of a high temperature bituthane underlayment. This specification is based on Grace/Certainteed's H T Wintergaud for the purpose of describing the configuration and installation protocol, but approved high temperature bituthane equals will be allowed for bidding purposes. Must be same quality as the Legacy TL shingles assemblies listed by Malarkey.
- 5.) Care shall be taken when tearing off the old asphalt shingles to prevent damage to existing ventilators, pipe stacks, vents and other penetrations that have the metal flanges buried under the existing shingles currently installed.
- 6.) Install new metal drip edge 3" X 3" with a ½" hemmed drip break in the new 24 gauge metal edge metal, per the detail attached to this plans and specifications. The new metal drip edges will be required around the entire perimeter of all the shingle roofs where the existing metal edges are located, The new edge metal will be fastened into the plywood deck and The drip edge vertical exposed metal will be hemmed and a drip break ½" at the bottom of the metal. Paint grip metal, primed where the Ice & Water will be attached and the metal attached to the plywood deck with nails fastened at six inches O.C. staggered to the plywood decking.
- 7.) Around all penetrations flash in the penetrations with grace Ice and water shield's HT bituthane. Pipes, electrical, vents curbs, power vents, heat stacks and any miscellaneous penetrations. All curbs will get the Ice & Water flashing around the entire perimeter of the curbs contact point with the plywood decking to seal any gaps between the deck and the

penetrations.

- 8.) Install CertainTeed's Winterguard HT Ice & Water Shield over the first three feet from the edges of the perimeter of the various roofs. Ice & Water Shield shall extend up the roof and terminating at least four inches under the new underlayment. The valleys and the ridges will also receive the Ice & Water shield from end to end of the valleys and ridges.
- 9.) Install the high temperature Ice & Water 36" throughout the perimeter roof surface nailed to the plywood decking and overlapping a minimum of four inches at the edges and six inches at the end of the rolls. Do not roof over any damaged wood nailers or plywood sheathing. The damaged wood will be replaced and verified and will be inspected and approved by the owner or the owner's representative prior to removal.
- 10.) Install new laminated modified asphalt shingles, (See section 07311 Legacy TL), per the plans and specifications. Each shingle will get six nails and (4) hand tabbing is required around the first two courses of the perimeter shingles and per malarkey's requirements for the enhanced wind speed warranty. For repairs and modifications in the future the roofing contractor shall turn over to the Lyon County School District six bundles of the new shingles that were installed matching exactly the installed shingles,(at the end of the project). Bundles shall be in their original wrapper and un-opened. This specification is based on the Malarkey's Legacy TL modified shingle and approved equals will be approved prior to bidding and must be documented in writing by the owner, for bidding purposes. Colors of the shingles will be selected by the owner prior to the award of the contract.
- 11.) Paint all exposed metal ducts, exposed flanges, vents, pipes, heat stacks, ventilators and base flashings/curbs to match the new shingles color. Paint to match the color of the roof shingles. Some metal will require cleaning and priming. Any rusted out equipment or tops of vents and caps will be replaced by the roofing contractor with the Lyon County School District's approval.
- 12.) Special Warranty: Standard form in which manufacturer agrees to repair or replace asphalt shingles that fail in materials or workmanship within specified warranty period. 1. Failures include, but are not limited to, the following: a. manufacturing defects. 2. Material Warranty Period: 40 years from date of Substantial Completion, prorated, with first 20 years non-prorated. Contractor shall include the cost of the 20 year non-prorated warranty in their base bid.
- 13.) **A final flood test will be required** with supervision from the owner or owner's representative and all associated labor, water and materials will be supplied by the Roofer at no additional cost to the owner. Roofer shall conduct the flood test when roof is 100% completed.
- 14.) The final roof inspection shall have the following people in attendance: The owner, roofing membrane's technical representative, roofing consultant, and the roofing contractor and his foreman shall all be present during the final inspection. A punch list shall be generated from the final inspection and the punch list shall be completed with-in 5 days of the final inspection.

NON MANDATORY PRE-BID MEETING:

There will be a mandatory pre-bid meeting at the East Valley Elementary School site, Fernley, Nevada), Date and time to be posted in the notice to contractors for requests for bids. All contractors interested in bidding this project are invited to attend this meeting.

End of the Scope of Work for the Shingles

GENERAL REQUIREMENTS

- 1.) This building will be occupied throughout the entire project and the safety of the Lyon County School District's employees and Personnel is a top priority. The Contractor shall be responsible at all times during the tear-off and new installation to keep the roof area and interior of the building water tight at all times. When the new and existing plywood decking are exposed and at the end of each day's work the roofing areas shall be made water tight. No Exceptions.
- 2.) Contractor will be liable for any damage to the exterior and interior resulting from roofing activities and or personnel. The roofing contractor will make a comprehensive list detailing any pre-existing damages that could be attributed to the roofing contractor during the re-roofing work and turn the list over to the owner prior to starting any roofing. Failure to turn in the list over to the owner prior to starting the job will be grounds for denial of the roofing contractor's explanation of pre-existing damages/events. A video tape/file will also be acceptable as a means of documenting the pre-existing damages.
- 3.) Contractor shall have a superintendent present at all times and staff the job with sufficient personnel to complete the re-roof with-in the contract time. A hard copy of the specifications and drawings will be present on the roof during all phases of the re-roof.
- 4.) During the course of work the contractor shall be available in case of leaks or an emergency 24 hours a day and shall have a response time of ninety minutes upon notification.
- 5.) A final roof inspection shall be performed with the following in attendance: Roofing contractor, roof consultant and the owner's representative.
- 6.) Submit to the Owner, prior to the start of the Re-roof, information on the type of Roof underlayment and shingle system proposed by the roofer with step by step application procedures and technical specifications. Submit shop drawings of any and all details of flashings or **proposed modifications to any detail by the roofing contractor found on the roof.**
- 7.) Work on the roof shall be completed between the hours of 7:00am and 8:00pm.
- 8.) The grounds adjacent to the roof shall be kept clean at all times and cleaned on a daily basis. These buildings are occupied and there is no access to utilities. Contractor shall supply all power, water, and portable toilets at no additional cost to the owner.

END

REFERENCE STANDARDS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Quality assurance
- B. Schedule of References

1.2 QUALITY ASSURANCE

- A. For products or workmanship specified by association, trade, or Federal Standards, comply with requirements as specified or as required by applicable Standards/Codes.
- B. Conform to the most recent accepted or approved reference standard at the time of the bid opening.
- C. Interpretation of the standards and any conflict resolution shall be directed to the owner and the owner's representative. Bidding documents verses the standards/codes.

1.3 SCHEDULE OF REFERENCE

AA	Aluminum Association 818 Connecticut Avenue, N.W. Washington, D.C. 20006
AIA	American Institute of Architects 1735 New York Avenue, N.W. Washington, D.C. 20006
AITC	American Institute of Timber Construction 333 W. Hapden Avenue Englewood, CO 80110
ANSI	American National Standards Institute 1430 Broadway New York, NY 10018
APA	American Plywood Association Box 11700 Tacoma, WA 98411 1916 Race St. Philadelphia, PA 19103
AWI	Architectural Woodwork Institute

	2310 S. Walter Reed Dr. Arlington, VA 22206
AWPA	American Wood-Preservers' Association 7735 Old Georgetown Rd. Bethesda, MD 20014
FM	Factory Mutual System 1151 Boston-Providence Turnpike POB 688 Norwood, MA 02062
ICC	International Code Council 500 New Jersey Avenue, NW 6th Floor, Washington, DC 20001 [P] 888-ICC-SAFE (888-422-7233)
NAAMM	National Association of Architectural Metal Manufacturers 221 N. LaSalle St. Chicago, IL 60601
NWMA	National Woodwork Manufacturers' Association 205 W. Touhy Ave. Park Ridge, IL 60068
NRCA	National Roofing Contractors Association
SMACNA	Sheet Metal & Air Conditioning Contractors' National Association 8224 Old Courthouse Rd. Vienna, VA 22190
IBC	International Building Code
UL	Underwriters' Laboratories, Inc. 333 Pfingston Rd. Northbrook, IL 60062

END OF SECTION

SUBMITTALS

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Procedures.
- B. Construction Progress Schedules.
- C. Manufacturer's Instructions.

1.2 RELATED REQUIREMENTS

- A. General Conditions.
- B. Section 01340 – Shop Drawings, Product Data and Samples.
- C. Section 01630 – Product Substitutions.

1.3 PROCEDURES

- A. Submit submittals to the Owner and the project's Roofing Consultant.
- B. Transmit each item with a separate submittal number. Identify project, supplier; identify pertinent drawings and sheet number and detail number, specification section number, and individual product or piece of information as appropriate. Any items submitted that are not in accordance with the plans and specifications shall be highlighted or made known to all parties.

1.4 CONSTRUCTION PROGRESS SCHEDULE

- A. Submit when the project will startup or mobilize and how many calendar days to complete the scope of work called out in the plans and specifications.

1.5 MANUFACTURER'S INSTRUCTIONS

- A. Submit manufacturer's instructions for handling and delivery, storage, assembly, installation start-up, and finishing, prior to the start-up of the re-roofing. This applies to the new modified laminated asphalt shingles.

END OF SECTION

CONSTRUCTION CLEANING

PART 1 GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Daily Cleaning and disposal of demo materials, old roofing components, waste materials, and miscellaneous debris.

PART 2 PRODUCTS

2.1 EQUIPMENT

- A. Provide large dumpsters and covered containers for deposit of all debris.

PART 3 EXECUTION

3.1 CLEANING

- A. Contractor shall police the areas adjacent to the building for roofing debris and trash on a daily basis. The job site shall be clean and not an eye sore to adjacent occupied buildings.

3.2 DISPOSAL

- A. Remove roofing materials, debris, from the site once a week minimum and more if required. Site is accessible from 7:00am to 8:00pm and there are no public access areas adjacent to the job site. Transport and dispose of all waste per local codes and requirements at a certified dump site.
- B. Contractor shall clean all areas around the building on a daily basis, utilizing a magnetic rake and with no visual debris.

END OF SECTION

SELECTIVE DEMOLITION

PART 1 GENERAL

1.1 RELATED DOCUMENTS

- A. Scope of work, drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division

- 1. Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:

- 1. Demolition and removal of selected site elements.
 - 2. Repair procedures for selective demolition operations.

1.3 DEFINITIONS

- A. Remove: Detach item from existing construction and legally dispose of them off- site.
- B. Remove and Reinstall: Detach item from existing construction, prepare them for reuse, and reinstall them where indicated.
- C. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 MATERIALS OWNERSHIP

- A. Except for items or materials indicated to be reused, salvaged, reinstalled or otherwise indicated to remain Owner's property, demolished materials shall become Contractor's property and shall be removed from Project site.
- B. Historic items, relics, and other items of interest or value to Owner that may be encountered during selective demolition remain Owner's property.

2.1 PREPARATION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris- removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - 1. Do not close or obstruct streets, walks, walkways, or other adjacent occupied or used facilities without the permission from the owner and authorities having jurisdiction.

2. Care shall be taken not to damage sprinkler heads and landscaping caused by trucks and snorkel lifts driving over the job site. Identify all sprinkler heads and flag. Protect existing site improvements, and landscaping to remain.
- B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and existing facilities that are to remain.

2.2 SELECTIVE DEMOLITION

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
1. Proceed with selective demolition systematically, working from the furthest point away from your dump site to limit the amount of work and foot traffic over the new shingles/underlayment membrane. Complete selective demolition prior to the start of the roofing application.

END OF SECTION

Section 06100

ROUGH CARPENTRY

1 - GENERAL

1.1 RELATED DOCUMENT

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Framing with dimension lumber
- B. Related Sections: The following Sections contain requirements that relate to this section:
 - 1. Division 7, Section 07311, "Asphalt Shingles"

1.3 DEFINITIONS

- A. Rough carpentry includes carpentry work not specified as part of other Sections and generally not exposed, unless otherwise specified.

1.4 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specifications Sections.
- B. Material certificates for dimensional lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use as well as design values approved by the Board of Review of American Lumber Standards Committee.
- C. Wood treatment data as follows including chemical treatment manufacturer's instructions for handling, storing, installation, and finishing of treated material:
 - 1. For each type of preservative treated wood product include certification by treating plant stating type of preservative solution and pressure process used, net amount of preservative retained, and compliance with applicable standards.
 - 2. Warranty of chemical treatment manufacturer for each type of treatment.

1.5 QUALITY ASSURANCE

- A. Codes and Standards: Comply with the latest provisions of the following codes, specifications, and standards, except where more stringent requirements are shown or specified.

1.6 DELIVERY, STORAGE, AND HANDLING.

- A. Delivery and Storage: Keep materials under cover and dry. Protect against

exposure to weather and contact with damp or wet surfaces. Stack lumber as well as plywood and other panels; provide for air circulation within and around stacks and under temporary coverings including polyethylene and similar materials.

1. For pressure treated lumber and plywood with waterborne moisture provide spacing between each bundle to provide for air circulation.

2 - PRODUCTS

1 LUMBER, GENERAL

1. Lumber Standards: Furnish lumber manufactured to comply with PS 20 "American Softwood Lumber Standard" and with applicable grading rules of inspection agencies certified by American Lumber Standards Committee's (ALSC) Board of Review.
2. Grade Stamps: Provide lumber furnish pieces with each piece factory-marked with grade stamp of inspection agency evidencing compliance with grading rule requirements and identifying grading agency, grade, species, moisture content at time of surfacing, and mill.
3. For exposed lumber furnish pieces with grade stamps applied to ends or back of each piece; or omit grade stamps entirely and provide certificates of grade compliance issued by inspection agency.
4. Nominal sizes are indicated, except as shown by detail dimensions. Provide actual sizes as required by PS 20, for moisture content specified for each use.
5. Provide dressed lumber, S4S, unless otherwise indicated.
6. Provide seasoned lumber with 19 percent maximum moisture content at time of dressing and shipment for sizes 2 inches or less in nominal thickness, unless otherwise indicated.

2.1 DIMENSION LUMBER

- A. For structural light framing (2 to 4 inches thick, 2 to 4 inches wide), provide the following grade and species:
 1. "No. 2" grade, or better.
 2. Douglas Fir-Larch.
- B. For structural framing (2 to 4 inches thick, 5 inches and wider), provide the following grade and species:
 1. "No. 2" grade, or better.
 2. Douglas Fir-Larch.

2.2 CONSTRUCTIONAL PANELS, GENERAL

- A. Construction Panel Standards: Comply with PS 1 "U.S. Product Standard for Construction and Industrial Plywood" for plywood construction panels and, for products not manufactured under PS 1 provisions, with APA PRP-108.

- B. Trademark: Furnish construction panels that are each factory-marked with APA trademark evidencing compliance with grade requirements.

CONCEALED PERFORMANCE-RATED CONSTRUCTION PANELS

- A. General: Where construction panels are indicated for the following concealed types of applications, provide APA Performance-Rated Panels complying with requirements designated under each application for grade designation, span rating, exposure durability classification, edge detail (where applicable), and thickness.
- B. Roof Sheathing: APA RATED SHEATHING.
1. Exposure Durability Classification: EXTERIOR.
 2. Span Rating: 40/20 or 48/24.

FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
1. Where rough carpentry is exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners with a hot-dip zinc coating ASTM A 153 or of AISI Type 304 stainless steel.
 2. Fasteners shall be approved in the proposed membrane manufacturer's FM & UL approval guides.
- B. Nails, Wire, Brads, and Staples: FS FF-N-105.
- C. Power Driven Fasteners: National Evaluation Report NER-272.
- D. Wood Screws: ANSI B18.6.1.

METAL FRAMING CONNECTORS

- A. General: Provide metal framing connectors of type, size, metal, and finish indicated that comply with requirements specified including the following:
1. Current Evaluation/Research Reports: Provide products for which model code evaluation/research reports exist that are acceptable to authorities having jurisdiction and that evidence compliance of metal framing anchors for application indicated with the building code in effect for this Project.
 2. Allowable Design Loads: Provide products for which manufacturer publishes allowable design loads that are determined from empirical data or by rational engineering analysis and that are demonstrated by comprehensive testing performed by a qualified independent testing laboratory.

- B. Galvanized Steel Sheet: Steel sheet zinc-coated by hot-dip process on continuous lines prior to fabrication to comply with ASTM A 525 for Coating Designation G60 and with ASTM A 446, Grade A (structural quality); ASTM A 526 (commercial quality); or ASTM 527 (lock-forming quality); as standard with manufacturer for type of anchor indicated.
 - 1. Use galvanized steel framing anchors for rough carpentry exposed to weather, in ground contact, or in area of high relative humidity, and where indicated.
- C. Acceptable Products: Subject to compliance with requirements, products that may be incorporated in the Work include the following, or an approved equal:
 - 1. "Strong-Tie Connectors, "Simpson Strong-Tie Company, Inc.

PRESERVATIVE WOOD TREATMENT BY PRESSURE PROCESS

- A. General: Where lumber or plywood is indicated as preservative-treated wood or is specified herein to be treated, comply with applicable requirements of AWPB Standards C2 (lumber) and C9 (Plywood). Mark each treated item with the AWPB or SPIB Quality Mark Requirements.
Treat indicated items and the following:
 - 1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
 - 2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.
 - 3. Wood framing members less than 18 inches above grade.
 - 4. Wood floor plates installed over concrete slabs directly in contact with earth.
- B. Complete fabrication of treated items prior to treatment, where possible. If cut after treatment, coat cut surfaces to comply with AWPB M4. Inspect each piece of lumber or plywood after drying and discard damaged or defective pieces.

EXECUTION

INSTALLATION. GENERAL

- A. Discard units of material with defects that impair quality of rough carpentry construction and that are too small to use in fabricating rough carpentry with minimum joints or optimum joint arrangement.
- B. Set Rough carpentry to required levels and lines, with members plumb and true to line and cut and fitted.
- C. Fit rough carpentry to other construction; scribe and cope as required for accurate fit. Correlate location of furring, nailers, blocking, grounds, and similar supports to allow attachment of other construction.
- D. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated.
- E. Countersink nail heads on exposed carpentry work and fill holes.
- F. Use common wire nails, unless otherwise indicated. Use finishing nails for finish work. Select fasteners of size that will not penetrate members where opposite side will be exposed to

view or will receive finish materials. Make tight connections between members. Install fasteners without splitting of wood; pre-drill as required.

3. WOOD GROUNDS, NAILERS, BLOCKING AND SLEEPERS

- A. Install wood grounds, nailers, blocking , and curbs where shown and where required for screeding or attachment of other work. Form to shapes as shown and cut as required for true line and level of work to be attached. Coordinate location with work involved.
- B. Attach to substrates as required to support applied loading. Countersink bolts and nuts flush with surfaces, unless otherwise indicated. Per FM loss prevention data sheets.

3. WOOD FRAMING, GENERAL

- A. Framing Standard: Comply with IBC 2012, unless otherwise indicated.
- B. Install framing members of size and spacing indicated.
- C. Anchor and nail as shown, and to comply with the following:
 - 1. National Evaluation Report No. NER-272 for pneumatic or mechanical driven staples, P-Nails, and allied fasteners.
 - 2. Published requirements of manufacturer of metal framing connectors.
 - 3. "Chapter 23 Table 2304.9.1 – Nailing Schedule" of the IBC.

3.4. INSTALLATION OF CONSTRUCTION PANELS

- A. General: Comply with applicable recommendations contained in Form No. E30, "APA Design/Construction Guide – Residential & Commercial, "for types of construction panels and applications indicated.
- B. Fastening Methods: Fasten panels as indicated below:
 - 1. Sheathing: Nail to structural framing.

END OF SECTION

SECTION 07311 - ASPHALT SHINGLES

RT 1 GENERAL

1.1 WORK INCLUDED

- A. Removal and disposal of existing roofing shingles, and associated roofing materials and associated flashings that have been approved by the Lyon County School District for removal, prior to removing.
- B. Installation of new edge metal flashings.
- C. Replacement of damaged vents and pipe penetrations, if necessary.
- D. New Roof Shingles and Underlayment's, base sheet = high temperature bituthane nailed down to the plywood deck. Ice & Water Shield at the perimeter at all penetrations or openings.
- E. All manufacturer's requirements including, but not necessarily limited to, pertinent portions of their specifications and general requirements and recommendations apply to the work of this section as fully as though repeated herein. However, these shall be considered as *minimum* requirements and shall

not supersede more stringent requirements as Lyon County School District herein.

1.2 RELATED WORK

- A. Section 02072 – Demolition of Roofing and Mechanical equipment.
- B. Section 06200 – Rough Carpentry.
- C. Section 07600 – Flashing and Sheet Metal.

1.3 SUBMITTALS

- A. Submit details and any other technical literature which completely describes the substrate preparation and application method of the specified roofing systems. Step by Step procedures for installation of ice and water shield, felt base sheet, and shingles for this project from tear off to final flood test. Include Malarkey's hind wind warranty installation requirements.
- B. Product data for each type of product specified, including details of penetrations, tie-ins and edge details.
- C. Samples of Ice and Water shield, #30 felts or synthetic underlayment and the manufacturer's sample board for shingles specified.
- D. Warranties: Sample of special warranties non pro-rated specifically.

1.4 REFERENCES

- A. American Society for Testing and Materials (ASTM).
 - 1. E108 Fire Spread Tests of roof assemblies.
 - 2. D3018 Specification for Class A Asphalt Shingles Surfaces with Mineral Granules.
- B. Underwriter's Laboratories (U.L.) Building Materials Directory.
- C. Manufacturer's Current Applicable Specifications.
- D. NRCA Steep Roofing Manual's recommendations for shingles.

1.5 QUALITY ASSURANCE

- A. Fire-Test-Response Classification: provide asphalt shingles identical to those tested according to ASTM E108 or UL 790 and listed by UL. Each bundle of shingles shall be wrapped with covering with labels identifying each bundle of asphalt shingles with fire-test approvals listed on the packaging.
- B. Wind-Resistance-Test Characteristics: Wind-resistant asphalt shingles are called out and indicated, provide products identical to those tested according to

ASTM D3161-99a 130mph wind resistance or UL 997 and passed. **Hand tabbing of the first six courses will be required in addition to the manufacturer's standard applications, (4 hand tabs), per shingle on all courses requiring the hand tabbing.**

- C. Whenever specification items found herein are less stringent than Manufacturer's requirements, Manufacturer's requirement shall be followed.
- D. The proper installation, of all of the components of the roofing shingles and underlayment membrane system is the responsibility of the roofing contractor. The roofing contractor shall inform the owner or owner's representative of any conditions detrimental to the quality of construction or long-term performance of the roofing system during the warranty period and shall not proceed with the work until the conditions are corrected.
- E. If the daily temperature reaches 80 degrees and over no work can be performed over the newly installed shingles unless procedures are in place to insure that the new shingles will not have granule displacement or visible foot prints in the shingles surface. Any damage to the shingle will cause the roofer to replace the shingles at no additional cost to the owner.

DELIVERY, STORAGE, AND HANDLING

- A. Deliver all roofing materials to job site in the manufacture's unopened packages/bundles.
- B. Store all roofing materials at the job site above ground on pallets to prevent water damage, staining, or other physical damage. Store rolled goods on end. Comply with the manufacturer's recommendations for storing of the materials at the job site, handling and protection of stored materials.

1.7 PROJECT CONDITIONS

Proceed with installing the asphalt shingles only when weather is clear and forecasted weather conditions will permit work to be performed according to manufacturers' recommended installation restrictions. Install roofing system when substrate is completely dry and smooth.

Environmental requirements:

- 1. Apply roofing in dry weather
- 2. Do not expose stored roofing materials and accessories to a constant temperature in excess of 150 degrees F.

Protection:

- 1. Provide special protection or avoid traffic on completed work.
- 2. Contractor shall correct all deficiencies in accordance with NRCA's Steep Roofing Manual's guidelines for shingle installation and the manufacturers' recommendations at no additional cost to the owner.

Flood Testing: The Owner will require the Contractor to perform a simulated rain shower for a period of fifteen (15) minutes on all completed roof surfaces and base flashings. In the event of leaks the contractor shall correct all deficiencies in these areas causing water leakage into the facility, at no additional cost to the owner. The contractor shall be responsible to provide all equipment and provide water for testing the roof at no additional cost to the owner.

1. Owner or the Owner's representative shall be present at time of the flood testing. A water truck maybe needed as the site has limited utilities.

Installation:

1. Shingles and all associated work shall be installed in accordance with the manufacturer's current published application procedures.
2. National Roofing Contractors Association's recommendations for steep sloped roofing systems.

- F. Any and all changes or variances from the manufacturer's published installation requirements shall be approved by the owner prior to the work commencing.

Pre-construction meeting:

1. Prior to the roofing installation, conduct a Pre-construction meeting at a site to be determined by the owner. The roofing contractor shall take meeting minutes and provide a copy for the owner.
2. Attendance: Lyon County School District-wide roofing coordinator, Roofing Consultant, and the Roofing Contractor's job foreman for this project.

General Requirements:

1. Contractor shall be responsible at all times during the tear-off and new installation to keep the roof area water tight. At the end of each day's work, the roof shall be made water tight and contractor shall tear-off only as much roofing as can be replaced in the same day.
2. Contractor will be liable for any and all damages to the exterior and interior resulting from roofing activities and/or personnel.
3. No change order work will be allowed without a Lyon County School District Inspector present. Contractor shall have a superintendent present at all times and staff the job with sufficient personnel to complete the re-roof. Contractor shall have a copy of the plans and specifications on site at all times while working on the roof.
4. During the course of work, the contractor shall be available in case of leaks or an emergency 24 hours a day and shall have a response time of five hours upon notification.
5. A final roof inspection/flood test shall be performed with the following in attendance: The

Roofing contractor and the owner's representative.

6. Submit to the LCSD, prior to the start of the re-roof, information on the type of shingles with step by step application procedures and technical specifications. **Submit shop drawings of any and all details of flashing or proposed modifications found on the roof.**
7. Work on the work shall be completed between the hours of 7:00 A.M. and 8:00 P.M.
8. The grounds adjacent to the roof shall be kept clean at all times as the building will be occupied during the re-roof.

GUARANTEE AND WARRANTY

A Contractor's Warranty Agreement:

The contractor agrees to inspect and make necessary repairs to any defects or leaks in the roof system and associated flashings. The roofing contractor shall provide for this for a period of five years for workmanship, upon final completion of the punch list and final inspection as determined by the owner. Emergency leaks will be attended to within twenty-four (24) hours from receipt of notice from the owner. As soon as weather permits, contractor will restore affected areas to the standards of this contract without voiding the manufacturer's guarantee and repair any damages from these leaks without cost to the owner, except for leaks caused by abuse to roof by others or by abnormal weather conditions such as lightening severe hail, or other unusual climatic phenomena. This Guarantee must be submitted to the owner, in writing, before final payment is released for the project.

B Manufacturer's Warranty:

1. Standard form in which manufacturer agrees to repair or replace asphalt shingles that fail in materials or workmanship within specified warranty period.
 - A. Failures include, but are not limited to, the following:
 - a.) Manufacturing defects.
 - B. Material Warranty Period: 40 years from date of Substantial Completion, prorated, with first 20 years non-prorated. Include cost of 20 year non-prorated in base bid.
 - C. Discoloration Warranty Period: Asphalt shingles will not discolor 15 years from date of Substantial Completion.
 - D. Wind-Speed Warranty Period: Asphalt shingles will resist blow-off or damage caused by wind speeds of up to 130 mph (ultimate design wind speed) for ten years from date of Substantial Completion.

E. Workmanship Warranty Period: five years from date of Substantial Completion

2. If, 24 hours after notification of roof leakage, contractor has not responded, owner shall have the right, without invalidating his Guarantees and at the expense of the contractor, to make any emergency temporary repairs that are required in order to protect the building and its contents from damage due to roof leakage.

2.1 MANUFACTURERS

- A. Malarkey Roofing Products. Or approved equal as acceptable to the LCSD prior to bidding only.
- B. Waterproof Underlayment:
1. Grace Ice and Water Shield high temperature.
 2. Malarkey's High Temperature Bituthane Ice & Water shield.

2.2 ASPHALT SHINGLES

- A. Owner shall select Colors, Blends, and Patterns: Where manufacturer's standard products are indicated, provide asphalt shingles with the following requirements: Malarkey's Legacy TL minimum.
- B. Laminated fiber glass construction
- C. 480 lbs. per square
- D. UL Class A fire resistance rating
- E. UL certified to meet ASTM D3462
- F. UL certified to meet ASTM D3018 Type I
- G. ASTM D3161, Class F, 130 mph wind resistance
- H. Miami-Dade Product Control Acceptance
- I. Conforms to CSA standard A123.5
1. Provide Owner/Architect selections from manufacturer's full range of colors, textures, and patterns for asphalt shingles of type indicated.

METAL TRIM AND FLASHING

- A. Sheet Metal Materials: Furnish the following sheet metal materials:
1. Galvanized-Steel Sheets: ASTM A526, G90, (ASTM A526M, Z275) hot-dip galvanized steel with coating designation according to ASTM A525 (ASTM A525M), mill phosphatized where indicated for painting; 0.0217 inch (0.55 mm) thick, unless otherwise noted.
- B. Metal Drip Edge: Brake-formed (24) gauge sheet metal primed with dimensions of 3" X 3" unless otherwise noted on drawings fascia flange with a 3/8 inch hemmed drip edge/drip break at lower edge of all the perimeter metal. Furnish the following material in lengths of 8 or 10 feet (2.5 to 3m). Secure using appropriate fasteners spaces @ 6" O.C. staggered and primed to receive the

Bituthane underlayment at all perimeters rakes and drip edges.

1. Material: Galvanized-steel sheets. Field verify with Owner.

C. Metal Flashing: Job-cut to size and configurations required

1. Material: Galvanized-steel sheets. Field verify with Owner.

D Step Flashings: Extend underlayment up vertical "steps" and extend 6" further up slope unless otherwise noted on drawings beyond the step. Extend new shingles to butt up to the base of the steps. Install new 24 gauge pre-finished metal step flashing over shingles on the low side and over underlayment on the high side. After securing the flange at 4" – 6" O.C. extend new underlayment and shingles over the top of the flange on the high side. This occurs at the brick wall on the west and east side of the roof.

E Vent Stacks: Vent stacks and similar roof penetrations shall be flashed using Malarkey's approved pipe penetration detail, all new minimum 8" high appropriately sized for the penetration being sealed. Seal top edge of pipe jack with elastomeric sealant or butyl tape.

F Valley Flashing:

1. Remove existing valley metal to accommodate installation of new underlayment and new metal valleys.
2. Install new ice and water shield underlayment at all valleys, drip edges and ridges directly over the plywood decking.
3. Install new valley metal over the new underlayment in the valley. Secure along edges on both sides, spacing nails 6 to 8 inches apart. If necessary, cut the lower edge of the first piece to conform to, and be flush with, the eave flashing strip. Overlap succeeding metal valley sections in a shingle manor as to not buck water and over-lap a minimum of six inches over underlying sections.
4. No shingle fasteners will be allowed to penetrate through the metal valley flashings. Hand Tab with mastic to provide for the securement at the valleys only. Where shingles overlap onto metal valley flashing, cement shingles to the metal and each other utilizing asphalt based modified mastic. Prime edges of metal valleys prior to installing the shingles. Clip top corners of shingles at metal overlap to prevent water penetration underneath the shingles. Shingles shall be trimmed in a straight line on top or over the top of the valley metal.

ACCESSORIES

- A. Roof Cement: Asphalt cut-back flashing cement compounded fortified with fibers, Fillers and solvents non-asbestos. Federal Spec SS-C-153B, Type IASTM D 4586 type III.
- B. Nails: Aluminum or hot-dip galvanized steel, 0.120-inch-diameter barbed shank,

sharp-pointed, conventional roofing nails with a minimum 3/8 inch-diameter head and of sufficient length to penetrate 3/4" inch into solid decking or at least 1/2 inch through plywood sheathing. **STAPLES ARE NOT ACCEPTABLE.**

- C. Where nails are in contact with flashing, prevent galvanic action by providing nails made from the same metal as that of the metal flashing.

EXECUTION

3.1 PREPARATION FOR ROOF REPLACEMENT

Contractor shall remove all existing roofing and underlayment down to the existing wood deck. All fasteners shall be removed or driven flush. All tear-off materials shall be removed from the roof on a daily basis and disposed of in accordance with applicable codes and ordinances. Contractors shall not remove more in one day than can be covered the same day.

Preparation

1. The surface over which new shingles are to be applied shall be smooth, clean, dry, free of debris, and be sufficiently rigid to support the roofers and any equipment without any deflection that is visible.
2. All openings that have been a result of the demolished HVAC equipment shall be framed in and support to the adjacent roof trusses.
3. Clean all surfaces of debris and of any moisture before proceeding with application of new roof material.
4. Where plywood decking meets at the end of each wall, the wood decking will be screwed down tight and a 20 Ga. Piece of flat metal 6" inches wide and running the width of the roof slope shall be installed and fastened down with screws every 6" on center if there is a gap between the wall and plywood. Make this area as level as possible for new shingles.

Inspection

1. Contractor will be responsible for insuring that the roof surface is clean, firm, smooth, dry, properly secured against movement, and acceptable for application of new roofing materials
2. Commencement of the roofing application over any of the plywood decking will be construed as the contractor's acceptance of the decking and any corrections required after the commencement will be the responsibility of the roofing contractor at no additional expense to the owner.

GENERAL APPLICATION REQUIREMENTS

- A. Start roofing work in dry weather only and without the forecast of inclement weather later in the day. Each section of the roof must be completely dried-in daily.
- B. Use only materials and procedures that are proper and suitable for the slopes and for the underlying materials to which they are attached.

3.3 INSTALLATION

- A. General: Comply with all of the manufacturer's instructions and recommendations for the shingles specified. Utilize good roofing practices as noted in the NRCA's Steep Roofing Manual.
- B. Ice & Water Shield high temperature waterproof underlayment: Apply waterproof underlayment throughout the entire roof's perimeter, drip edges, ridges and the transition from the steep roof to the low slope roof. Ice & Water shall extend from the edge of the roof up the slope to a point 36 inches inside the exterior wall.
- C. Install new metal drip edge flashing under the new underlayment and Prime both sides of metal. Nail metal to the plywood decking with nails spaced six inches O.C. staggered. Around the entire perimeter the new edge metal shall be 3" X 3" with a hemmed exposed edge with a ½" drip break and leg extending back to the wood fascia and fastened to the bottom.
- D. Application of underlayment:
1. Install Ice & Water shield as specified Extend felt field underlayment over the metal flanges of the drip edge metal at all rakes and eaves.
 2. Install underlayment, ice & water shield over the flange of the drip edge metal, extending from the edge of the roof, up to the point 36" inside the exterior walls. Adhere to the sub-straight and then overlap with the field underlayment #30 felt sheet in accordance with manufacturer's instructions. Nail Ice & Water with appropriate fasteners as recommended by the shingle manufacturer and underlayment manufacturer.
 3. Lay the underlayment smooth and free of wrinkles, buckles or fish mouths.
 4. Lap so water flow occurs over parallel to, but never against the laps.
 5. Lap underlayment minimum 4" on sides and 6" on ends.
 6. Extend 4" up vertical surfaces at curbs and walls minimum. Refer to drawings for more stringent requirements.
- E. Application of shingles:
1. Legacy TL starter or an approved alternative starter system must be used for the two-layered starter course. Apply starter course at eaves. Apply starter shingles, with adhesive dots at the bottom, over metal drip edge flange and nail along the bottom edge, using eight (8) nail fasteners equally spaced and located about an inch from the bottom. The starter course of shingles shall over hang the new metal ½" to provide for a drip edge. Half inch minimum for the overhang of the shingle starter course, and top shingle will line up to create a monolithic finished edge detail. After fastening, apply six dabs of roof cement the size and thickness of a quarter over each shingle, so that the lower edge of the dab is at least 3/8" above the bottom of the overlying tab. Hand tab all the courses of shingles along the edges. Each field shingle is to receive four tabs of quarter sized dabs of roofing cement. Overlying shingle must be pressed firmly into the cement. Avoid excess applications of cement as this can result in damming or blistering. Continue application of full-length starter course strips along the entire eave.

2. Over the starter course, install the first full course of shingles. The bottom edge of this course should be flush with that of the starter course. End joints of this and all subsequent courses shall be off set at least five inches from the end joints of the underlying course. In addition, end joints shall be off set at least three inches from fasteners on the underlying course. Place shingles close together without crowding. Nail this and all subsequent courses using 6 nails equally spaced along the nailing guide line. Nails must penetrate through both components and into the plywood decking $\frac{3}{4}$ ". Hand Tab all shingles in the first six courses.
3. Apply subsequent courses with the butt of each shingled applied to the top of the saw tooth of the underlying shingle so that there will be $\frac{5}{8}$ " of each shingle exposed with a two inch head lap. Strike a chalk line about every six courses to check parallel alignment with eaves.
4. At the ridges, upon completion of final shingle course, install ridge materials, install double application hip-ridge shingles in accordance with manufacturer's instructions. Allow for 8" exposure of hip/ridge shingle and secure with two nails placed through the dimensional fold and 1" from each single with roof cement over the underlying.
5. Nailing shall be in accordance with the location directions printed on every package of shingles. Place four dabs on spot of Shingle Tab Cement, 1" in diameter, under each single tab immediately upon installation. Nails per shingle,(6) shall penetrate completely through the plywood decking $\frac{1}{2}$ " minimum.
6. Do not work over newly installed shingles as this will cause granular loss and scarring of the finished shingles. Remove and replace any deformed, bent, torn, broken, scarred or otherwise damaged or defective shingles, including any shingles with evidence of granule loss.

3.4 ADJUSTING

- A. Replace any damaged materials installed under this Section with new materials that meet specified requirements.

3.5 CLEAN UP

- A. Contractor shall remove bituminous or other markings from finished surfaces and also keep the roof and premises clean and free from accumulations of waste materials and rubbish at all times. Contractor shall remove all debris, scrap, and rubbish from the work area daily. Surplus materials and all equipment shall be promptly removed from the site upon completion of the work. Prior to final acceptance, the Contractor shall restore all areas affected by his work to their original Lyon County School District's cleanliness and repair all damage done to the premises, by his workmen and equipment.

3.6 REROOFING DAILY COMPLETION CHECKLIST

- A. Checklist shall include the following information:
1. Areas of completed work for that day. Inspection report for the roofing installed and verification of protection with canvas tarps over the new PVC membrane.
 2. Photos of daily progress. Turned in weekly and dated permanently.
 3. Name of project.
 4. Date and time of Start-up and shut down.
 5. Weather conditions; high and low temperatures for the day.
 6. Forecasted weather conditions for that night.
 7. Run a magnet rake around the perimeter of the building after each day's work to pick-up any loose nails.
- C. Copies of the Checklist shall be submitted to the Lyon County School District's inspector assigned to that project and a copy to the roofing consultant.

3.7 FIELD QUALITY CONTROL

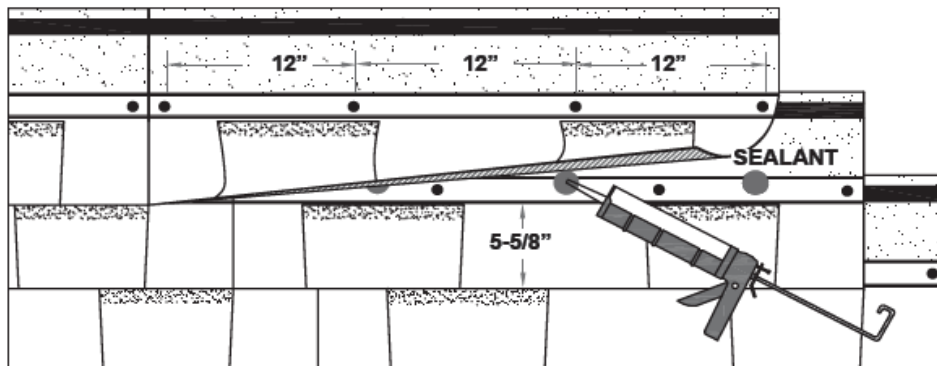
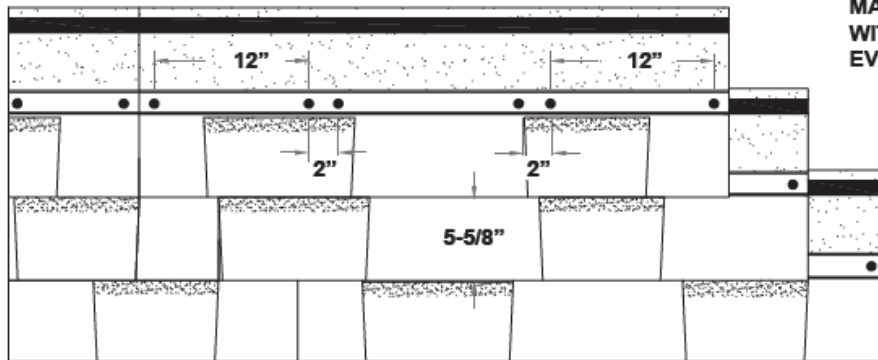
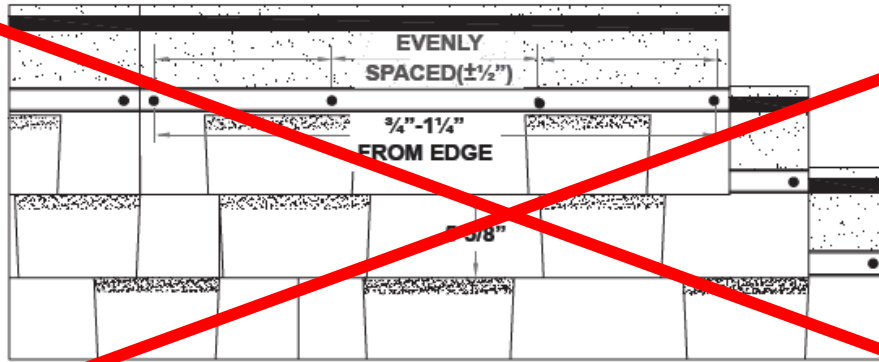
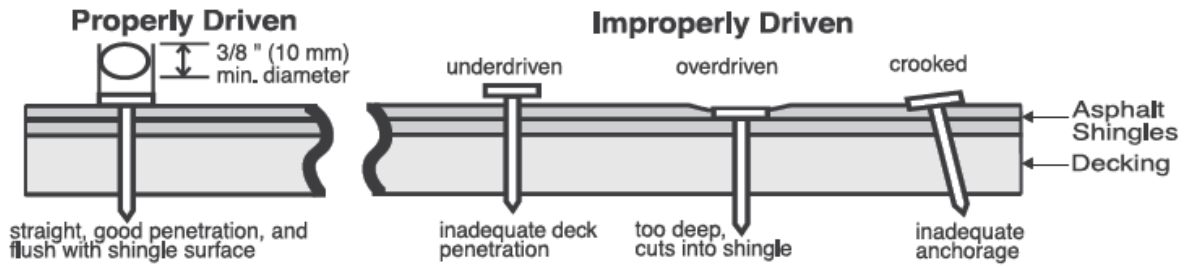
- A. Inspections:
1. Upon completion of installation, contractor shall inspect all areas of the roof and flashings to verify compliance with the plans and specifications. Notify the Lyon County School District and the Roofing consultant that the roof is ready for a final inspection

3.8 FINAL INSPECTION

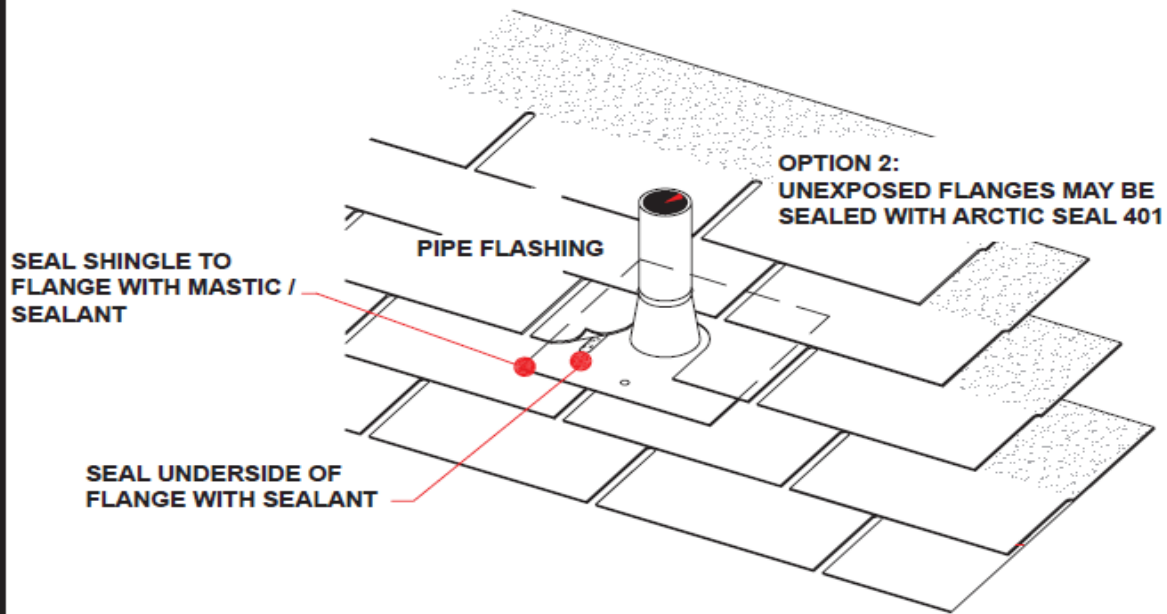
- A. The Contractor shall coordinate and set up a Final Inspection/flood test. It is mandatory that the following participants be present at the time of the final inspection. Failure to have all parties present will invalidate the final inspection and another Final shall be set up with all parties present. Re-inspection shall be at no cost to the owner and any associated fees due to a second inspection will be at the expense of the roofing contractor. Attendees shall be;
- Lyon County School District – Roofing Inspector
 - Roofing Contractor
 - Applicable Subcontractors
 - Roofing Consultant

Any discrepancies or incomplete work shall be documented in a "punch list" which we will be issued to the Contractor. The 10% retention will be withheld until completion and confirmation of all punch list items as well as all other outstanding project requirements. Once all punch list items have been corrected that will start the warranty period for the manufacturer and for the Roofing Contractor.

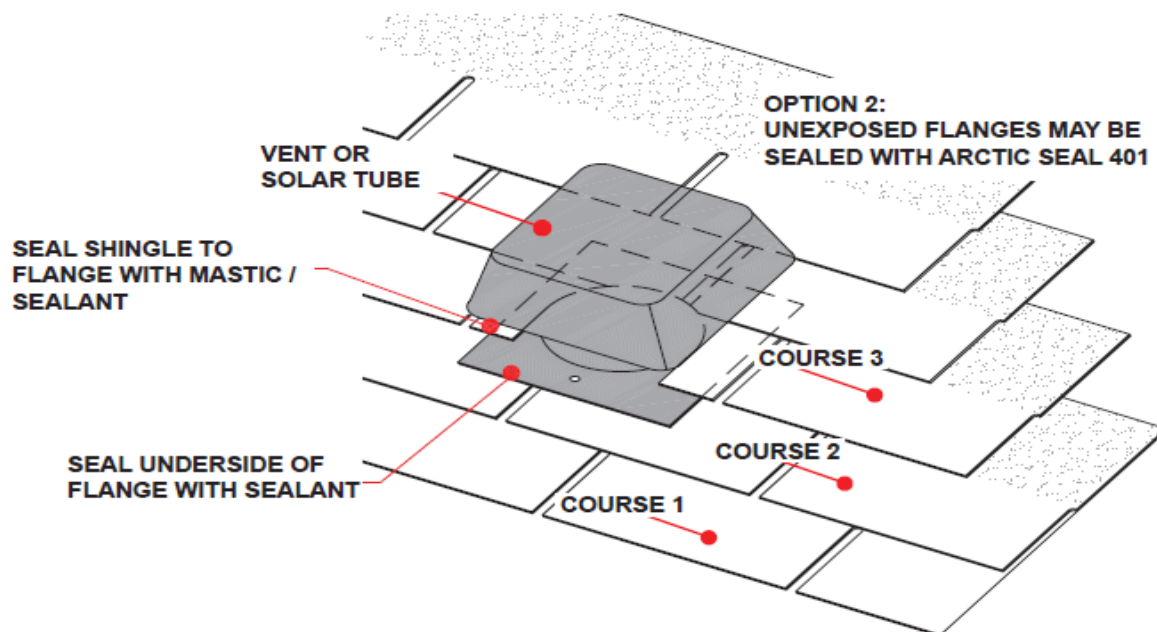
END OF SECTION



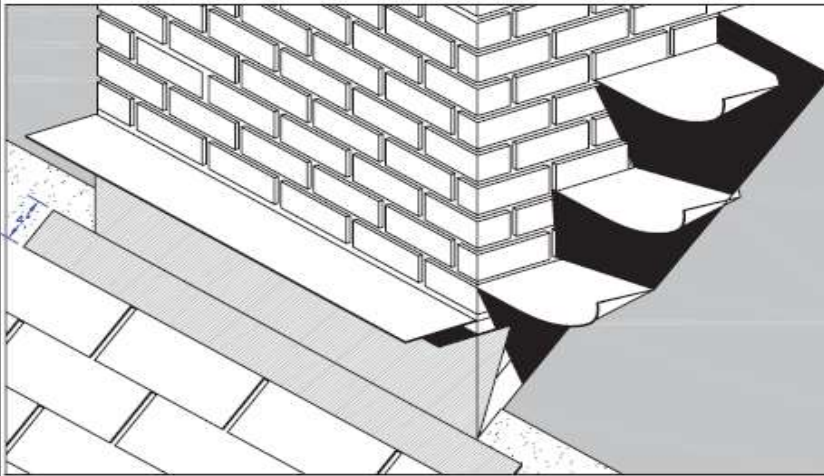
PIPE FLASHINGS



OTHER FLANGED FLASHINGS



STEP FLASHING FOR CHIMNEYS OR ROOF TO WALL TRANSITIONS

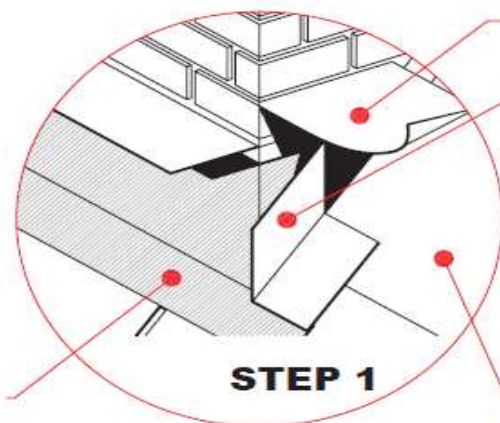


COUNTER FLASHING BENT UP SLIGHTLY TO ALLOW FOR STEP FLASHING INSTALLATION.

SELF-ADHERED UNDERLAYMENT RUN 3" UP THE VERTICAL FACE OF THE WALL OR CHIMNEY.

SHEET METAL APRON INSTALLED OVER THE LAST FULL COURSE OF SHINGLES, CUT AND FORMED TO THE CORNER AND SECURED.

STEP FLASHING CLOSE UP



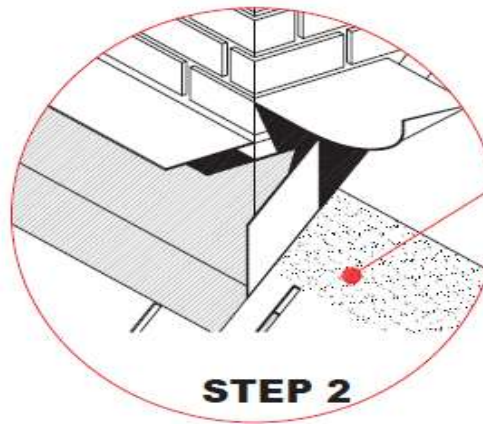
SHEET METAL APRON INSTALLED OVER THE LAST FULL COURSE OF SHINGLES, CUT AND FORMED TO THE CORNER AND SECURED.

STEP 1

COUNTER FLASHING BENT UP SLIGHTLY TO ALLOW FOR STEP FLASHING INSTALLATION.

SHEET METAL 'STEP FLASHING' INSTALLED IN SEALANT OVER THE SHEET METAL APRON, LAPPING 1" BEYOND THE CORNER OF THE CHIMNEY.

UNDERLAYMENT WITH OPTIONAL ARCTIC SEAL RUN UP THE VERTICAL FACE OF THE WALL OR CHIMNEY.



STEP 2

INSTALL NEXT COURSE OF SHINGLES OVER THE STEP FLASHING AND CUT WITH A 1/4" GAP FROM THE STEP FLASHING BEND.

LAMINATE LAYOUT PATTERNS

STEP 1.

COURSES 1-7

*ALWAYS BUTT FACTORY EDGE TO FACTORY EDGE WHEN INSTALLING THE STAIR METHOD. THIS HELPS MAINTAIN A STRAIGHT LAYOUT OF THE REMAINING SHINGLES.

- 1: 39-3/8" LONG
- 2: 33-3/4" LONG
- 3: 28-1/8" LONG
- 4: 22-1/2" LONG
- 5: 16-7/8" LONG
- 6: 11-1/4" LONG
- 7: 5-5/8" LONG

STEP 2.

COURSES 8-19

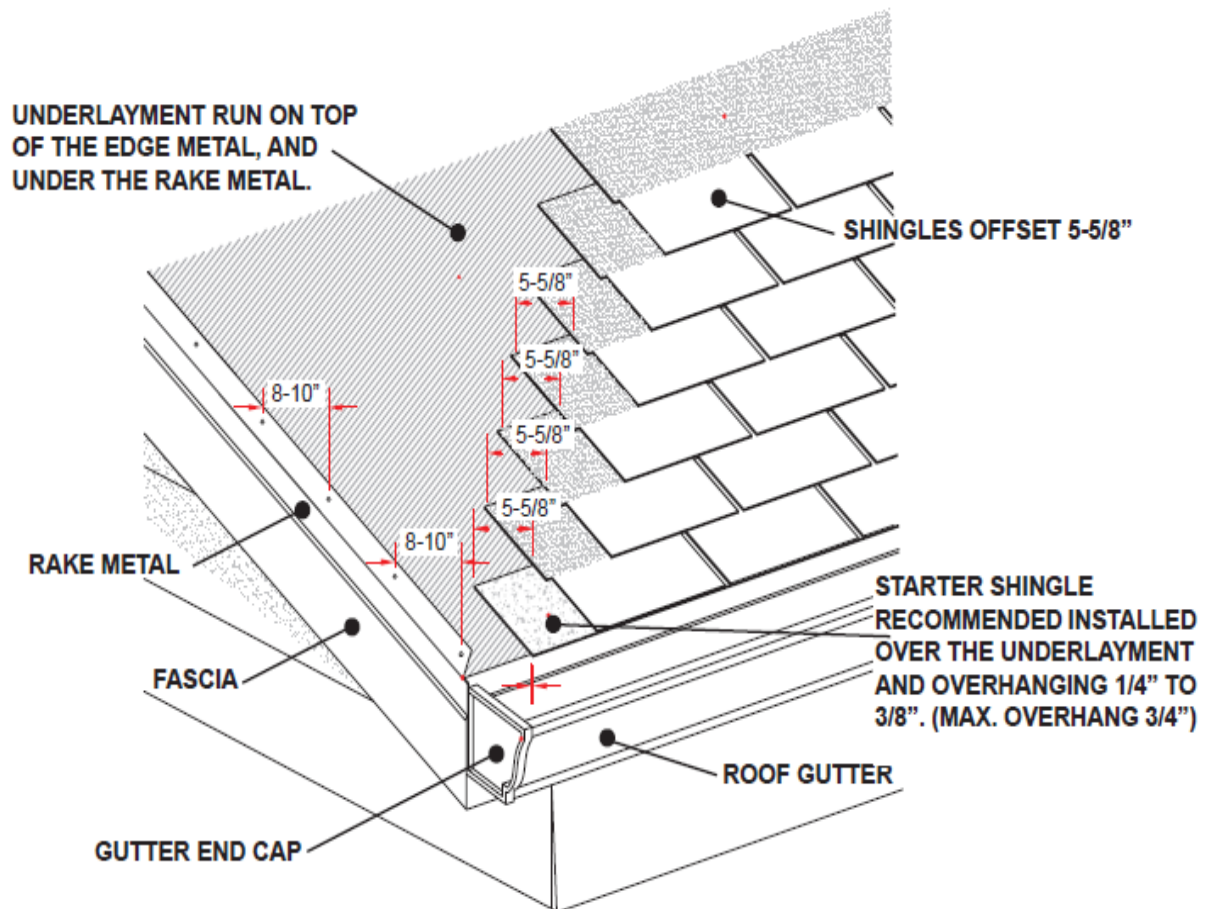
*APPLY A FULL SHINGLE TO EACH OF THE FIRST SEVEN COURSES TO EXTEND THE PATTERN.

STEP 3.

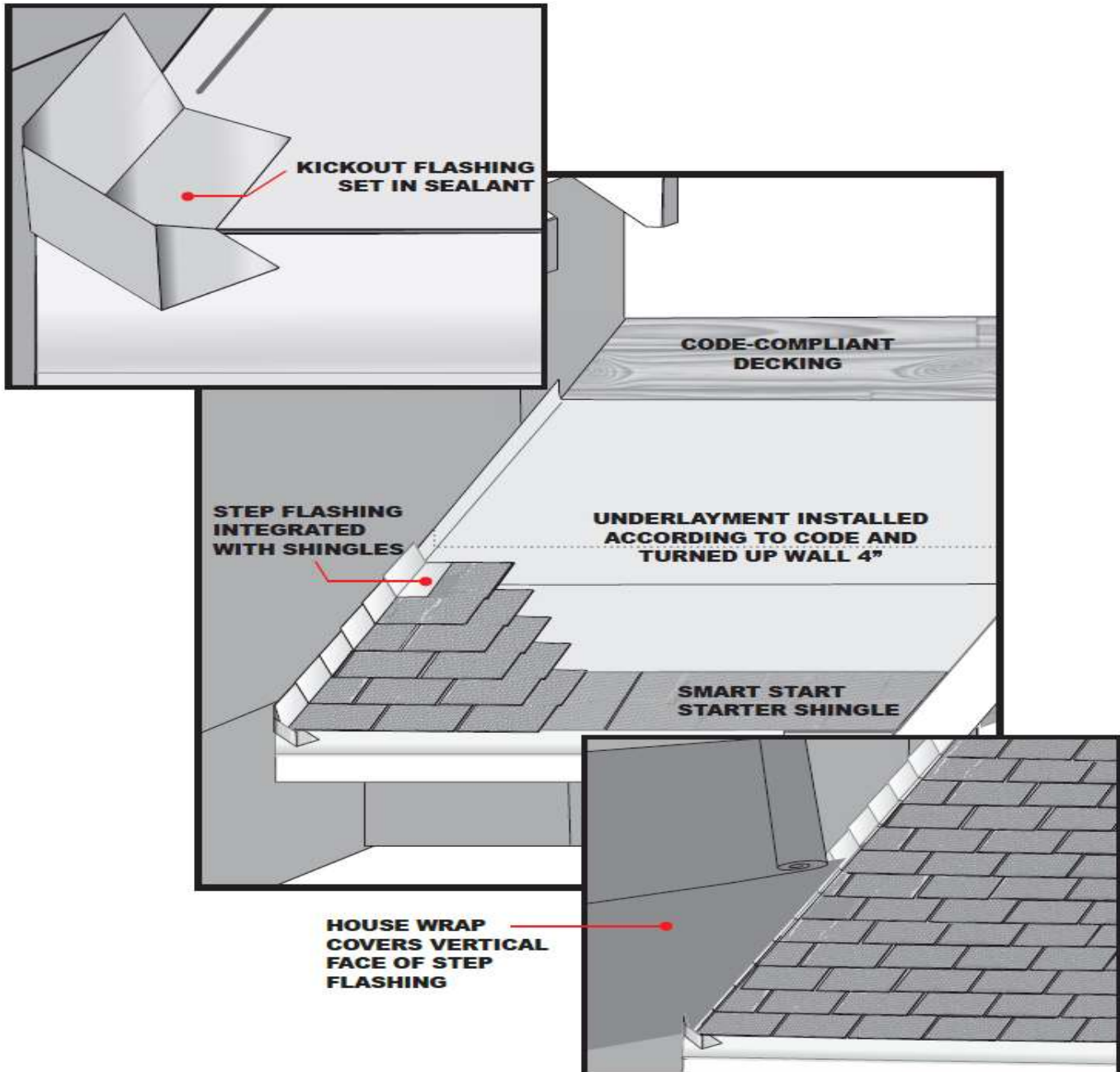
REMAINING COURSES

*REPEAT THE PROCESS BEGINING WITH A FULL SHINGLE AND CONTINUE SUCCEEDING COURSES.

ROOF EDGE AND RAKE METAL



KICKOUT FLASHING/STEP FLASHING



SECTION 07600

FLASHING AND SHEET METAL

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Copings, drip edges, aprons and reglets. See drawings for type and location.
- B. Miscellaneous items shown on the drawings, but not specifically called for in the specifications.

1.2 RELATED WORK

- A. Section 07311 Asphalt Shingles

1.3 REFERENCED STANDARDS

- A. ASTM A526 - Steel Sheet, Zinc Coated (Galvanized), by the Hot Dip Process, Commercial Quality.
- B. ASTM A527 - Steel Sheet, Zinc Coated (Galvanized), by the Hot Dip Process, Lock-Forming Quality.
- C. FS TT- S- 00230 C - Sealing Compound; Elastomeric Type, Single Component.
- D. FS SS-C-00153a - Cement, Bituminous, Plastic - Type I.
- E. SMACNA Standard, latest edition.

1.4 SHOP DRAWINGS

- A. Submit shop drawings in accordance with Section 01340.
- B. Clearly detail shaping, jointing, length of sections, fastening, and installation details.

1.5 EXISTING CONDITIONS/ PROTECTION

- A. Exercise care when working on or about roof surfaces to avoid damaging or puncturing underlayment membrane or flexible flashings.
- B. Place gypsum board panels and cloth tarps on roof surfaces adjacent to work of this section and on access routes. Keep in place until completion of work.

1.6 GUARANTEE/WARRANTY

- A. Provide Owner with a guarantee stating that metal flashings and other metal components will properly shed water and protect membrane from physical damage for a minimum period of two (2) years from date of substantial completion, and that damage resulting from failure to provide above Lyon County School District performance will be repaired to satisfaction of Owner at no additional cost.

PART 2 PRODUCTS**2.1 COPINGS**

- A. 24 gauge Galvanized Iron
- B. Coping at Parapets:
 - 1. The coping shall be 24 gauge G.I. with a 22 gauge continuous clip fastened 12" O.C. The coping sections shall be 10'-0" in length with 6" wide concealed joint covers. The joint covers shall be set in a bed of caulking. **Do not use silicone caulking at any time on this project.**
 - 2. Provide formed corners.
 - 3. Install to Manufacturer's latest printed instructions.
 - 4. Provide shop drawings.
- C. Substitutions: Under the provisions of Section 01630.
- D. Masonry Reglets/Flashing:
 - 1. Reglets shall be Type MA-4 or Type ST by Fry Reglet Co. as shown on drawings.
 - 2. Stucco reveals shall be PRM-75-75 by Fry Reglet Co.
 - 3. Drip screeds shall be DS-875-V-5/8"-300 by Fry Reglet Co.
 - 4. Provide end laps which ensure watertight seal where necessary.
 - 5. Provide standard fry flashing installed without clips or screws.
- F. Substitutions: Under the provisions of Section 01630.

2.2 **ACCESSORY MATERIALS AND COMPONENTS**

- A. Fasteners: Concealed hook strip or clip type, as detailed or required, of same material as flashings; sized to suite application.
- B. Solder and Flux: Type recommended for materials being sealed.

2.3 **FABRIC ATION**

- A. Form sections square, true, and accurate to size, free from distortion and other defects detrimental to appearance or performance.
- B. Form sections in 10' lengths. Make allowances for expansion at joints. Provide 6" long laps under sleeves at joints.
- C. Seams are to be butt hairline type, except corners. Fabricate corners minimum 18" mitered, solder, or welded, and sealed as one piece.
- D. Wash and wipe clean soldered joints to remove traces of flux immediately after soldering.
- E. **Hem All exposed edges of flashings on underside 1/2", minimum.**
- F. Back paint flashings with bituminous paint where expected to be in contact with cementitious materials or dissimilar metals.
- G. Form exposed sheet metal and coated metal work without excessive oil-canning, buckling and tool marks, true to line and levels indicated.
- G. Fabricate shop fabricated items in a c c o r d a n c e with latest SMACNA requirements.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Secure flashings in place using specified type fasteners. Use exposed fasteners only in locations approved by Architect. When using exposed fasteners, they are to be of same finish as flashings. EPDM washers will be utilized as neoprene washers will not be allowed.
- B. Insert metal flashings into reglets where indicated on drawings to form tight fit. Seal flashings into reglets with sealant. Install all reglets and flashings per Manufacturer's latest printed instructions.
- C. Apply sealing compound at junction of metal flashings and flexible flashings.
- D. Lock seams and end joints. Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.



EAST VALLEY ELEMENTARY SCHOOL FRONT ENTRANCE.



EAST SDIE OF THE BUILDING EAST WING EAST SIDE.



RECENT HIGH WINDS HAVE DAMAGED THE SHINGLES AND THE BASE SHEET IS EXPOSED.

END OF SPECIFICATIONS

EAST VALLEY ELEMENTARY SCHOOL, MAIN BUILDING. FERNLEY, NEVADA

LYON COUNTY SCHOOL DISTRICT RE-ROOFING PROJECTS 2026-2027



RPC Roof Consulting
Reno, NV
(775) 853-7202

REVISION LOG :

DATE	DESCRIPTION

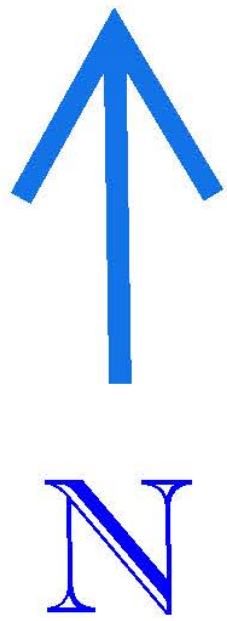
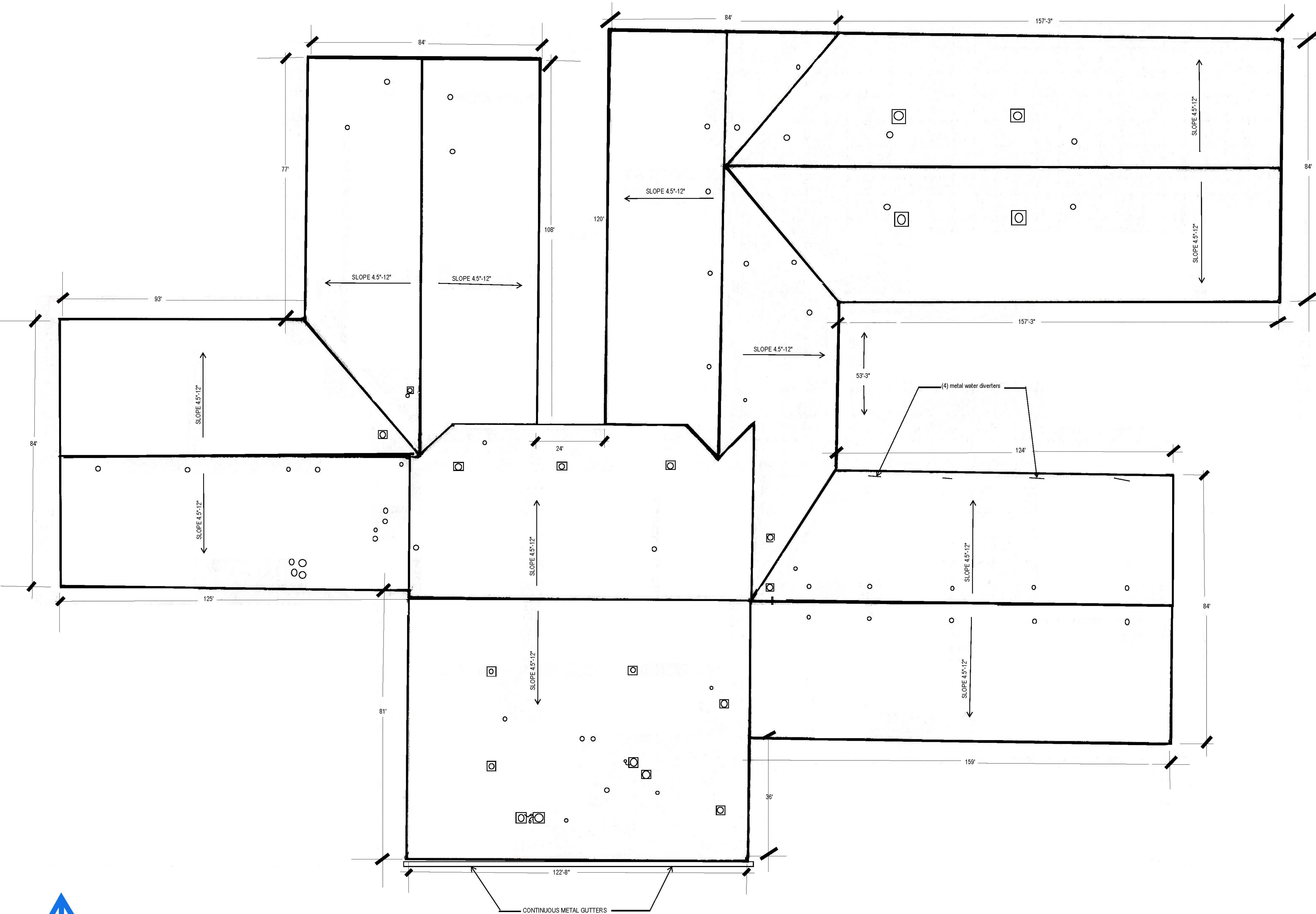
SHEET TITLE :

ROOFING REPLACEMENT - LYON COUNTY SCHOOL DISTRICT
EAST VALLEY ELEMENTARY SCHOOL
FARM DISTRICT ROAD FERNLEY, NEVADA 89408

DATE : MAY, 19, 2025
DRAWN BY : RPC
PROJECT NO. : N/A
SHEET :
A-1
SHT: 1 OF: 1

SHEET NOTES:

- 1.) Tear off the existing composition shingles, nails and felt underlayment down to the wood decks and ispose of all roofing materials and associated accessories at an approved dump site.
- 2.) Existing gutters to remain and any access doors to the building lacking gutters will get new gutters ten feet long centered above the door entrance.
- 3.) Care shall be taken when tearing off the old shingles and installing the new to prevent damage to the existing ventilators, currently in place. any metal flanges that are bent will be replaced at no additional cost to the owner. Paint all flanges to match the color of the new shingles.
- 4.) Around all penetrations flash in the penetrations with Grace Ice & Water Shield. Pipes, electrical, vents, power vents, heat stacks and any curbed ventilators.
- 5.) Install non-perforated type #30 felts applied shingle fashion throughout the roofs areas. provide Grace Ice & Water Shield at the edges of the roofs and at all ridges, valleys and flashings. Ice & Water Shield shall extend up the roof from the drip edge to terminate at least twenty four inches inside the exterior wall .
- 6.) Repair and or replace any damaged metal flashings/ flanges
- 7.) Install Malarkey's Vista AR (252) shingles per the plans & specifications. Each shingle will get six nails and hand tabbing is required throughout the entire roof's edges, all courses. For repairs and modifications in the future the roofing contractor shall turn over to the LCSD, two bundles of the Vista AR (252) shingles at the end of the project. New Bundles shall be in their original wrappers. six nails and hand tabbing is required throughout the entire roof's edges, all courses. For repairs and modifications in the future the roofing contractor shall turn over to the LCSD, two bundles of the Malarkey's Legacy TL shingles at the end of the project. Bundles shall be in their original wrappers.



EAST VALLEY ELEMENTARY SCHOOL, MAIN BUILDING

NOT TO SCALE DRAWINGS FOR RE-ROOF BIDDING PURPOSES ONLY