

PROJECT MANUAL

FOR

AMERICAN LEGION CONTINUATION HS

ROOFING PROJECT

FALL, 2022



5735 47TH Avenue

Sacramento, CA 95824

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American Legion Continuation HS Roofing Project

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PART 1 - GENERAL

1.1 SUMMARY:

- A. Install roof systems at American Legion Continuation High School that correspond with roof areas shown on site map and scope of work.
- B. Refer to Section 1.4 - General Installation Instructions for any details that are not listed in the Scope of Work.

1.2 SCOPE OF WORK:

- A. Main Building; Single Ply Roof Replacement:
 - 1. Remove existing single ply, felt underlayment, and coverboard only leaving built up roof system in place. Remove and dispose of two-piece coping cap.
 - 2. Mechanically fasten one layer of 1/4" Dens-Deck over entire deck.
 - 3. Install crickets behind all curb penetrations.
 - 4. Install mechanically fastened 60-Mil TPA roof system and associated components.
 - 5. Extend base flashing up and over parapet wall and install new coping cap to match size and profile of existing coping cap. New coping cap will be fabricated from 24 gauge, Kynar coated metal.
 - 6. Secure the top of the base flashing with a termination bar and install new counterflashing at roof to wall condition.
 - 7. Install TPA Walkway Roll where shown on attached aerial view.
 - 8. Replace all wood blocks with rubber blocks (see Section 1.4).
- B. Main Building; Built-Up Roof Coating:
 - 1. Remove and dispose of two-piece coping cap.
 - 2. Install high temperature, peel and stick membrane over the top of the parapet wall.
 - 3. Pressure wash roof to remove all dirt and debris.
 - 4. Reinforce corners of all curbs and around vent and pipe penetrations.
 - 5. Repair all blisters and other splits or deficiencies in the roof system.
 - 6. Remove abandoned chiller lines.
 - 7. Remove lag bolts holding Satellite in place and seal holes with 5-course repair. Satellite will be set back in place and secured with masonry blocks.
 - 8. Remove asphaltic walk pads. Install new cap sheet where necessary if the existing roof is damaged during the removal process.
 - 9. Prime roof and flashings with specified primer.
 - 10. Apply two coats of Cool Roof rated, acrylic elastomeric roof coating. Replace all wood blocks with rubber blocks (see Section 1.4). Existing rubber blocks can be re-used. Do not coat blocks.
 - 11. Install new two-piece coping cap to match size and profile of cap that was removed. New coping cap will be fabricated from 24 gauge, Kynar coated metal.
- C. V Wing; Built Up Roof Coating:
 - 1. Install new Kynar coated metal to cover existing fascia board. Slide new metal up behind the drip edge and secure with sheet metal screws with neoprene washers.
 - 2. Pressure wash roof to remove all dirt and debris.
 - 3. Reinforce corners of all curbs and around vent and pipe penetrations.
 - 4. Repair all blisters and other splits or deficiencies in the roof system.

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5. Prime roof and flashings with specified primer.
 6. Apply two coats of Cool Roof rated, acrylic elastomeric roof coating.
 7. Replace all wood blocks with rubber blocks (see Section 1.4).
- D. Auditorium; Built Up Roof Coating:
1. Install new Kynar coated metal to cover existing fascia board. Slide new metal up behind the drip edge and secure with sheet metal screws with neoprene washers.
 2. Pressure wash roof to remove all dirt and debris.
 3. Reinforce corners of all curbs and around vent and pipe penetrations.
 4. Repair all blisters and other splits or deficiencies in the roof system.
 5. Embed 6" strip of polyester into acrylic brush grade mastic over all laps in the cap sheet surface.
 6. Prime roof and flashings with specified primer.
 7. Apply two coats of Cool Roof rated, acrylic elastomeric roof coating.
 7. Replace all wood blocks with rubber blocks (see Section 1.4).
- E. Old Shop; Metal Roof Coating:
1. Pressure wash roof to remove all dirt and debris.
 2. Reinforce corners of all curbs and around vent and pipe penetrations.
 3. Apply two coats of self-priming, acrylic elastomeric roof coating designed for metal roofs.
- F. Contractor will be responsible for testing all roof drains prior to the start of the job. District will be notified immediately of any plugged or leaking drains. Contractor will use IPS Corporation Single Size Pneumatic Bypass Plugs to temporarily plug the roof drains prior to the start of the job and remove the plugs upon completion. Bypass Plugs are available at Heieck Supply in Sacramento.
- G. Contractor is responsible for taking the appropriate measures to protect the classrooms during the roofing project and will clean all debris that does enter the classrooms. Photo logs of the classrooms with before and after pictures will be required.
- H. No wood deck can be left exposed over the 4th of July weekend. Temporary roofing must be installed if the specified roof system is not installed prior to the weekend.
- I. Contractor will water test the roof upon project completion to verify that the roof is draining properly and drains are functioning properly. Any areas of ponding water will need to be corrected unless District and Material Manufacturer were aware of the ponding water and authorized the roof installation at this location.

1.3 ROOF REMOVAL INSTRUCTIONS

- A. Where asbestos is present, the low slope roof systems will be removed by a licensed asbestos abatement contractor in compliance with State, Local, and Federal codes for removal of roof systems that contain asbestos.
- B. Roof removal will include metal edge, gutters, wood blocks, roof jacks, and other roof related components. Items to re-use will be identified by prime contractor prior to mobilization of abatement contractor. Abatement or tear off contractor will clean these items and leave onsite for re-installation.

- C. Roofing material will be removed down to the structural deck. Deck will be free of all debris and vacuumed with a HEPA vacuum (if necessary) before new roof installation begins.
- D. Contractor will provide photo documentation of all rooms and walkways located below work areas prior to the start and upon completion of the removal scope.
- E. Classrooms will be protected with drop sheets suspended from the underside of the roof deck in order to catch all debris that filters through the roof during the tear off process.
- F. Drains will be plugged with IPS Corporation Bypass Plugs before roof removal begins. Plugs will be removed, cleaned, and put back before demobilization of tear off contractor.
- G. Interior Decontamination for asbestos abatement only:
 - 1. Abatement contractor will inspect classroom interiors periodically throughout the abatement process and clean any visible debris. Wet wipe vertical and horizontal surfaces and HEPA vacuum the floor.
 - 2. Abatement contractor will return after the roof is installed to remove the interior drop cloths and to perform another round of cleaning that will include wet wiping the horizontal and vertical surfaces and HEPA vacuuming the floors.
 - 3. Any debris left in the classroom is unacceptable.
- H. School grounds will be swept with a magnet on a daily basis.
- I. Lead Paint: All painted metal will be treated as if it has lead paint and be handled in accordance with Local, State, and Federal regulations.
- J. Contractor will adhere to good housekeeping practices throughout the project and keep the site clean and free of trash, debris, etc...
- K. Notify CAL-OSHA, EPA, DTSC, and Air Quality Management District as needed. Abatement contractor will sign manifest as agent for Owner.
- L. Provide complete close-out package upon project completion with notifications, clearance, waste manifests, etc...as applicable to each site.

1.4 GENERAL INSTALLATION INSTRUCTIONS

- A. Site Documentation Prior to Start of Project:
 - 1. Provide photo documentation of roof top conditions. This should include HVAC units, conduit lines, duct runs, vents, etc...Include photos of any damaged equipment or conduit lines on the roof.
 - 2. If contractor does not provide documentation of damaged equipment, then they will be responsible if there is any damaged equipment that needs to be repaired or replaced.
 - 3. Provide photo documentation of the classrooms before roof removal begins.
 - 4. Photo documentation should also include roof and buildings that are not part of the project but next to the buildings with roofs scheduled for replacement.
 - 5. Water test all drains including overflow drains. Report any plugged or leaking drains to District Representative.
 - 6. Verify location of fire alarm devices, conduit, and wiring if roofing above attic spaces.

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- B. Roof Preparation:
 - 1. A licensed mechanical contractor will perform all HVAC dis-connections.
 - 2. District will identify and mark all abandoned equipment that can be removed as part of the roof removal process.
 - 3. Protect gas lines that have been recently painted.
 - 4. Follow instructions outlined in Roof Removal section of specification.

- C. Insulation attachment:
 - 1. Insulation in mechanically fastened single ply system requires 8 fasteners per board.
 - 2. Insulation fasteners will be #12 screws with 3” metal insulation plates.
 - 3. Tapered edge strip is required wherever water is directed to gutters.
 - 4. Insulation will be held back to create a sump around the drains.

- D. Wood Nailers:
 - 1. Include replacement of all existing wood nailers and installation of new wood nailers wherever necessary to match the height of specified insulation.

- E. Edge Metal in Single Ply Assembly:
 - 1. All new drip edge will be fabricated from 24 gauge, single ply coated metal.
 - 2. Edge metal will always be installed with a continuous cleat unless specified otherwise.
 - 3. Edge metal will have a kick and hem.
 - 4. If no dimension is specified in the Scope of Work then the minimum face on edge metal will be 4”; Nailing flange will be 4”.

- F. Gutters:
 - 1. Gutters will be fabricated from 24 gauge, bonderized metal.
 - 2. Gutters will be fabricated to match standard District design.
 - 3. Contractor will paint gutters to match school colors unless specified otherwise.
 - 4. Install gutters prior to installing edge metal.
 - 5. Drop outlets will be soldered.
 - 6. Gutter straps will be installed 3’ on center and secured with sheet metal screws. Edge metal will be installed so drip edge covers the screws used to secure the gutters straps.
 - 7. Gutters that are being left in place will be cleaned and treated with Rust Buster.
 - 8. Clean and remove all debris from new and re-used gutters upon project completion.
 - 9. Schedule 40 steel pipe will be used for all new downspouts.

- G. Paint:
 - 1. Use District Standard Paint

- H. Drains:
 - 1. Contractor will be responsible for installing new dome strainers where they are missing or broken.
 - 2. Contractor will be responsible for replacing broken or missing clamping rings, broken drain bolts, and any other problems that make the existing drain part unusable.
 - 3. For single ply systems, install water-block under target patch below clamping ring per standard installation details.

- I. Gas Lines:
 - 1. Gas lines will be painted gray with PPG Durethane DTM urethane paint per manufacturer’s instructions.

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2. Yellow 12” markers identifying the pipe as a gas line will be applied every 10’. Use peel and stick decals or paint for this application.
3. Take measures to protect gas lines if they have been recently painted.
4. Sleeper supports that are anchored to the roof deck, roofed in, and covered with a metal cap will be installed every 20’.
5. Submit roof plan with location of block sleepers that will be roofed in to support the gas lines. Include location of rubber blocks.

J. Pipe Supports:

1. Pipe supports will be by Durablock, OMG Manufacturing, or C-Port.
2. Install pipe supports 5’ on center.
3. Supports will have an adjustable all thread in order to adjust the height of the unistrut.
4. Stacking unistruts is not acceptable.
5. Excess all thread will be cut off the top of the support.

K. Misc. Conditions:

1. Install metal 2’ X 3’ section of walkpad under all downspouts that drain onto roofs.
2. Direct condensate lines to drains if there are internal drains. If there are gutters, direct condensate lines to downspouts in the gutters.

1.5 DEFINITIONS

- A. Roofing Terminology: Refer to ASTM D 1079 and glossary of NRCA's "The NRCA Roofing and Waterproofing Manual" for definition of terms related to roofing work in this Section.

1.6 PERFORMANCE REQUIREMENTS

- A. General: Provide installed roofing membrane and base flashings that remain watertight; do not permit the passage of water; and resist specified uplift pressures, thermally induced movement, and exposure to weather without failure.

1.7 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Spec Data Sheet on rubber pipe supports.
- C. Installer Certificates: Signed by roofing system manufacturer certifying that Installer is approved, authorized, or licensed by manufacturer to install roofing system.
- D. Warranties: Unexecuted copy of manufacturer’s warranty and service agreement,

1.8 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's warranty.
- B. Manufacturer Qualifications:

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1. A qualified manufacturer that has UL approval for roofing system identical to that used for this Project.
 - C. Manufacturer's Technical Representative Qualifications: An authorized full-time employee representative of manufacturer experienced in the installation and maintenance of the specified roofing system and qualified to determine Installer's compliance with the requirements of this Project.
 - D. Source Limitations: Obtain components for roofing system from or approved in writing by roofing system manufacturer.
- 1.9 DELIVERY, STORAGE, AND HANDLING
- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, and directions for storing and mixing with other components.
- 1.10 PROJECT CONDITIONS
- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.
- 1.11 WARRANTY
- A. New Roof Component Coverage: The manufacturer's warranty must include labor and material coverage against leakage on all components including those manufactured by others. A single manufacturer shall provide specified warranty for all roof systems specified. This includes the single ply roofing systems, built up roof systems, and roof coatings. It also includes the following items:
 1. Included in the warranty coverage are the following:
 - a. Insulation materials, fasteners and adhesives.
 - b. All new and temporary roof membrane components and adhesives.
 - c. All metal edge components including cleat strips.
 - d. All tapered edge and cant strips.
 - e. All surface mastics, coatings, stripping, plies, etc.
 - f. All drain and scupper flashing.
 - g. Any roof leak or other problems caused by substrate movement of any component other than the deck shall not be excluded.
 - h. Any movement associated with metal edge joints of flanges causing leaks.
 - i. Damages caused by wind speed up to 74 miles per hour.
 - j. Permanent tie-ins and/or control joints separating new and old roofing.
 2. Warranty Period: 20 years from date of Substantial Completion.
 - B. Special Installer's Warranty: Submit roofing Installer's warranty, signed by Installer, covering Work of this Section.
 1. Include all components of roofing system such as roofing membrane, base flashing, roof insulation, fasteners, cover boards, and walkway products, and other components of the roofing systems.
 2. Warranty Period: 2 years from date of Final Acceptance.

PART 2 - PRODUCTS

2.1 TRI-POLYMER ALLOY SINGLE PLY ROOFING MEMBRANE

- A. Membrane shall be Tremco or District Approved Equal Tri-polymer alloy membrane based on Dupont's Elvaloy and blended with CPE and PVC. ASTM D 4434, fabric reinforced and fabric backed (where specified) with the following properties:
 - 1. Membrane Thickness: 60 mils, nominal.
 - 2. Exposed Face Color: White.
 - 3. Tensile Strength: 350 lbf; ASTM D751-98
 - 4. Elongation @ fabric break: 40% MD, 30% XMD; ASTM D 751-98
 - 5. Tear Strength: 100lbf; ASTM D 751-98
 - 6. Dimensional Stability @ 176°F: >3% @ 6 hours; ASTM D 1204-94
 - 7. Low Temperature Flexibility: -40°F; ASTM D 2136-94
 - 8. Thermal Emittance: .87
 - 9. Reflectivity: .86

2.2 INSULATION

- A. Gypsum Board: ASTM C 1177/C 1177M, glass-mat, water-resistant gypsum substrate.
 - 1. Dens-Deck, Securock, Dexcell Board or Equal
 - 2. Thickness = 1/4"

2.3 AUXILIARY MATERIALS

- A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with membrane or BUR roofing.
 - 1. Liquid-type auxiliary materials shall meet VOC limits of authorities having jurisdiction.
- B. Metal Termination Bars: Manufacturer's standard predrilled stainless-steel or aluminum bars, approximately 1 by 1/8 inch thick; with anchors.
- C. Sealant: Manufacturer's moisture cured, one-part, polyurethane sealant.
- D. Sheet Metal: 24 gauge, bonderized and painted to match school colors.

2.4 ROOF COATING MATERIALS

- A. Cool Roof Coating: High solids (65%), elastomeric coating; meets Title 24 Cool Roof standards.
 - 1. Ice Coating or Equal
- B. White Roof Mastic: Single component, high solids, acrylic elastomeric mastic.
 - 1. Solargard Acrylic Mastic or Equal
- C. Built Up Roof Primer:
 - 1. Tremco SP Primer or Equal
- D. Polyester Reinforcement:
 - 1. Permafab or Equal

2.5 METAL ROOF COATING MATERIALS

- A. Metal Roof Coating: Acrylic, elastomeric coating formulated to be installed direct to metal roofs.
 - 1. Solargard Hy-Build or Equal
- B. White Roof Mastic: Single component, high solids, acrylic elastomeric mastic.
 - 1. Solargard Acrylic Mastic or Equal
- C. Polyester Reinforcement:
 - 1. Permafab or Equal

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, and notify owner of any deficiencies found before starting installation.

3.2 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.

3.3 INSTALLATION, GENERAL

- A. Install roofing system in accordance with manufacturer's recommendations.
- B. Install roofing membrane, base flashings, and component materials in compliance with requirements in FMG 4450 and FMG 4470 as part of a membrane roofing system as listed in FMG's "Approval Guide" for fire/windstorm classification indicated. Comply with recommendations in FMG Loss Prevention Data Sheet 1-49.

3.4 INSULATION INSTALLATION

- A. Coordinate installing membrane roofing system components, so insulation is not exposed to precipitation or left exposed at the end of the workday.
- B. Comply with roofing system manufacturer's written instructions for installing roof insulation.
- C. Trim surface of insulation where necessary at roof drains so completed surface is flush and does not restrict flow of water.
- D. Install insulation in quantities and thickness as specified. Install insulation with long joints of insulation in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 1/4 inch with insulation.
 - 1. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.
- E. Fasten coverboard with eight #12 fasteners per board.

3.5 MECHANICALLY FASTENED SINGLE PLY INSTALLATION

- A. Install roofing membrane over area to receive roofing according to membrane roofing system manufacturer's written instructions. Unroll roofing membrane and allow to relax before installing.
 - 1. Install sheet according to ASTM D 5036.
- B. Start installation of roofing membrane in presence of membrane roofing system manufacturer's technical personnel.
- C. Accurately align roofing membrane and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- D. Install two half sheets at the perimeter of the roof. Half sheets are fastened 6" on center and full field sheets are fastened 12" on center.
- E. Apply roofing membrane with side laps shingled with slope of roof deck where possible.
- F. Seams: Clean seam areas, overlap roofing membrane, and hot-air weld side and end laps of roofing membrane according to manufacturer's written instructions to ensure a watertight seam installation.
 - 1. Test lap edges with probe to verify seam weld continuity.
 - 2. Verify field strength of seams a minimum of twice daily and repair seam sample areas.
 - 3. Repair tears, voids, and lapped seams in roofing membrane that does not meet requirements.
 - 4. Install T patches at all perpendicular seams.
- G. Base Flashing Installation: Apply solvent based bonding adhesive to substrate and underside of sheet flashing at required rate and allow to partially dry. Do not apply bonding adhesive to seam area of flashing. Parapet walls greater than 36" high will require a termination bar mid-span which shall be covered with an un-reinforced TPA strip.
- H. Flash penetrations and field-formed inside and outside corners with sheet flashing. Use pre-manufactured cones where applicable.
- I. Clean seam areas and overlap and firmly roll sheet flashings into the adhesive. Weld side and end laps to ensure a watertight seam installation.
- J. Terminate and seal top of sheet flashings.

3.6 COATING FOR EXISTING CAP SHEET ROOFS

- A. Remove all dirt, dust, and other loose debris from the roof. Area to be coated must be a clean, sound, and dry surface.
- B. Set one ply of polyester into brush grade mastic on all base flashings prior to coating.
- C. Repair all deficiencies such as splits, blisters, voids, etc. with 3-course application of brush grade mastic and polyester.
- D. Apply Cool Roof coating to all roofing surfaces including all flashings.

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1. Apply coating at a rate of 2 gallons per 100 square feet per coat.
2. Roll laps in cap sheet roof when first application is applied. This is to ensure a seamless application of the coating where no black edges will be visible on the roof.
3. Allow first coat to fully dry to support foot traffic without tracking before application of second coat at same application rate of 2 gallons per 100 square feet.
4. Total application rate is 4 gallons per 100 square feet.
5. Avoid foot traffic for 2 days minimum on final surface coat.

3.7 METAL ROOF COATING

- A. Remove all dirt, dust, and other loose debris from the roof. Area to be coated must be a clean, sound, and dry surface.
- B. Apply Hy-Build coating to all roofing surfaces including all flashings.
- C. Apply two coats at 1 gallon per 100 sq. ft. per coat. Total application = 2 gallons per 100 sq. ft.

3.8 FIELD QUALITY CONTROL

- A. Manufacturer's Technical Representative: Approved contractor will engage manufacturer's technical representative to perform roof tests and inspections and to prepare test reports.
- B. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion and submit report to Owner.
 1. Notify Owner 48 hours in advance of date and time of inspection.
 2. Contractor is required to complete all punch list items prior to payment from owner and issuance of warranty.
- C. Repair or remove and replace components of roofing system where test results or inspections indicate that they do not comply with specified requirements.
- D. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
- E. Pictures of the classrooms will be taken before and after removal of the roof system to determine if any additional clean up is necessary by the roofing contractor.
- F. Contractor will water test the roof upon project completion to verify that the roof is draining properly and drains are functioning properly. Any areas of ponding water will need to be corrected unless District and Material Manufacturer were aware of the ponding water and authorized the roof installation at this location.

END OF SECTION

PART 1 GENERAL

1.1 SCOPE OF WORK

- A. Furnish and install specified roofing and related components to the Auditorium roof at American Legion HS.
- B. Work includes:
 - 1. Removal and replacement of designated roofing.
 - 2. Installation of the following:
 - a. One ply of synthetic underlayment.
 - b. Granule surfaced, Cool Roof rated asphalt shingle roofing.
 - c. Associated metal flashing.
 - d. Install new ridge vents.
 - e. Install TPA single ply on interior gutter.
- C. Include 3 squares of extra shingles in base bid for District stock.

1.2 REFERENCES

- A. ASTM D 225 - Standard Specification for Asphalt Shingles (Organic Felt) Surfaced with Mineral Granules.
- B. ASTM D 226 - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.
- C. ASTM D 3018 - Standard Specification for Class A Shingles Surfaced with Mineral Granules.
- D. ASTM D 3161 - Standard Test Method for Wind-Resistance of Asphalt Shingles (Fan-Induced Method).
- E. ASTM E 108 - Standard Test Methods for Fire Tests of Roof Coverings.

1.3 SUBMITTALS

- A. Product Data: Provide manufacturer's printed product information indicating material characteristics, performance criteria, and product limitations.
- B. Manufacturer's Installation Instructions: Provide published instructions that indicate preparation required and installation procedures.

1.4 QUALITY ASSURANCE

- A. Contractor shall:

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1. Be experienced in shingle roof installation.
 2. Be acceptable by District.
 3. Be a Manufacturer Approved Contractor.
 4. Have not been in Chapter 7 during the last ten (10) years.
- B. Maintain one copy of manufacturer's application instructions on project site.
- C. Verify that manufacturer's label contains reference to specified ASTM standards.

1.5 WARRANTY

- A. Manufacturer's Warranty: Furnish shingle manufacturer's warranty for product(s) of this section as follows:

ASPHALT FIBER GLASS SHINGLES

1. Owens Corning: Lifetime limited warranty.
- B. Warranty Supplement: Provide manufacturer's supplemental Tru Protection warranty to cover labor and materials in the event of a material defect for the following period after completion of application of shingles:
1. First ten years.

PART 2 PRODUCTS

2.1 MANUFACTURER

- A. Provide products manufactured by Owens Corning Roofing and Asphalt, LLC or District Approved Equal.
- B. Substitutions of ASTM shingles that meet or exceed those specified will be allowed based upon District acceptance.

2.2 ASPHALT FIBER GLASS SHINGLES

- A. **Owens Corning TruDefinition Duration Cool Shingles:** Conforming to ASTM D 3018 Type I - Self-Sealing; UL Certification of ASTM D 3462, ASTM D 3161 Class "F" (110-mph)/UL997 Wind Resistance, and UL Class A Fire Resistance; glass fiber mat base; ceramically colored/UV resistant mineral surface granules across entire face of shingle; three-layer laminated four-tab shingle.
1. Color: TBD
 2. Product Attributes: Includes SureNail Technology, a woven fabric reinforcing strip in the nailing zone on the shingle's top surface.

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2.3 SHEET MATERIALS

- A. Underlayment: Weather-shedding synthetic polyolefin barrier.
 - 1. ProArmor Synthetic Roof Underlayment or equal.

2.4 FLASHING MATERIALS

- A. Sheet Flashing: 24 gauge, bonderized and painted to match school colors.

2.5 ACCESSORIES

- A. Nails: Standard round wire type roofing nails, corrosion resistant; hot dipped zinc coated steel, aluminum, or chromated steel; minimum 3/8 inch head diameter; minimum 11 or 12 gage shank diameter; shank to be of sufficient length to penetrate through roof sheathing or 3/4 inch into solid wood, plywood, or non-veneer wood decking.
- B. Asphalt Roofing Cement: ASTM D 4586, Type I or II.

2.6 ROOF VENTILATION

- A. Ridge Vent:
 - 1. Owens Corning Vent Sure.

2.7 FLASHING FABRICATION

- A. Form flashing to protect roofing materials from physical damage and shed water.
- B. Form sections square and accurate to profile, in maximum possible lengths, free from distortion or defects detrimental to appearance or performance.
- C. All edge metal on the rake edges will have a minimum 4” face with a kick & hem and be installed with a continuous cleat. Edge metal at gutters will have a minimum 3” face and kick and hem.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify existing site conditions.
- B. Verify that roof penetrations and plumbing stacks are in place and flashed to deck surface.
- C. Verify roof openings are correctly framed prior to installing work of this section.

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- D. Verify deck surfaces are dry and free of ridges, warps, or voids.

3.2 ROOF DECK PREPARATION

- A. Follow shingle manufacturer's recommendations for acceptable roof deck materials.
- B. Broom clean deck surfaces under eave protection and underlayment prior to their application.

3.3 INSTALLATION - PROTECTIVE UNDERLAYMENT

- A. Install one layer of synthetic underlayment perpendicular to slope of roof and lap minimum 4 inches over eave protection.
 - 1. Install according to manufacturer's instructions.

3.4 INSTALLATION - METAL FLASHING

- A. Weather-lap joints minimum 2 inches.
- B. Seal work projecting through or mounted on roofing with asphalt roofing cement and make weather-tight.

3.5 INSTALLATION - ASPHALT SHINGLES

- A. Install shingles in accordance with manufacturer's instructions for product type and application specified.

3.6 FIELD QUALITY CONTROL

- A. Visual inspection of the Work will be provided by District.

3.4 PROTECTION OF FINISHED WORK

- A. Protect finished work.
- B. Do not permit traffic over finished roof surface.
- C. Remove all dirt and debris from the field of the roof and the gutters. Inspect the building grounds and remove all miscellaneous debris.

END OF SECTION

American Legion High School Scope Summary

Auditorium:

Scope: Replace shingle roof and coat low slope roof sections with Cool Roof coating.

V Wing:

Scope: Install new Kynar metal to cover existing fascia and coat existing low slope roof with Cool Roof coating.

Main Building Single Ply Roof:

Scope: Remove existing single ply only, leaving built-up roof in place, and install new single ply roof system. Replace coping cap with new 2-piece metal.

Main Building Upper Roof:

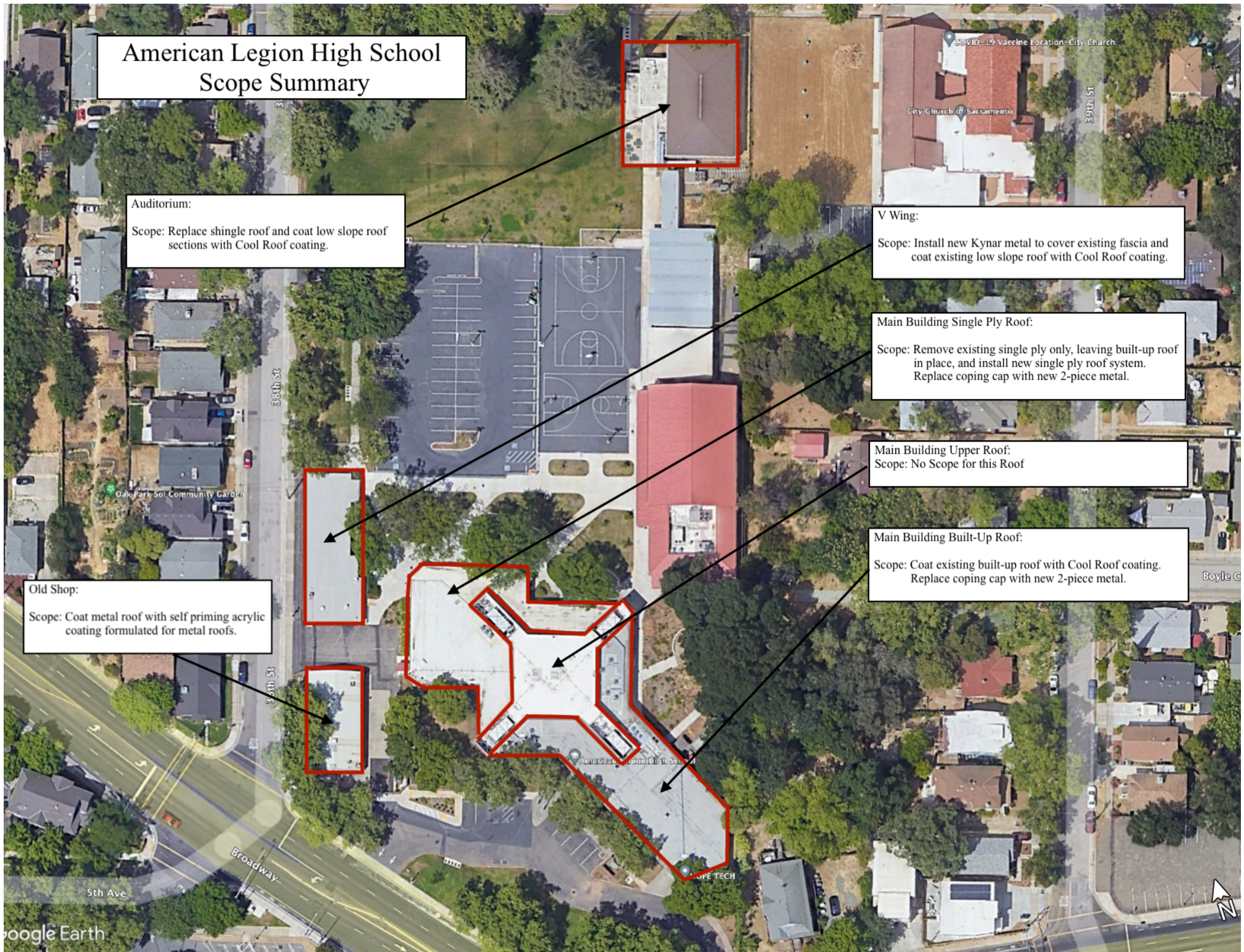
Scope: No Scope for this Roof

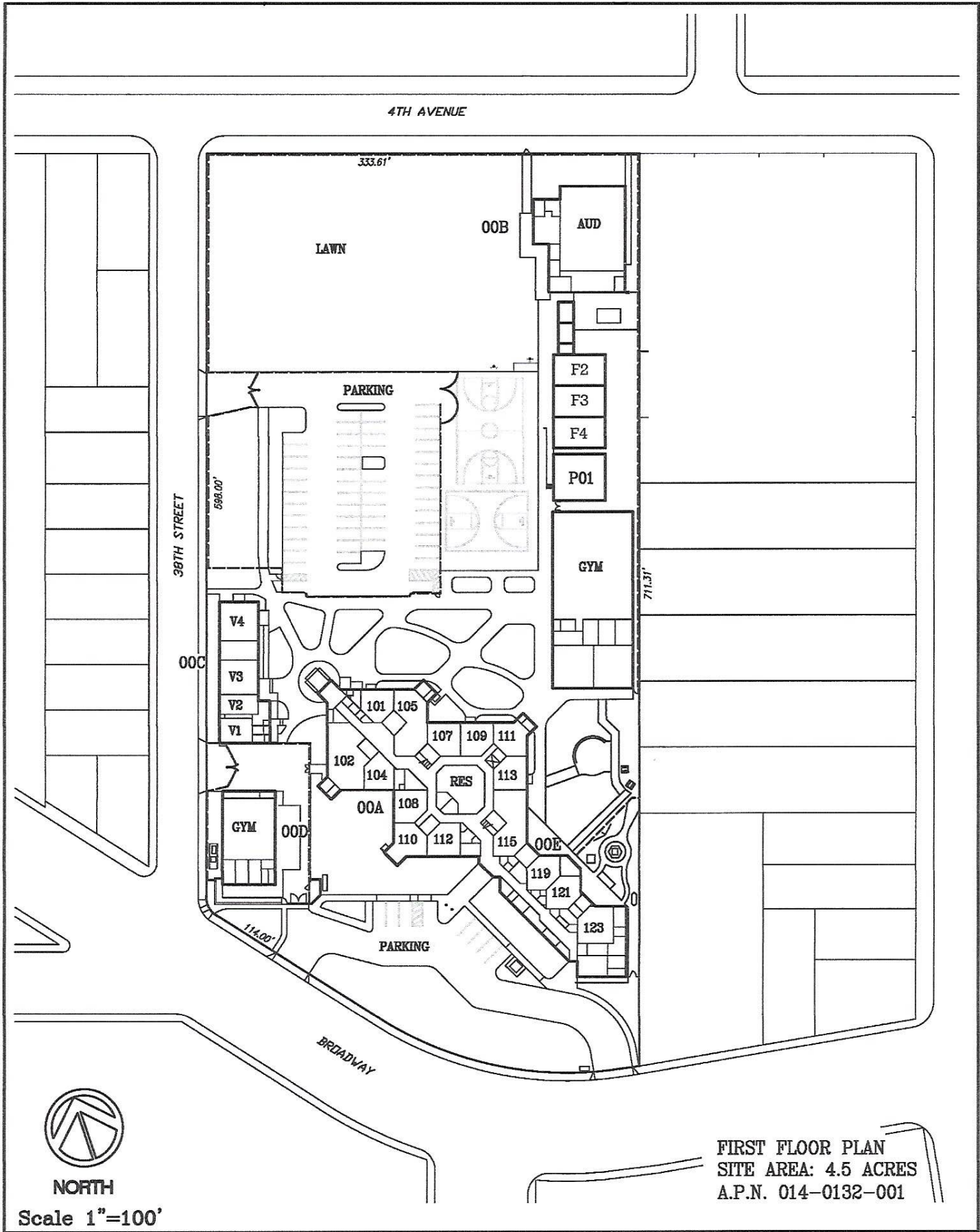
Main Building Built-Up Roof:

Scope: Coat existing built-up roof with Cool Roof coating. Replace coping cap with new 2-piece metal.

Old Shop:

Scope: Coat metal roof with self priming acrylic coating formulated for metal roofs.





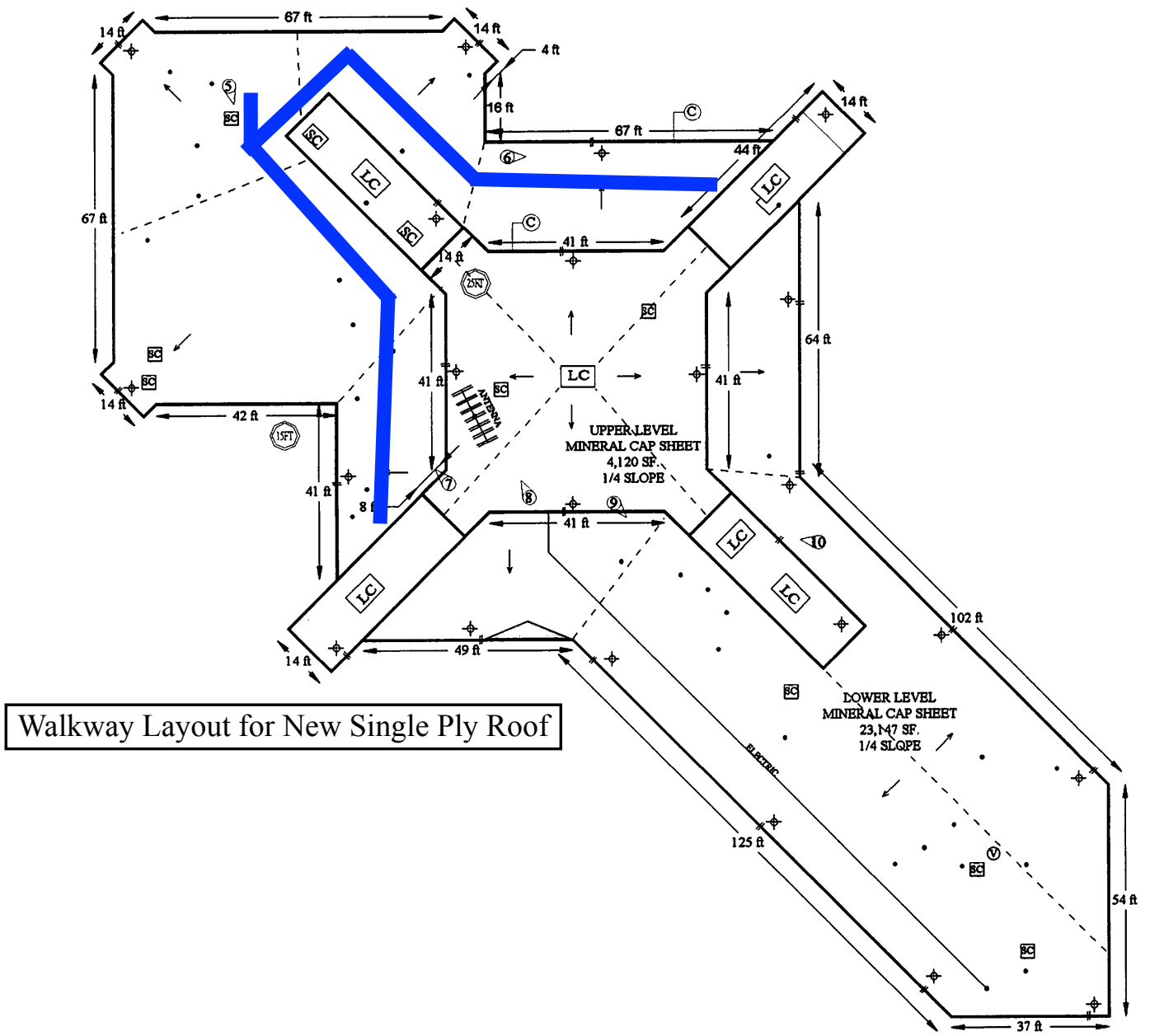
American Legion Continuation High School (570) 1 Of 2
3801 Broadway
SACRAMENTO CITY UNIFIED SCHOOL DISTRICT

EXISTING SITE DIAGRAM
DECEMBER 2019



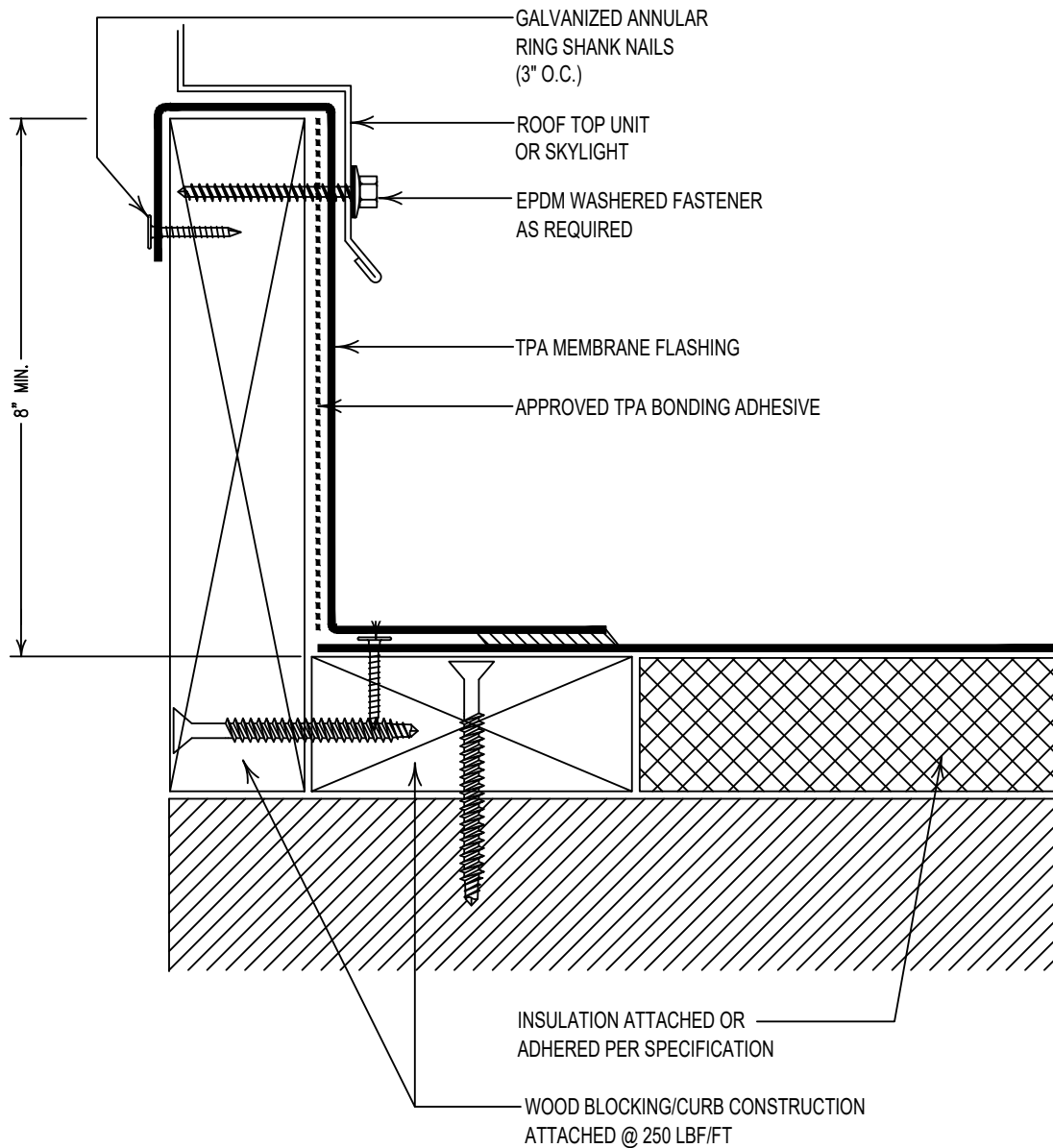
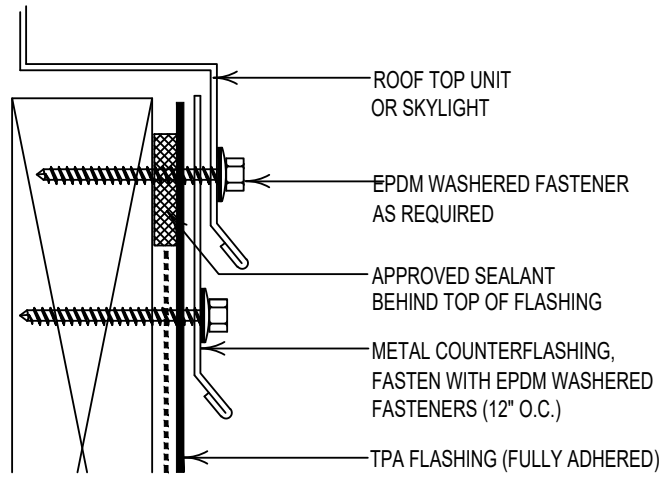
American Legion High School

Ⓐ 6 ft



Walkway Layout for New Single Ply Roof

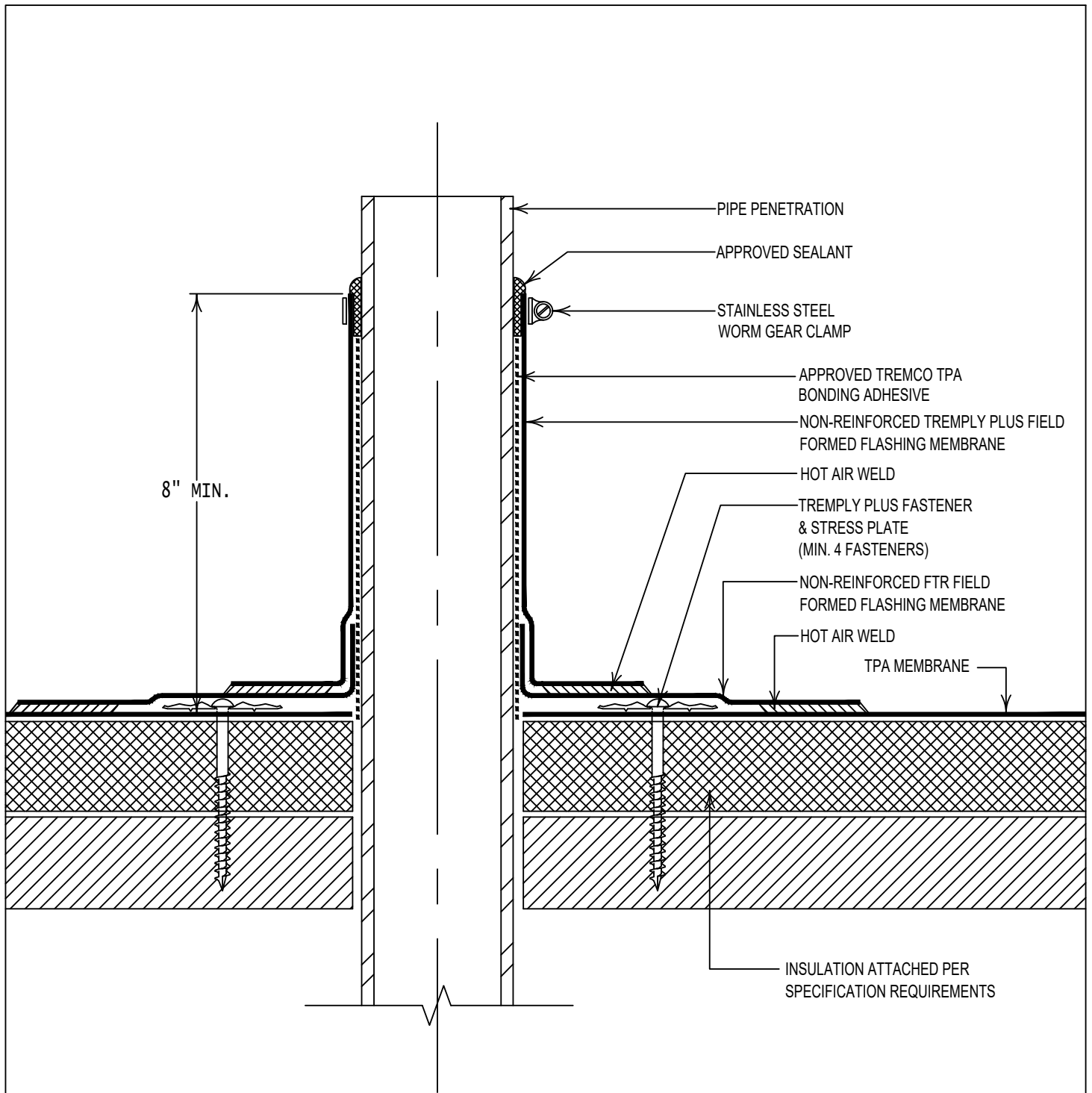
NON-LIFTABLE



TREMCO TPA
TYPICAL WOOD CURB OR SKYLIGHT
CUSTOM

N.T.S.

 **TREMCO**[™]
Roofing & Building Maintenance



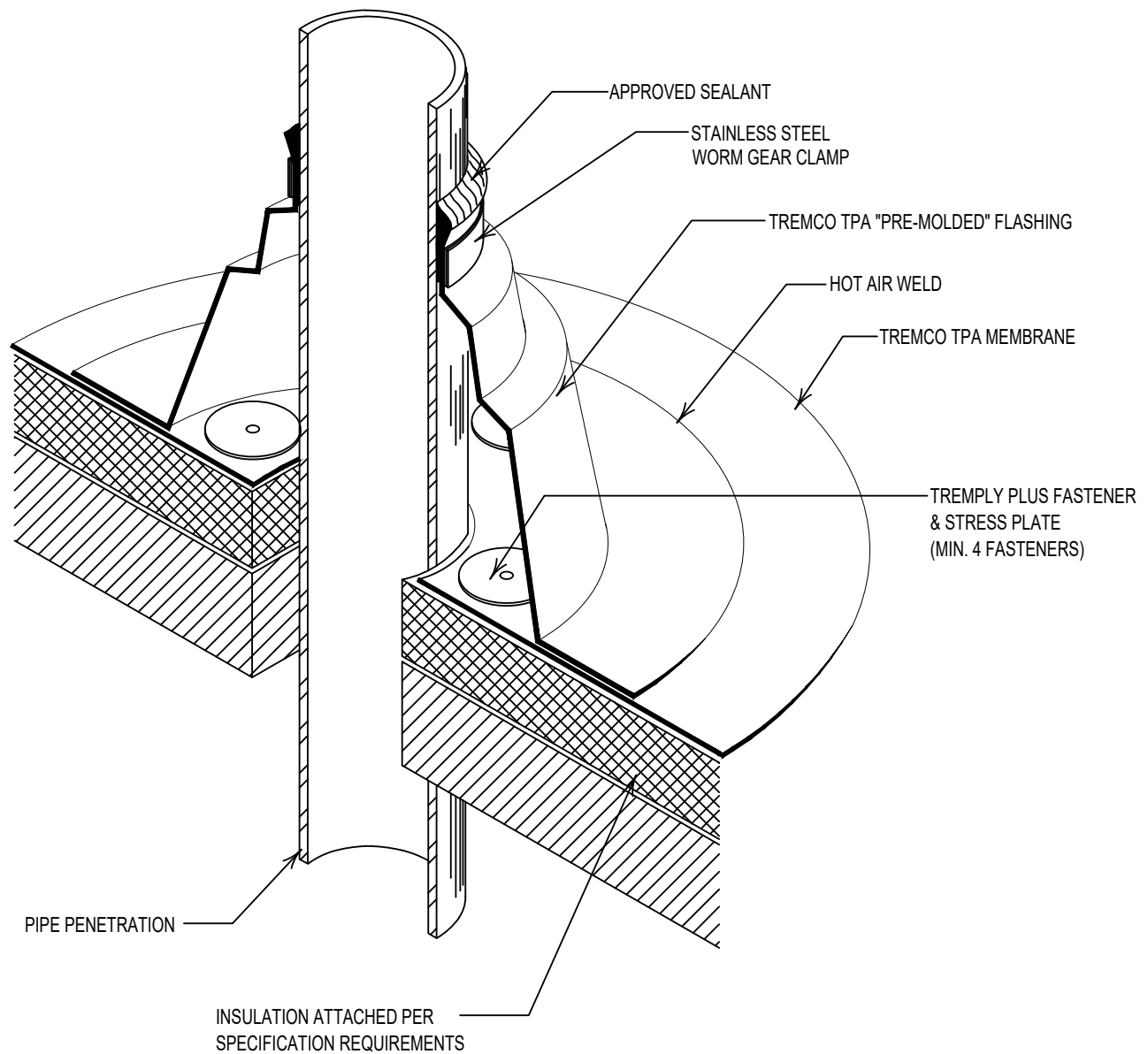
8" MIN.

- PIPE PENETRATION
- APPROVED SEALANT
- STAINLESS STEEL WORM GEAR CLAMP
- APPROVED TREMCO TPA BONDING ADHESIVE
- NON-REINFORCED TREMPY PLUS FIELD FORMED FLASHING MEMBRANE
- HOT AIR WELD
- TREMPY PLUS FASTENER & STRESS PLATE (MIN. 4 FASTENERS)
- NON-REINFORCED FTR FIELD FORMED FLASHING MEMBRANE
- HOT AIR WELD
- TPA MEMBRANE
- INSULATION ATTACHED PER SPECIFICATION REQUIREMENTS

TREMCO TPA
 FIELD FABRICATED PIPE FLASHING
 CUSTOM

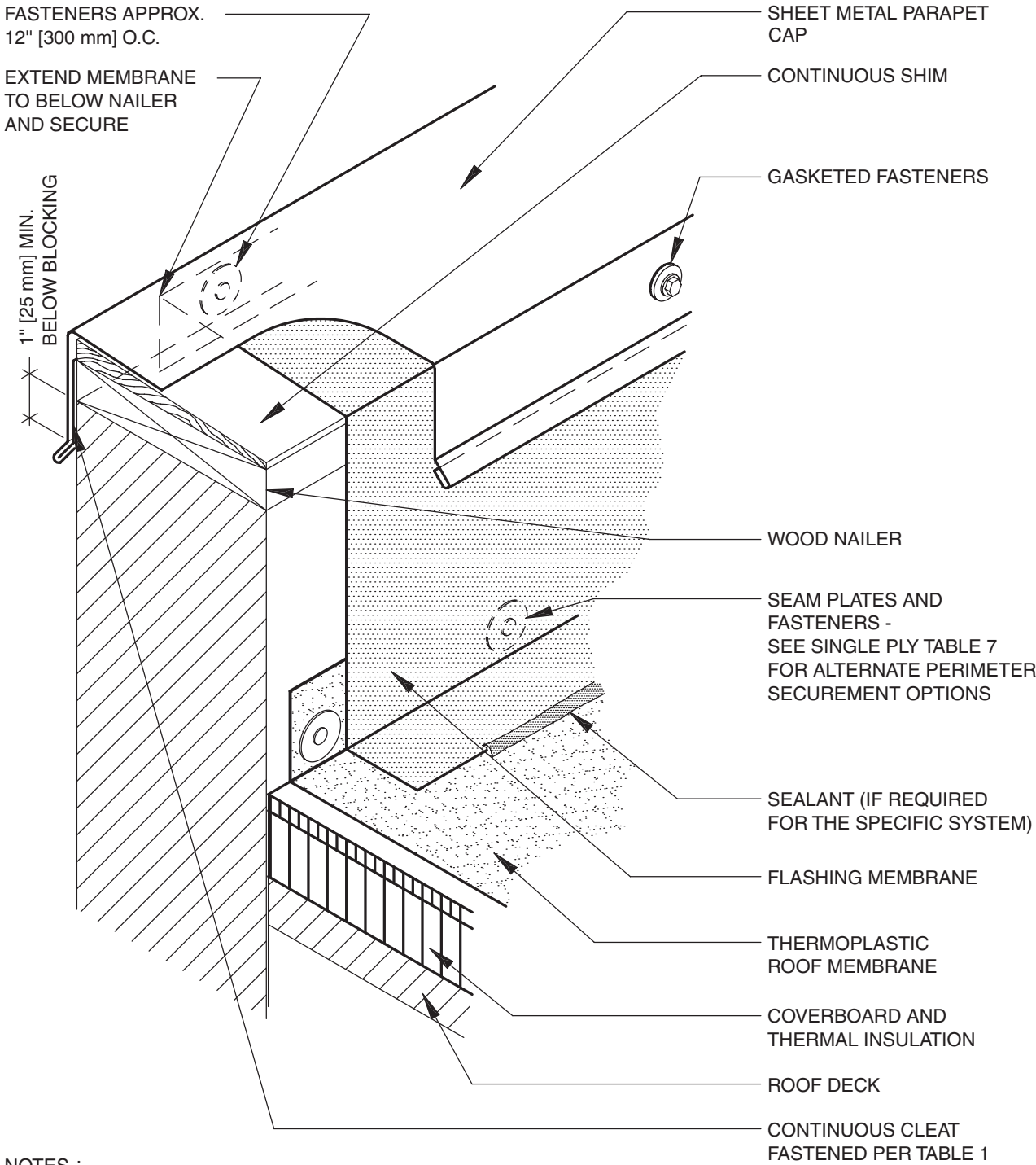
N.T.S.





TREMCO TPA
 PRE-MOLDED PIPE FLASHING
 CUSTOM

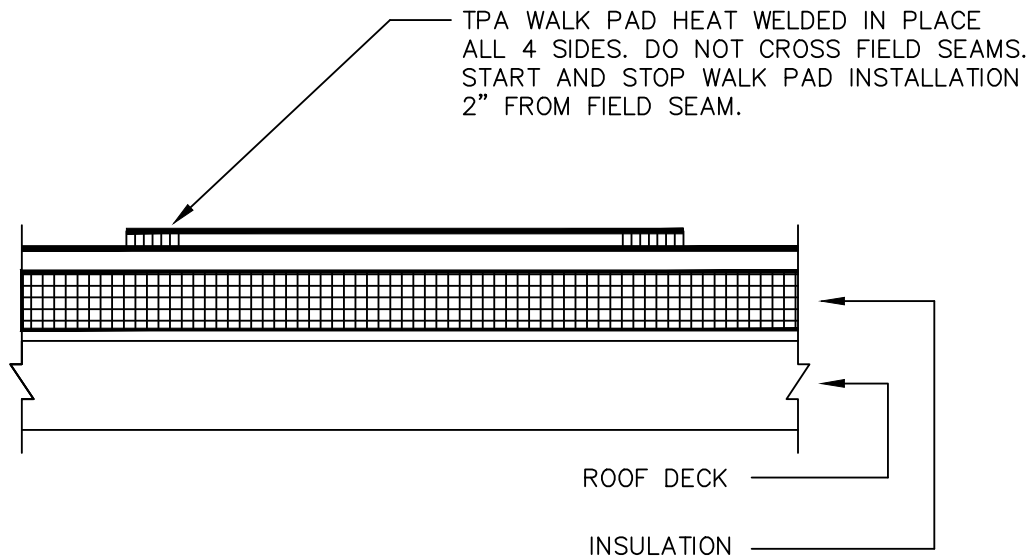
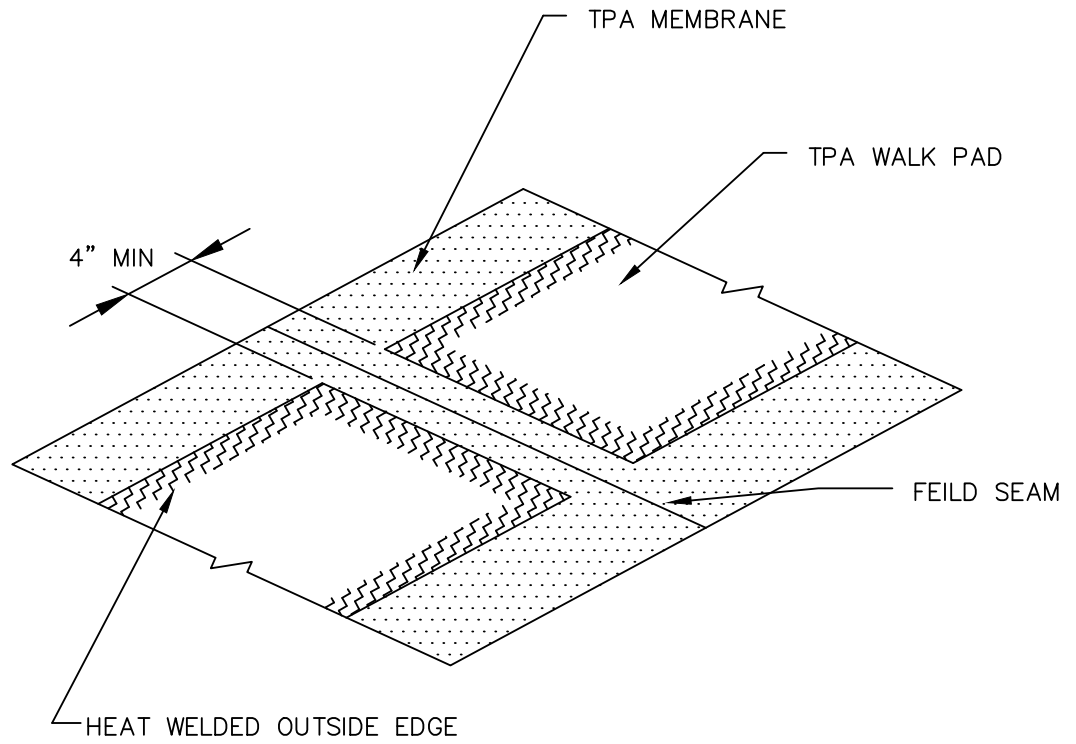
N.T.S.



NOTES :

1. THIS DETAIL SHOULD BE USED ONLY WHERE THE DECK IS SUPPORTED BY THE WALL. EXPANSION JOINT DETAIL SIMILAR TO DETAIL TP-6 SHOULD BE USED FOR NON-WALL-SUPPORTED DECK.
2. REFER TO THE SHEET METAL SECTION OF THE METAL ROOFING MANUAL FOR JOINERY AND SECUREMENT OPTIONS FOR SHEET METAL.
3. REFER TO INTRODUCTION FOR ADDITIONAL INFORMATION.

 <p>NATIONAL ROOFING CONTRACTORS ASSOCIATION</p>	<p>METAL PARAPET CAP (COPING) AND BASE FLASHING</p>	<p>2001</p>	<p>NOT DRAWN TO SCALE</p>	<p>TP-1</p>
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TREMCO®

SHEET TITLE:

WALK-PAD
INSTALLATION

SCALE:

NTS

DRAWING No.:

TPA-29