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June 6, 2024

TO: PLANHOLDERS

SUBJECT: PCT STRAD BAY ROOF & HUSKY MAINTENANCE TOWER ROOF
REPLACEMENTS
PROJECT NO. 201191.01 & 201204.01
CONTRACT NO. 072112

ADDENDUM NUMBER 02

This addendum is issued to amend the following:

SPECIFICATIONS

A. SECTION 00 11 13 – Advertisement for Bids

1. Sealed Bid Date/Time/Location: Bids will be received at the Front Reception Desk, Port Administration Office, One Sitcum Plaza, Tacoma, Washington 98421 until **10:00 A.M.** on ~~6/11/2024~~ **6/20/2024**, at which time they will be publicly opened and read aloud, and the apparent low bid will be determined.

B. SECTION 07 53 00 – Single-Ply Membrane Roofing (PVC)

1. **REVISE** paragraph 2.02-A (Attachment A)
2. **DELETE** paragraph 2.04-B (Attachment A)
3. **DELETE** paragraph 2.05-E (Attachment A)

C. SECTION 11 01 00 – Fall Protection Systems

1. **REPLACE** this section in its entirety with the version attached with this addendum (Attachment B). Note the addition of delegated design requirements, including:
 - Preparation and submission of deferred submittal documents to the AHJ.
 - Engineered drawings with supporting calculations stamped by a structural engineer with current Washington State License

DRAWINGS

A. Sheet G1.00 Cover Sheet

1. **REPLACE** the issued Drawings in 072112 'PCT Strad Bay Roof and Husky Maintenance Tower Roof Replacements' with the attached Drawings (Attachment C).

B. Sheet AD1.00 Roof Demolition Plan – PCT

2. **REPLACE** the issued Drawings in 072112 ‘PCT Strad Bay Roof and Husky Maintenance Tower Roof Replacements’ with the attached Drawings (Attachment D).

C. Sheet AD9.10 Roof Reference Photos – PCT

3. **REPLACE** the issued Drawings in 072112 ‘PCT Strad Bay Roof and Husky Maintenance Tower Roof Replacements’ with the attached Drawings (Attachment E).

D. Sheet A1.10 Enlarged Roof Plan – PCT

4. **REPLACE** the issued Drawings in 072112 ‘PCT Strad Bay Roof and Husky Maintenance Tower Roof Replacements’ with the attached Drawings (Attachment F).

E. Sheet A1.20 Enlarged Roof Plan – Husky

5. **REPLACE** the issued Drawings in 072112 ‘PCT Strad Bay Roof and Husky Maintenance Tower Roof Replacements’ with the attached Drawings (Attachment G).

F. Sheet A5.10 Details – PCT

6. **REPLACE** the issued Drawings in 072112 ‘PCT Strad Bay Roof and Husky Maintenance Tower Roof Replacement’ with the attached Drawings (Attachment H).

ATTACHMENTS:

- A. 07 53 00 – Single-Ply Membrane Roofing (PVC)
- B. 11 01 00 – Fall Protection Systems
- C. G1.00 – Cover Sheet
- D. AD1.00 – Roof Demolition Plan - PCT
- E. AD9.10 – Reference Photos - PCT
- F. Sheet A1.10 – Enlarged Roof Plan - PCT
- G. Sheet A1.20 – Enlarged Roof Plan - Husky
- H. Sheet A5.10 – Details - PCT

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Existing roof membrane preparation
 - 2. PVC Roof Membrane Assembly (PCT Strad Bay)
 - a. Single-Ply PVC Roofing
 - b. Insulation
 - c. Cover board
 - 3. PVC Roof Membrane Assembly (Husky Maintenance)
 - a. Single-Ply PVC Roofing
 - b. Cover board
 - 4. Roof system documentation plaque
 - 5. Walk pads
- B. Related Sections:
 - 1. Selective Demolition is covered in Section 02 07 00
 - 2. Flashing and Sheet Metal is covered in Section 07 62 00.
 - 3. Sealants covered in Section 07 92 00.
 - 4. Fall Protection is covered in Section 11 01 00
- C. The Drawings, the provisions of the Agreement, the General Conditions, and Division 1 specification sections apply to all work of this Section.
- D. Substitutions: Substitute products will be considered only under the terms and conditions of Division 1 Requirements, and products meeting the requirements of this Section

1.02 QUALITY ASSURANCE:

- A. Manufacturer Qualifications: Provide primary products, produced by a single manufacturer, which has produced that type product successfully for not less than five (5) years. Provide secondary products only as recommended by manufacturer of primary products for use with roofing system specified.
- B. Membrane Certification: submit letter from manufacturer (or outlined in manufacturer's certification data sheet) attesting to the following membrane system requirements outline in Section 2
 - 1. Minimum membrane thickness: 60 mils
 - 2. Minimum wear layer of 30 mils
 - 3. Membrane with above characteristics has been manufactured for at least five (5) years
- C. Manufacturer Field Quality Control: A technical representative of the materials manufacturer shall be available for consultation at site with a maximum of 24-hour notice.

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- D. Manufacturer's representative shall make regular site inspections, no less than one per week. Representative shall provide a copy of a written summary report of the visit to the Architect no more than 2 days after.
 - 1. Installer Qualifications: A single Installer ("Roofer") shall perform the work of this section; and shall be a firm with not less than ten (10) years of successful experience in installation of roofing systems similar to those required for this project and who is trained and authorized by the manufacturer of primary roofing materials for no less than ten (10) years.
 - E. Installer shall provide all personnel trained in the application of the materials and systems and shall maintain supervision as specified elsewhere. Provide written certification from manufacturer of roofing system certifying that Installer is approved by manufacturer for installation of specified roofing system prior to bid.
 - F. Manufacturer's Inspection: Upon completion of the installation, and the delivery to the membrane manufacturer's representative by the Contractor of a certification that all work has been done in strict accordance with the contract specifications and membrane manufacturer requirements, an inspection shall be made by a representative of the manufacturer to ascertain that the roofing system has been installed according to applicable manufacturer's specifications and details.
 - G. Testing: The Owner reserves the right to perform any testing as may be required to determine compliance with these Contract Documents. Costs for such testing will be the Owner's responsibility unless testing indicated non-compliance. Costs for such testing indicating non-complying work shall be corrected and testing will be repeated until the work complies with the Contract Documents.
 - H. UL Listing: Provide roofing system and component materials which have been tested for application and slopes indicated and are listed by Underwriters Laboratories, Inc. (UL) for class A external fire exposure over noncombustible decks.
 - I. Provide roof-covering materials bearing Classification Marking (UL) on bundle, package or container indicating that materials have been produced under UL's Classification and Follow-up Service.

1.03 SUBMITTALS

- A. Make submittals in accordance with Section 01 33 00.
- B. Product Literature: Submit product literature for the following:
 - 1. Roofing materials.
 - 2. Insulation boards.
 - 3. Cover boards
 - 4. Adhesives.
 - 5. Attachment requirements to meet wind uplift requirements
 - 6. Identifying fastener rates to meet uplift requirements
 - 7. Submit drawing showing each layer of the roof assembly, method of attachment, including rates of fasteners or adhesive beads to meet wind uplift requirements.
- C. Insulation and Roof Board Approval: Manufacturer's written approval for rigid polyisocyanurate insulation and roof board.

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- D. Samples: Three 3 x 6-inch samples of the insulation and each sheet component of the roofing and flashing membranes.
 - E. Warranty: Copy of membrane manufacturer's proposed warranty.
 - F. Evidence of UL and ICBO approvals.
 - G. Shop Drawings: Submit shop drawings to describe all proposed details which deviate from what is shown on Contract Drawings, fully noted and drawn to scale with references to a roof plan.
 - H. Roof Board and Insulation Layout: Submit roof plan indicating proposed insulation, crickets, roof board layout and sump taper system to meet FM requirements and manufacturer approval and sump taper system. Include submittals for fastening pattern for roof board meeting FM requirements.
 - I. Roof Plaque layout
 - J. Quality Assurance Submittals:
 - 1. Certifications: Letter from roofing manufacturer stating that proposed applicator of roofing system is approved to install roofs meeting the requirements of a 20-year unlimited penal sum warranty. Submit whether the warranty is required or not.
 - 2. Immediately after completion of the roofing system installation, submit report from the roofing system manufacturer, including inspection notes, stating the following:
 - a. Roofing system was installed in accordance with the manufacturer's recommendations to meet the warranty requirements specified.

1.04 QUALITY ASSURANCE

- A. Inspection: Roofing installation may be inspected. Give 72 hours' notice to the Architect, prior to the start of each work phase.
- B. Qualifications of Installers:
 - 1. Approved by the membrane roofing manufacturer to install roofing systems meeting the requirements of a 20-year unlimited warranty.
 - 2. Minimum of 5 years' experience; use only competent and skilled roofers familiar with the products and the manufacturer's current recommended methods of installation.
- C. Pre-Installation Meeting:
 - 1. Prior to starting the work of this Section administer a pre-roofing meeting.
 - 2. Require in attendance the following parties:
 - a. Owner.
 - b. Architect.
 - c. Owner's roofing consultant.
 - d. Roofing installer.
 - e. Sheet metal and canopy cladding installers.
 - f. Mechanical installer.
 - g. Roofing manufacturer's representative.

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3. 2Agenda: Review all procedures, details, and sequence of construction. Discuss and determine responsibility for protection of the work during and after construction, and subsequent maintenance of the roofing system.
 - D. Phased Application: Except as otherwise approved, phased application of the roofing system will not be permitted. If emergency dry-in becomes necessary, utilize necessary means/methods to prevent water entry into the building. Upon resumption of work all substrates shall be dry prior to new roof installation.
 - E. Provide roofing membrane materials from a single manufacturer. Use only roofing accessories and insulation that are approved by the roofing membrane manufacturer, and are warrantable by the manufacturer as part of the entire roofing system.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to job site in sealed, undamaged, original containers imprinted with manufacturer's name, product name, and pertinent identifying numbers.
- B. Handle all materials to prevent damage. Place all materials on pallets and fully protected from moisture with clean canvas tarpaulins.
- C. Membrane rolls shall be stored lying down on pallets, and fully protected from moisture with clean canvas tarpaulins.
- D. Bonding adhesive shall be stored at temperatures above 40 degrees F.
- E. All flammable materials shall be stored in a cool dry area away from sparks and open flames. Follow precautions outlined on container or supplied by material manufacturer/supplier.
- F. Any materials that are determined by the Architect and/or manufacturer to be damaged are to be removed from the job site and replaced at no cost to the Owner.

1.06 JOB CONDITIONS

- A. Roofing Loading Limitations: Okay for contractor to load roofing materials from and stage roofing activities from the roof.
- B. Contractor shall verify that all roof drain lines are unblocked, and free running, before starting work. Report any such blockages to the Engineer in writing.
- C. Only as much of the new roofing as can be made watertight each day, including flashing work, shall be installed.
- D. All roofing, insulation, flashings and metal work removed for construction shall be taken off the site to a legal dumping area for disposal daily.
- E. Weather Condition Limitations: Roofing materials shall not be applied when water in any form, i.e., rain, dew, ice, frost, snow, etc., is present on the deck. All surfaces to receive new membrane or flashing shall be thoroughly dry. Should excessive surface moisture occur, the Contractor shall provide the necessary equipment to dry the surface prior to application.
- F. Prior to and during all applications, all dirt, debris, and dust shall be removed from surfaces either by vacuuming, sweeping, blowing with compressed air and/or similar methods.
- G. Do not install the PVC membrane in direct contact with any product containing asphalt, coal- tar pitch, creosote or penta-based materials. Consult manufacturer's representative for special installation requirements.

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- H. Do not allow waste products containing petroleum, grease, acid, solvents, vegetable or mineral oil, animal oil, animal fat, etc. or direct steam venting to come into direct contact with roofing membrane.
 - I. The contractor shall follow all safety regulations as recommended by OSHA.
 - J. All local building codes and requirements must be followed where applicable.
 - K. Solvent welding of detail seams is not allowed.

1.07 PROTECTIONS

- A. Provide tarps or plastic sheeting, as required, to adequately protect opened roofs and flashings and to prevent entrance of moisture or rain water into the existing structure until new materials have been applied and roof is in a water tight condition.
 - 1. All glass-faced insulation board (including HD board) shall have the factory wrap removed to allow the boards to breathe, and breathable tarps installed to provide weather protection.
- B. Do not open up any more roof surface at one time than can be adequately covered and protected in the event of sudden unexpected rainfall.
- C. Have necessary waterproof canvas or plastic sheeting handy in case of emergency. Contractor will be held liable for any damage to building interior due to his negligence.
- D. All new and temporary construction, including equipment and accessories, shall be secured against wind blow-off or damage.
- E. The Contractor shall provide all necessary protection and barriers to segregate the work area and to prevent damage to adjacent areas.
- F. Temporary cut-offs shall be installed at the end of each day's work, and shall be removed before proceeding with the next day's work. Waterstops shall be compatible with all materials, shall provide a 100% watertight seal, shall be as recommended by the roofing membrane manufacturer, and shall not emit dangerous or incompatible fumes.
- G. The contractor is warned that certain PVC membranes are incompatible with asphalt and oil-based materials and cements. Creosote and penta-based materials are also incompatible. Such materials shall not come into contact with PVC membranes at any time. If such contact occurs, the material shall be cut out and discarded. The contractor should consult membrane manufacturer with respect to material compatibility, precautions, and recommendations.
 - 1. Contractor to install insulation and cover board in such a way to prevent seepage of asphalt to areas where contact with new membrane could occur. Existing asphalt surfaces must be removed completely or separated per manufacture's recommendations.
- H. Precaution should be taken when using membrane adhesives at or near rooftop vent or air intakes. Potentially hazardous fumes could enter the building. Coordinate vents and air intakes to be closed or shut off during roofing and flashing operations in the area of such penetrations.

1.08 WARRANTIES

- A. Submit in accordance with Division 1 requirements.
- B. Installer's Guarantee: The Contractor shall furnish from the roofing installer, a 2-year unlimited guarantee against defects in workmanship and materials.

C. **Manufacturer's Warranty:** The PVC roofing materials manufacturer shall provide a written twenty (20) year warranty signed by a corporate officer for an unlimited penal sum guarantee covering both materials and installation of the materials and systems. The warranty shall include the entire membrane assembly and shall include replacement of insulation due to membrane system failure. The warranty shall be written to allow for minor roofing repairs by the Owner. All roofing work under this contract to be in accordance with the following warranty standards:

1. Meeting minimum warranty provisions using the warranty language provided at the end of this section as a template
 - a. Warranty structured such that Owner is not a signature party to the Warrantee
2. Non-pro-rated, no dollar limit
3. Duration: 20-years

1.09 ROOF MEMBRANE QUALITY CONTROL

- A. 60-mil minimum thickness roof membrane is required.
- B. Each roll delivered to the site is to be stamped by the manufacturer as "Certified 60-mil Minimum Thickness"; rolls delivered not bearing this certification will be rejected.
- C. The Architect will field measure the thickness of each roll delivered to the site. Rolls not measuring at 60-mil minimum thickness will be rejected.

PART 2 - PRODUCTS

2.01 MATERIALS, GENERAL

- A. **Approved Manufacturers:** Sika Sarnafil, Carlisle, Soprema
- B. **General:** Ensure that all products used on this project are 100% asbestos free. Provide certification to this effect if requested by the Engineer.
- C. **Insurance and Code Requirements:** Provide materials complying with governing regulations, and which can be installed to comply with the following:
 1. Underwriter's Laboratories and/or ICBO approved for a Class "B" rating when installed on combustible decks. Provide documentation meets SEI/ASCE 7 for wind uplift of membrane attachment.
- D. **Warranty Requirements:** Roof membrane manufacturer must approve the use of all accessory materials that affect the manufacturer's warranty and include them in their warranty.

2.02 PVC MEMBRANE

- A. **Description,** 60-mil, minimum thickness, single-ply, ~~felt backed~~ PVC, white.
 1. ASTM D 4434-95 standard for polyvinyl chloride sheet roofing. Classification: Type II
 - a. Sarnafil: **G 410-60**, fully-adhered
 - b. Soprema: Sentinel P150, fully-adhered
 - c. Carlisle: **Sure-Flex PVC (60-mil Min)**, fully-adhered
 2. Scrim:
 - a. Type: fiberglass

- b. Stitching: 9" x 9" x 1000 Diniers
- 3. Membrane requirements
 - a. Overall membrane thickness: minimum 60 mils
 - b. Wear layer minimum thickness: 30 mils

2.03 INSULATION

- A. Install new flute fillers in between metal decking ribs.
 - 1. Verify insulation required by membrane manufacturer for system warranty applications.
 - 2. Approved manufacturers:
 - a. InsulFoam FL: Flute fill, 1 lbs/sf; 1.5" thick; loose laid
 - b. or approved equal.
 - c. Note equal products must have non-organic facers.
- B. Flat Stock Roof Insulation: Rigid closed cell polyisocyanurate foam insulation with fiberglass facers, 48" x 96", or approved equal. Minimum edge thickness shall be one-quarter inch (1/4"). Maximum thickness of any single layer shall be 3.5". ASTM C 1289, Type II, Class 2, Grade 2, (20 psi).
 - 1. Verify insulation required by membrane manufacturer for system warranty applications.
 - 2. Approved manufacturers:
 - a. Carlisle: "SecurShield Polyiso
 - b. Soprema: "Sopra-Iso Insulation"
 - c. Sika Sarnafil: "Sarnatherm ISO"

2.04 COVER BOARD

- A. Glass-mat, pre-primed water-resistant gypsum board
 - 1. Board Size: 48" x 96", or approved equal
 - 2. Thickness: 1/4 inch
 - 3. Manufacturers:
 - a. Georgia Pacific, Dens Deck Prime
 - b. USG Secure-Rock (pre-primed for fully adhered membrane application)
 - c. or approved equal
- B. ~~Glass-mat, pre-primed water-resistant gypsum board~~
 - 1. ~~Board Size: 48" x 96", or approved equal~~
 - 2. ~~Thickness: 1/4 inch~~
 - 3. ~~Manufacturers:~~
 - a. ~~Georgia Pacific, Dens Deck Prime~~
 - b. ~~USG Secure-Rock (pre-primed for fully adhered membrane application)~~
 - c. ~~or approve equal~~

2.05 MISCELLANEOUS PRODUCTS

- A. General: Provide installation accessories as required for complete roofing system and as recommended by membrane manufacturer
- B. Membrane Adhesive: water-based adhesive as recommended by manufacturer for particular substrate and project condition, formulated to withstand minimum 60 psf uplift force and as approved by membrane manufacturer.
 - 1. Screws and plates for insulation (where described in roof assemblies): Factory-coated steel fasteners and 3" diameter metal or plastic plates complying with corrosion- resistance provisions in FM Global 4470, designed for fastening substrate board, insulation, to the roof deck.
 - 2. Ensure fasteners do not penetrate the roof deck as the underneath side of the roof deck is an exposed surface.
- C. Coverboard Fasteners: Coated galvanized steel; with factory-applied corrosion-resistant coating, with three-inch metal disks. Size and type required for substrate type and thickness and for deck type. Provide fasteners which meet requirements for pullout resistance.
- D. PVC Coated Steel: 25-gauge galvanized sheet metal with laminated PVC coating.
 - 1. Sarnaclad: PVC-coated, heat-weldable sheet metal capable of being formed into a variety of shapes and profiles.
 - 2. Soprema, Sentinel Equivalent
 - 3. Carlisle PVC Coated Metal
- E. ~~Walkways: Preformed walkway boards: As manufactured or recommended by membrane manufacturer. Size: 36 inches wide X 30 inches long; minimum 1/8 inch thick.~~
- F. Walkway board adhesive: As recommended by membrane manufacturer.
- G. Preformed Pipe Boot Flashings: Molded from same material as flexible flashings. Provide stainless steel band clamp for top edge.
- H. Asphalt Resistant Membrane Flashing: Utilize asphalt resistant membrane where in contact with any existing asphalt residue, if necessary for manufacturer chosen.
- I. Provide 1/4" x 1" aluminum termination bar to secure top edge of membrane at wall surfaces.
- J. Conduit Blocking: pressure treated 4 x 4 blocking. Provide separate protection under each block to protect roof membrane.

2.06 ROOF PLAQUE

- A. Furnish and install "Roof Installation Information Plaque"
 - 1. Plaque: photo-engraved, aluminum card (for exterior display) at location to be determined by the Engineer.
 - a. Size: 5.5" x 8.5" x 3/16".
- B. Engraved Information:
 - 1. Name of Building
 - 2. Date of Substantial Completion
 - 3. Date of Install Warranty Expiration

4. Date of Roof Manufacturer Warranty Expiration
5. Roof Manufacturer and warranty reference number
6. Roof installer and installer warranty reference number (and phone number)
7. Description of Roof assembly

2.07 WALK PADS

- A. PVC Cross Grip Walkway Rolls:
 1. open grid, two-layer construction
 2. 3' wide by 9/16" thick, 1.3 lbs / sf ft
 3. Carlisle Sure-Flex PVC Crossgrip Walkway
 - a. Substitutions under provisions of 01 2500
 4. Color: Gray

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Carefully inspect substrate and adjacent construction and verify that conditions are suitable for installation of the work as indicated and specified.
 1. Verify that all surfaces to be covered by roofing are properly pitched to drain, and suitable for installation of roofing system.
 2. Examine surfaces for low areas that will not drain properly, foreign material, ice, wet insulation, unevenness, or any other defect which would prevent the proper execution and quality application of the Roofing System as specified.
 3. Verify that installation of wood blocking and grounds, vents, drains, curbs, and other projections has been completed.
 4. Verify that roof penetrations are tubular.
- B. Discrepancies: In the event of discrepancy, notify the Engineer, and do not proceed with installation until discrepancies have been corrected.
- C. Commencement of roofing installation constitutes Contractor acceptance of substrate condition as satisfactory.
- D. Removal and Preparation of Existing Roof System(s):
 1. Remove existing built-up roof membrane, flashings and other materials noted in the drawings and legally dispose off-site.
 2. Remove only enough roofing to accommodate the day's work and ensure the exposed area can be made 100% watertight at the end of the day or first sign of inclement weather.
 3. Ensure that all drains are clear and clamping rings tightened at the end of each work day.

3.02 INSULATION AND COVERBOARD INSTALLATION

- A. General Installation Requirements:
 1. Install coverboard and substrate coverboard in accordance with approved shop drawings and insulation and adhesive manufacturer's printed instructions.

2. Securely butt edges without deformation. Miter board edges at ridges and elsewhere to prevent open joints.
3. Protect insulation from weather exposure at all times until roofing is installed.
4. Stagger joints between layers
5. Mechanically fasten 3 ½" Rigid insulation to metal roof deck with mechanical fasteners and 3 inch metal disks.
6. Fully-adhere coverboard with manufacturer's recommended adhesive

3.03 ROOF MEMBRANE INSTALLATION

- A. Install membrane materials in accordance with Manufacturer's current published application instructions and these contract documents. Application of roofing membrane shall immediately follow application of insulation assembly as a continuous process with no phased application.
- B. Loosely lay sheet membrane over roof insulation and allow the membrane to relax thirty (30) minutes minimum before bonding or splicing. Apply adjoining sheets by lapping the edges and splicing.
- C. Accurately align roofing membrane and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- D. Bonding Adhesive: Apply bonding adhesive to substrate and underside of roofing membrane at rate required by manufacturer and allow to partially dry before installing roofing membrane. Do not apply bonding adhesive to splice area of roofing membrane.
- E. Mechanically fasten roofing membrane securely at terminations, penetrations, and perimeter of roofing.
- F. Apply roofing membrane with side laps shingled with slope of roof deck where possible.
- G. Seams: Clean seam areas, overlap roofing membrane, and weld side and end laps of roofing membrane and sheet flashings according to manufacturer's written instructions to ensure a watertight seam installation. Weld seams as follows:
 1. Weld Method: Hot air.
 - a. All side and end lap joints shall be hot air welded. Lap areas shall be a minimum of 3" wide when machine welding and 4" wide when hand welding.
 2. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of sheet membrane if required by manufacturer.
 3. Verify field strength of seams a minimum of twice daily and repair seam sample areas.
 4. Repair tears, voids, and lapped seams in roofing that does not meet requirements.
- H. Spread sealant bed over deck drain flange at deck drains and securely seal roofing membrane in place with clamping ring.
- I. Membrane securement: Provide securement at all locations where membrane ends or goes through angle change except for round pipe penetrations less than 18" in diameter and square penetrations less than 4" square. Utilize batten strips at all horizontal terminations of field plies.
- J. Flash all penetrations passing through the sheet membrane. Flashing shall be installed per manufacturer's approved details at roof intersections, parapets, and around penetrations. Use longest pieces practicable

3.04 MEMBRANE FLASHINGS

- A. Membrane flashing installation shall progress concurrently with the roof membrane installation.
- B. All field membranes shall be terminated at parapets and roof edges with mechanical fasteners fastened into wood nailers at 12" on center.
- C. Extend flashing membrane minimum 8 inches above roofing level unless detailed otherwise. All flashing membranes shall be fully adhered with cut and hot air welded interior, exterior and mitered corners and shall extend minimum 5 inches onto field membrane.
- D. Utilize premanufactured inside and outside corners, flashing cones, etc. to the greatest extent possible.

3.05 DRAINS AND SCUPPERS

- A. Flash drains and scuppers using PVC membrane per the manufacturer's current details.
- B. Flashing material shall cover the flange of the scupper,
- C. Install clamping ring if provided as part of the drain or scupper design. Install strainer baskets.

3.06 ACCESSORY INSTALLATION

A. Miscellaneous Items

- 1. Prime metal flanges as required with a uniform coating of primer (as recommended by the roof membrane manufacturer). All flanges shall be set in a smooth even bed of waterblock sealant, or as detailed by the manufacturer..
- 2. Overnight seals: Exercise care that moisture does not enter beneath completed section of the roof. Temporarily seal loose edges of the membrane daily and when weather is threatening. Night seals can be built using plastic cement and roofing felts, and constructed to withstand protracted periods of service. Night seals must be completely removed, all felts employed removed, prior to the resumption of roofing.
- 3. All exposed cap sheet edges at waste stacks, vent stacks, etc., shall be caulked with sealant, tooled into the joint.
- 4. Raise conduit penetrations, insulated pipes, soil stacks, vents, and curbs as necessary to obtain an 8 inch height above the finished roof surface. Include rewiring and duct extension as necessary to raise or extend conduit or ducts.
- 5. Place conduit lying on the roof on new PT blocking placed on protection pad at a maximum of 8 feet on center. Adhere traffic pad to block, and not to roofing.
- 6. Electrical and mechanical work to be performed by journeyman worker experienced and trained in work performed to the building code.
- 7. Verify all drain lines and downspouts are functional prior to the start of work. Contractor to be responsible to assure drains are free draining upon completion of roofing work.
- 8. Install 1/4" x 1" aluminum termination bar to secure top edge of membrane at vertical wall surfaces. Fasten with anchors at 8" o.c.

3.07 TERMINATION BAR INSTALLATION

- A. Install termination bar in accordance with manufacturer's written instruction
- B. Install termination bar at all reglet and/or skirt flashing location

1. Roof to wall transitions
 2. Equipment curbs
 3. Other locations as required by the manufacturer to meet warranty requirements
- C. Install water block sealant behind top of flashing. Anchor bar through pre-punched holes at a rate to maintain a seal (max 12" o.c.)
- D. Remove excess flashing material above bottom of lap sealant reservoir channel.
- E. FIELD QUALITY CONTROL
1. Manufacturer's Field Services:
 2. Require the roofing manufacturer's representative to perform inspection services during the roofing installation period.
 3. The roofing manufacturer's representative shall notify the General Contractor and roofing contractor immediately of all observed unacceptable conditions.
 4. Ponding Water: Perform flood tests, or utilize rain events, to identify areas of ponding.
 5. All depressions subject to ponding to a depth 1/2 inch or greater at any point shall be reviewed for repair options.
 6. Repair depressions replacing substrate that has deflected.

3.08 CLEANUP

- A. Remove all traces of splashed and spilled roofing materials.
- B. Repair or replace with new, as directed, adjacent surfaces permanently damaged from roofing application.

3.09 PROTECTION

- A. Protect newly installed materials from damage.
- B. No foot or wheel traffic, nor storage of roofing materials or material handling equipment will be permitted over the newly installed roofing.
- C. Equipment or materials stored on the new roof surface shall be placed on minimum 5/8" plywood, separated from the roof membrane by a polyethylene sheet to avoid bonding of plywood to the roof surface.

END OF SECTION

PART 1 - GENERAL

1.01 SUMMARY

- A. Work in this section includes:
 - 1. Fall protection system design and engineering.
 - 2. Fall protection anchors, lifelines, and impact absorbers.
 - 3. Testing and certification of fall protection systems.
 - 4. Delegated design and submission of deferred permit submittal documents to AHJ.

1.02 SYSTEM DESCRIPTION

- A. General: Engineer, furnish, and install structural fall restraint and fall arrest systems capable of withstanding loads and stresses within limits and under conditions specified in OSHA and other applicable safety codes. Provide fall prevention anchors permanently attached to roof structure.

1.03 QUALITY ASSURANCE

- A. Design of system shall be one that complies with Federal OSHA Standard 1910.66, Subpart F, "Powered platforms for building maintenance", App C, "Personal Fall Arrest Systems and State of Washington Department of Labor and Industries regulations and all other occupational, health and safety codes of the applicable governing jurisdictions.
- B. Manufacturer Qualifications: Approved manufactured units shall be supplied from the product line of a firm engaged exclusively in the production of safety anchor equipment.
- C. Welding Standards for Manufactured Units: Comply with the following applicable provisions:
 - 1. AWS D1.1, "Structural Welding Code - Steel," and D1.3, "Structural Welding Code - Sheet Steel". Certify that each welder has satisfactorily passed AWS qualification tests for welding processes involved and, if pertinent, has undergone recertification.
- D. Qualified Professional Engineer: Shall be currently licensed and registered to practice structural engineering in the State of Washington.

1.04 SUBMITTALS

- A. Manufacturer's Product Information: Submit product information and detail drawings of each type of safety anchor specified for use on this project if units supplied are from a manufacturer's product line. Include installation instructions.
- B. Shop Drawings: Submit shop drawings with details showing installation of safety anchors to building structural system. Submit complete layout and configuration of system, anchor locations, and all other components and accessories.
 - 1. Shop drawings shall be designed and stamped by a licensed structural engineer in the State of Washington (hired by the Contractor) for compliance with fall protection standards. Include final layout and anchorage details to the existing structure.
- C. Test Reports: Indicate compliance with required performance requirements.
- D. Structural Calculations: Provide stamped and signed structural calculations prepared for this project by structural engineer currently licensed in the State in which the project is located, calculations shall address all applicable loads identified in the IBC.

1. Include the design of substructure support framing, clips and fasteners connecting fall protection systems to the existing building structure.
- E. Deferred Submittals: Shop drawings, details, and structural calculations stamped by a Washington State currently registered structural engineer shall be submitted to the AHJ for approval. Refer to the AHJ for deferred submittal procedures and requirements.
 1. Jurisdiction: City of Tacoma Planning and Development Services.
 2. Parent Record Number: BLDCA24-0123

1.05 PERFORMANCE REQUIREMENTS

- A. System to be designed in compliance with Chapter 296-880 WAC Unified Safety Standards for Fall Protection/Fall Restraint.
- B. Conform to additional requirements of OSHA - Occupational and Safety Health Administration Standards, except where in conflict with adopted WISHA regulations.
- C. Structural Design: Provide structural engineering design for the anchorage of fall protection systems, including the substructure support framing system and the connections to the existing building structure.
- D. Available Record Drawings: Structural record drawings for existing structure may be provided to the Contractor for reference only. Neither the Owner or Architect guarantee the accuracy and completeness of any documents provided.

1.06 DELEGATED DESIGN PROCEDURES

- A. Delegated Design:
 1. Definition: Transfer of design responsibility to Contractor for one or more specialty scopes of the work for the construction of a project as indicated in Specifications.
 2. Delegated design requires Contractor to obtain professional engineering services for the design and connection of fall protection systems to the existing structure.
- B. Delegated Design Approval Items:
 1. Delegated Design approval items that were not submitted at the time of the application for permit, and that need to be submitted to Authority Having Jurisdiction for permitting as determined by Contractor.
 2. The delegated design submittal items shall not be installed until delegated design submittals have been approved by Authority Having Jurisdiction.
 3. Responsible Control: All shop drawings and related submittals shall be the responsibility of Contractor, stamped and signed approved by Contractor and Contractor's design professionals and submitted to Architect for review and acceptance.
 4. The Architect will review delegated design submittals and material data for consistency with design intent only. Contract Drawings indicate design intent and shall be used as providing minimum coverage area for fall protection systems. Architect's review does not relieve Contractor and Contractor's subcontractors and their design professionals of their responsibilities to meet Contract Document requirements.
- C. Responsibility for Delegated Design Approval Items:

1. Contractor is responsible for Authority Having Jurisdiction review and approval of delegated design items, including but not limited to engineering, approvals, fees and costs, testing and inspections, installation, review and approval including securing final approvals and turning documentation over to the Owner.

PART 2 – PRODUCTS

2.01 MANUFACTURER

- A. Provide an engineered fall protection system complete with all components manufactured and designed by one of the following:
 1. Guardian Fall Protection, Inc.
 2. Super Anchor Safety
 3. PRO-BEL Safety Systems
 4. 3M DBI Sala Fall Protection
 5. SafeGuard Industries
 6. ~~Or approved equal~~ Other manufacturers may be acceptable, subject to their ability to provide products conforming with the requirements of this Specification. Submit substitution requests in accordance with Section 00 26 00 – Substitution Procedures

~~2.02 FALL PROTECTION ANCHORS~~

- ~~A. Description: Manufactured fall protection post anchors designed for installation over metal deck, and compatible for use with horizontal lifeline.~~
 - ~~1. Basis of Design: Guardian CB-18 for Steel Deck~~
 - ~~2. Material: 2-1/2" schedule 80 pipe, galvanized steel with 5/8" diameter U-bar.~~

~~2.03 STANDING SEAM ROOF CLAMP~~

- ~~A. Description: Manufactured non-penetrating fall protection anchors designed for installation on standing seam roofs~~
 - ~~1. Basis of Design: 2-Way Standing Seam Roof Clamp~~
 - ~~2. Material: Zinc-plated steel~~

~~2.04 HORIZONTAL LIFELINES~~

- ~~A. Description: Continuous wire rope assembly with integral attachment hardware and energy impact absorber at anchorage connections.~~
 - ~~1. Basis of Design: Guardian Metal Energy Absorber System, Stainless Steel~~
 - ~~2. Components: Stainless steel shackles, cable fist grips, turnbuckles.~~
 - ~~3. Lifeline Cable: Safety Yellow, PVC coated, 7x7, 5/16 inch (8 mm) 316 Stainless Steel Wire, Breaking Strength 8000 lbs. minimum.~~
 - ~~a. Basis of Design: Lexco Cable Item # 51677SSVC-38-316, SS316 PVC~~
 - ~~4. Sliding O-Rings: Provide two (2) O-rings between each post anchor.~~

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine job condition before commencement of work. Commencement of work will denote acceptance of existing conditions unless notice is given in writing of unacceptable conditions prior to commencement.
- B. Examine structural substrate at each anchor location for soundness. ~~If any signs of decay, lack of structural integrity, or structural members other than those shown in drawings exist, notify the Architect prior to installation.~~ Confirm that structural elements to which the fall protection anchors will be attached, are adequate to provide secure attachment as designed by the fall protection structural engineer.
- C. Faults occurring in the work completed under this Section of the specification due to the acceptance of incorrect conditions of existing work will be rectified at no cost to the Owner.
- D. Proceed with installation of roof anchors only after verifying conditions are satisfactory.
- E. ~~Check actual locations of beams, joists, and other construction to which safety anchors must fit, by accurate field measurement. Show recorded measurements on final shop drawings.~~

3.02 INSTALLATION

- A. General: Installation of fall protection anchors and horizontal lifeline systems to be performed by contractor according to manufacturer's instructions and recommendations.
- B. Install roof anchors and supplemental backing prior to installation of new metal roof systems.
- C. ~~Perform load testing on installed anchors prior to installation of new PVC roof systems as described in section 3.03. Document and repair any failures during the load testing process. Conduct quality control testing as recommended by the fall protection manufacturer prior to installation of new roof assemblies.~~
- D. ~~Install horizontal lifelines using manufacturer's attachment hardware. Provide adjustable turnbuckle at each lifeline. Lifeline cable shall have no more than 2" of sag between anchors.~~
- E. ~~Continuous lifeline cables shall not exceed 100 feet in length.~~
- F. ~~Provide energy impact absorbers at lifeline locations indicated on plan, or as recommended by the manufacturer. At a minimum, provide no less than one (1) impact absorber on lifelines up to 60 feet in length, and two (2) impact absorbers on lifelines between 60-100 feet in length.~~
- G. ~~Locate and gang impact absorbers at locations where they can be easily inspected and observed prior to use.~~

3.03 ~~INSPECTION & LOAD TESTING OWNER TRAINING~~

- A. Instruct Owner in proper use and inspection of fall protection systems. Provide all manufacturer literature and safety inspection logs as part of O&M submittals.
- B. ~~Ensure all manufactured anchors have been installed in accordance with fall protection manufacturer's engineering documentation and specifications.~~
- C. ~~Conduct load testing on installed post anchors prior to installation of PVC roofing. A total of six (6) anchors shall be tested during three (3) individual load tests. Provide a roof plan indicating test locations and photo document test procedures.~~
 - 1. ~~The test procedure shall consist of tensioning two anchors using a chain/wire rope, and a load cell to measure the force applied to the anchors.~~

- ~~2. Anchors shall be tensioned to a force of 1,500lbs measured using the load cell, and held at that force for a minimum of 3 minutes.~~
- ~~3. Any observed stress damage, broken welds, or permanent deviation of the post anchor more than 1/2" out of plane shall constitute a failure.~~
- ~~4. Notify the Architect of any failed load tests prior to starting repairs.~~

3.04 CERTIFICATION

- A. Provide certification of the system that it is compliant with all applicable codes. This shall be in the form of a letter, signed and stamped by a licensed structural engineer in the State of Washington (hired by the Contractor).
- B. Provide manufacturer's inspection and certification during or after installation to provide verification that the system has been installed correctly.

END OF SECTION

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PORT OF TACOMA

PCT STRAD BAY ROOF & HUSKY MAINTENANCE TOWER ROOF REPLACEMENTS PROJECT NO. 201191.01 & 201204.01 CONTRACT NO. 072112

PORT COMMISSIONERS:

JOHN MCCARTHY
DON MEYER
KRISTIN ANG
RICHARD P. MARZANO
DEANNA KELLER

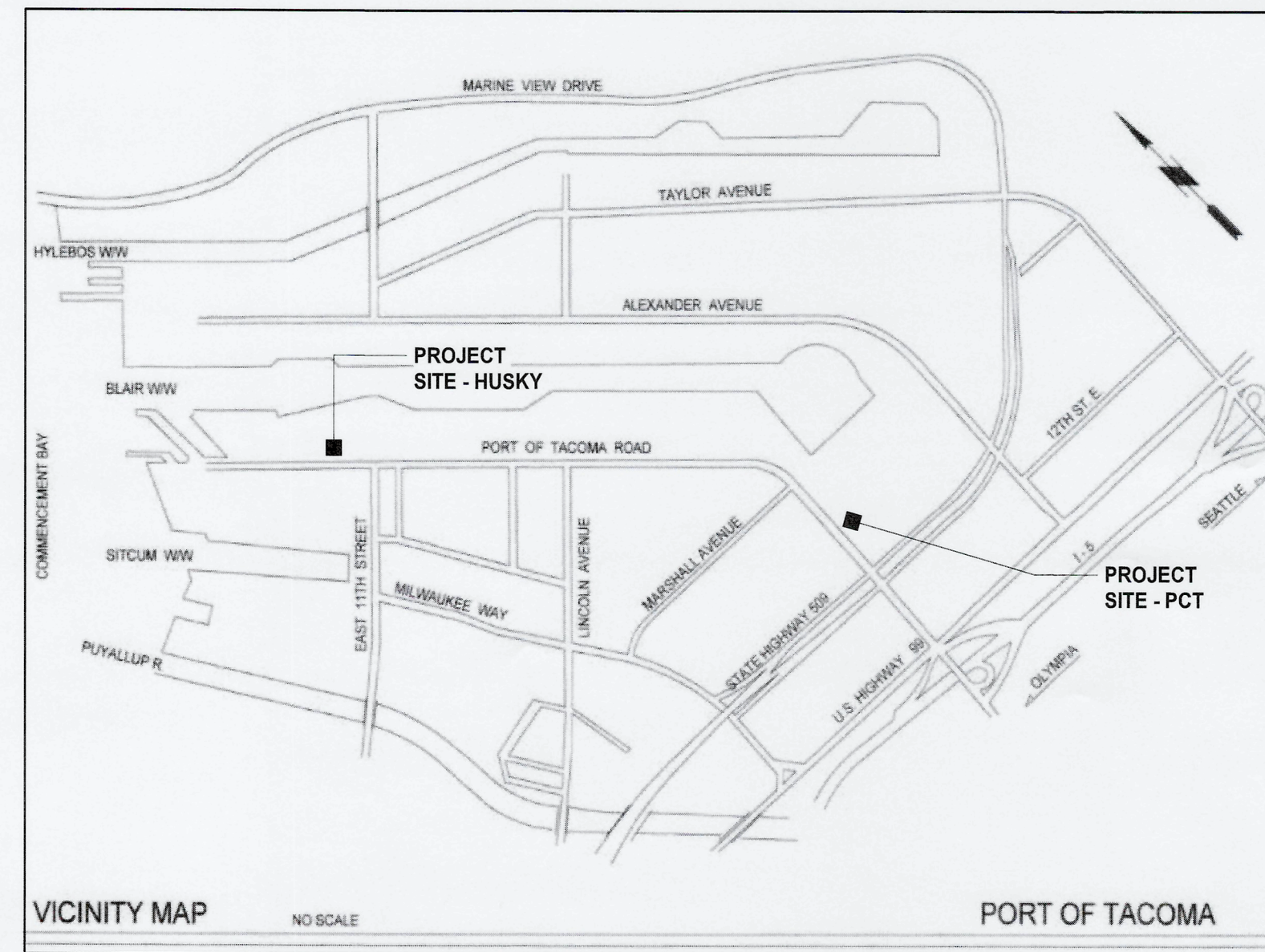
PORT STAFF:

JOHN WOLFE
NWSA Chief Executive Officer

ERIC JOHNSON
Port of Tacoma Executive Director

THAIS HOWARD, P.E.
Director of Engineering

MARCUS VAN VALEN
Project Manager



DRAWING LIST	
SHEET DESIGNATION	SHEET TITLE
G1.00	COVER SHEET
G1.01	GEN. NOTES, SYMBOLS, & ABBREVIATIONS
G1.10	SITE, STAGING & ACCESS PLAN - PCT
G1.20	SITE, STAGING & ACCESS PLAN - HUSKY
AD1.00	ROOF DEMOLITION PLAN - PCT
AD9.10	REFERENCE PHOTOS - PCT
AD9.20	REFERENCE PHOTOS - HUSKY
A1.10	ENLARGED ROOF PLAN - PCT
A1.20	ENLARGED ROOF PLAN - HUSKY
A1.30	REFLECTED CEILING PLAN - PCT
A2.10	PARTIAL BUILDING ELEVATIONS - PCT
A2.20	PARTIAL BUILDING ELEVATIONS - HUSKY
A5.10	DETAILS - PCT
A5.20	DETAILS - HUSKY
E0.1	LEGEND, NOTES, & ABBREVIATIONS
E1.0	PARTIAL ELECTRICAL PLAN

CONSULTANT:

IOAI ARCHITECTURE
+ PLANNING

ARCHITECT:
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1011 SW Klickitat Way, Suite 208
Seattle, WA 98134-1162

Contact: Jerry Osborn, AIA
p. (206) 631-8442 ext. 2607
e. josborn@oaips.com

HULTZ BHU
engineers inc

ELECTRICAL ENGINEER:
HULTZ BHU ENGINEERS INC.
1111 Fawcett Ave
Tacoma, WA 98402

Contact: Phil Crawford
p. (253) 383-3257
e. philipc@hultzbhu.com

DEFERRED SUBMITTALS:

- ENGINEERED FALL PROTECTION SYSTEMS

CONTRACTOR SHALL SUBMIT ALL REQUIRED DEFERRED SUBMITTAL DOCUMENTS FOR ENGINEERED FALL PROTECTION SYSTEMS, INCLUDING STRUCTURAL DETAILS AND CALCULATIONS FOR FALL PROTECTION ANCHORS AND LIFELINES. CALCULATIONS AND DETAILS SHALL BE STAMPED BY A WASHINGTON STATE LICENSED ENGINEER. REFER TO SPECIFICATION SECTION 11 01 00 - FALL PROTECTION SYSTEMS.

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STATE OF WASHINGTON
6273

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DATE: [Blank]

DIRECTOR: [Blank]

DATE: [Blank]

PRINTED BY: [Blank]

DATE: [Blank]

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TACOMA, WA 98421

SECTION: 02

TOWNSHIP: 20

SECTION: 02

DATE: 03/20/2024

DATE: [Blank]

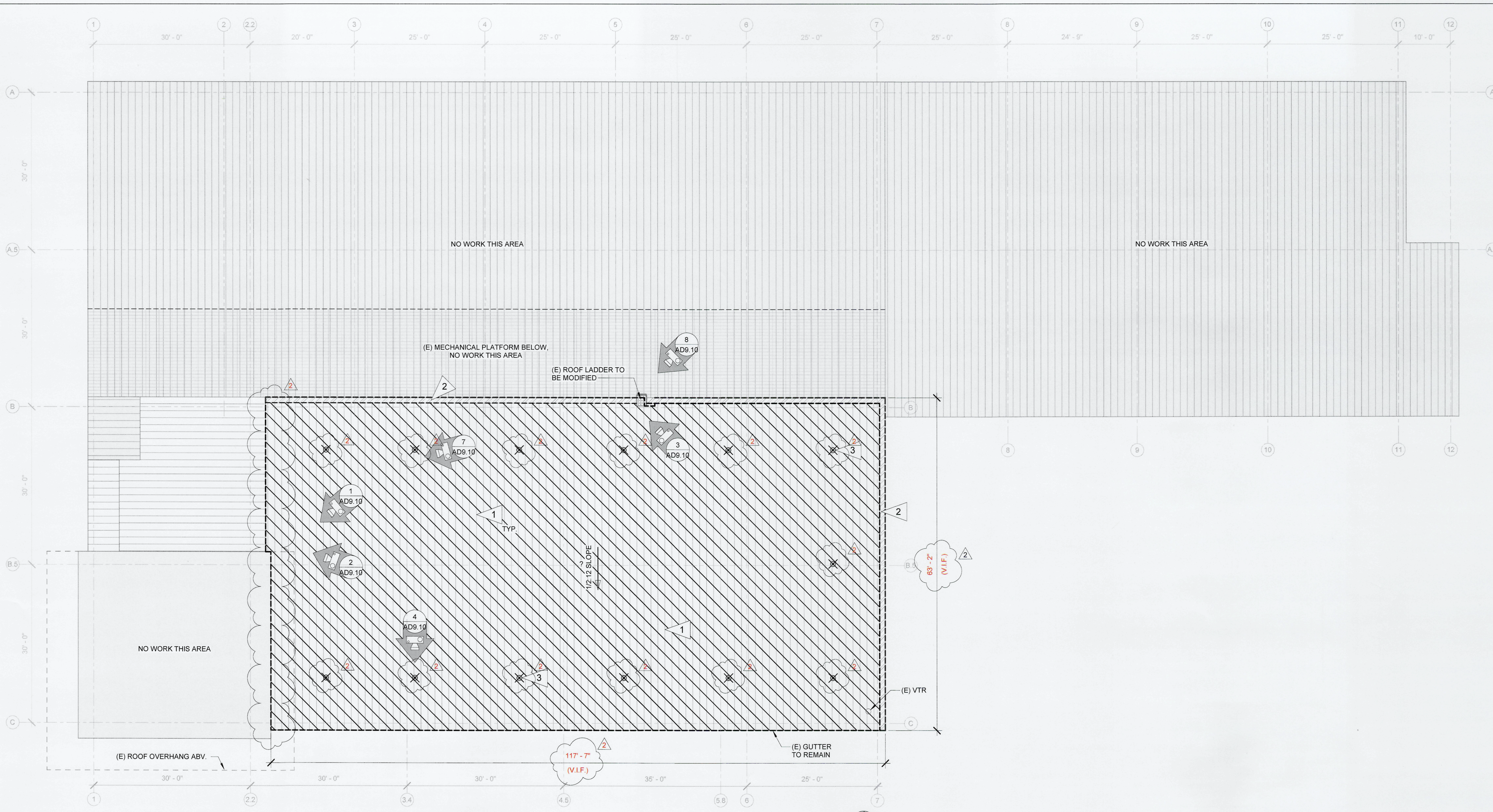
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SHT # OF 16
G1.00

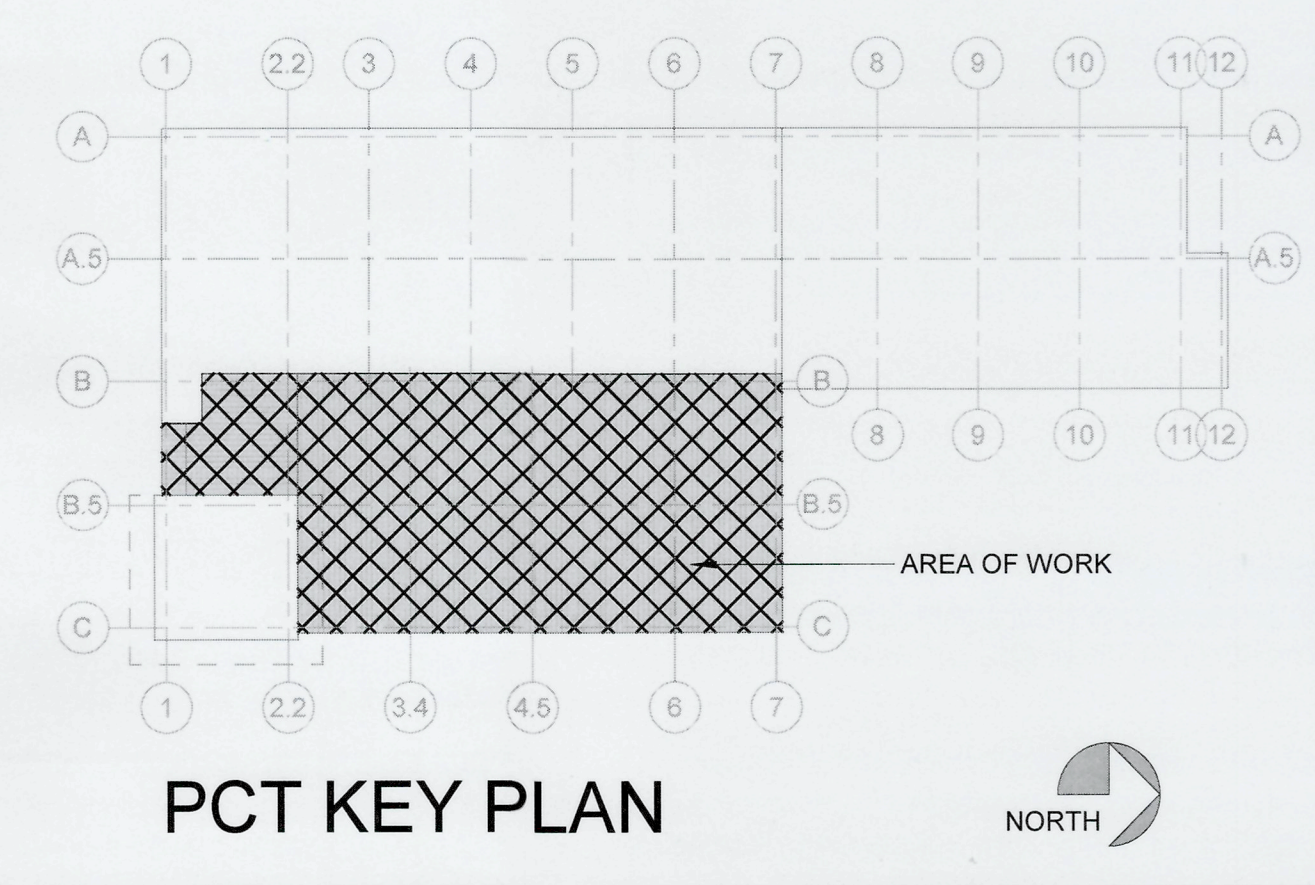
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M. ID: 201191.01
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1 PCT STRAD BAY - ROOF DEMOLITION PLAN
 AD1.00 1" = 10'-0"
 NORTH

DEMOLITION KEYNOTES		DRAWING LEGEND	
1	DEMOLISH (E) ACRYLIC COATED, STANDING SEAM METAL ROOF PANELS 18" WIDE	○	(E) VENT THROUGH ROOF TO REMAIN (VTR)
2	DEMOLISH (E) FLASHING, TRIM, AND/OR VTR BOOT FLASHING. (E) GUTTER TO REMAIN	⊗	(E) FALL PROTECTION ANCHOR TO BE DEMOLISHED
3	DEMOLISH (E) FALL PROTECTION ANCHORS, 13 QTY.		



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 STATE OF WASHINGTON

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APPROVED: [Signature] DATE: 4/6/24

DIRECTOR ENGR. DATE: [Blank] PROJ. ENGR. DATE: [Blank]

PRINTED BY: C.Y. PORT ADDRESS: 3205 PORT OF TACOMA RD TACOMA, WA 98421

MARK: 1 REVISION: [Blank] BY: CY

MARK: 2 ADDENDUM #1 ADDENDUM #2 JIM

6694 PCT STRAD BAY ROOF & HUSKY MAINTENANCE TOWER ROOF REPLACEMENTS

AD1.00

SHT # 5 OF 16

CONT./CONS: 072112 TOWNSHIP: 20 RANGE: 03 SECTION: 02

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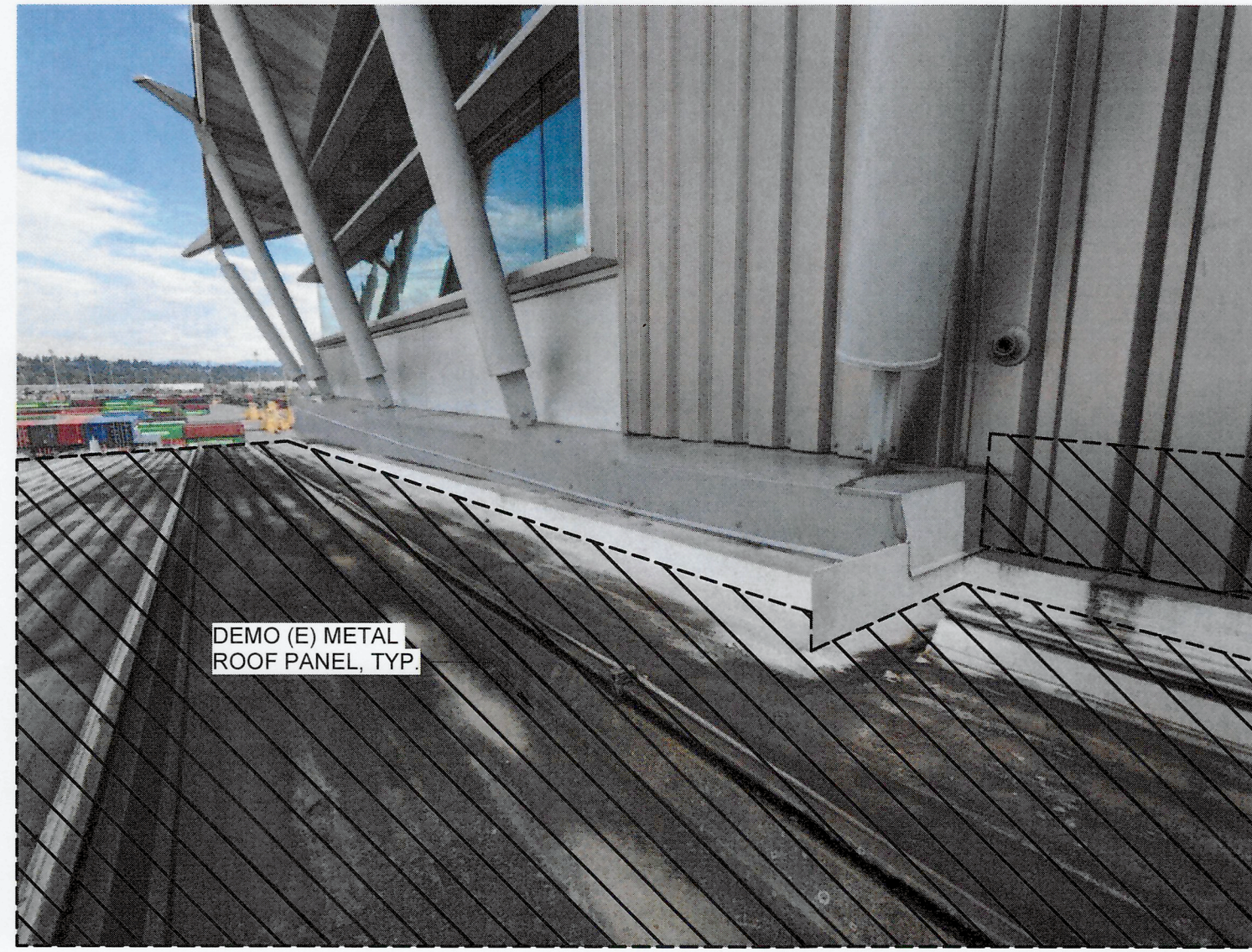
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ROOF DEMOLITION PLAN - PCT

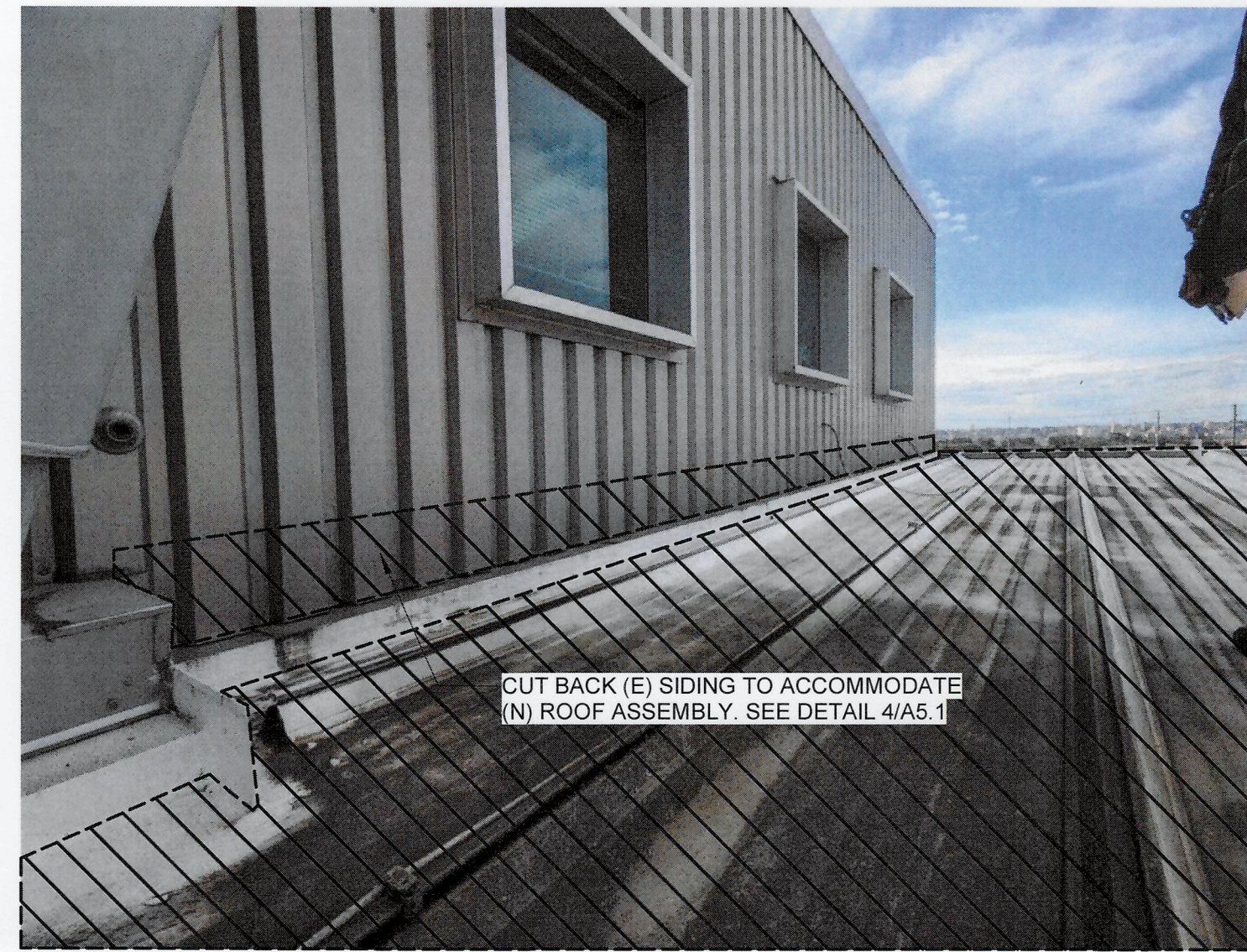
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1 SOUTHEAST VIEW
AD9.10 NTS



2 SOUTHWEST VIEW
AD9.10 NTS



3 (E) ROOF ACCESS LADDER
NTS



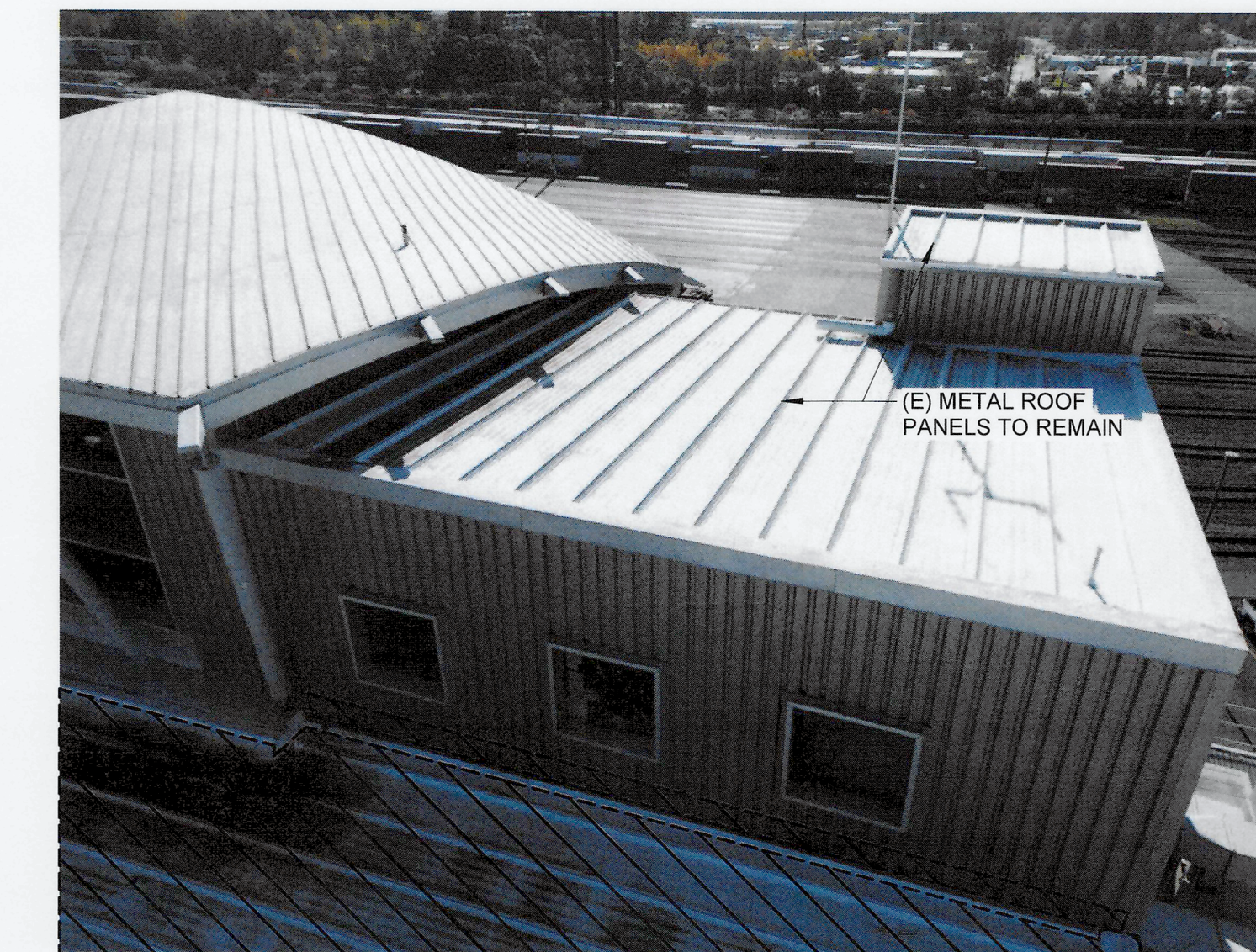
4 (E) FALL ANCHOR
AD9.10 NTS



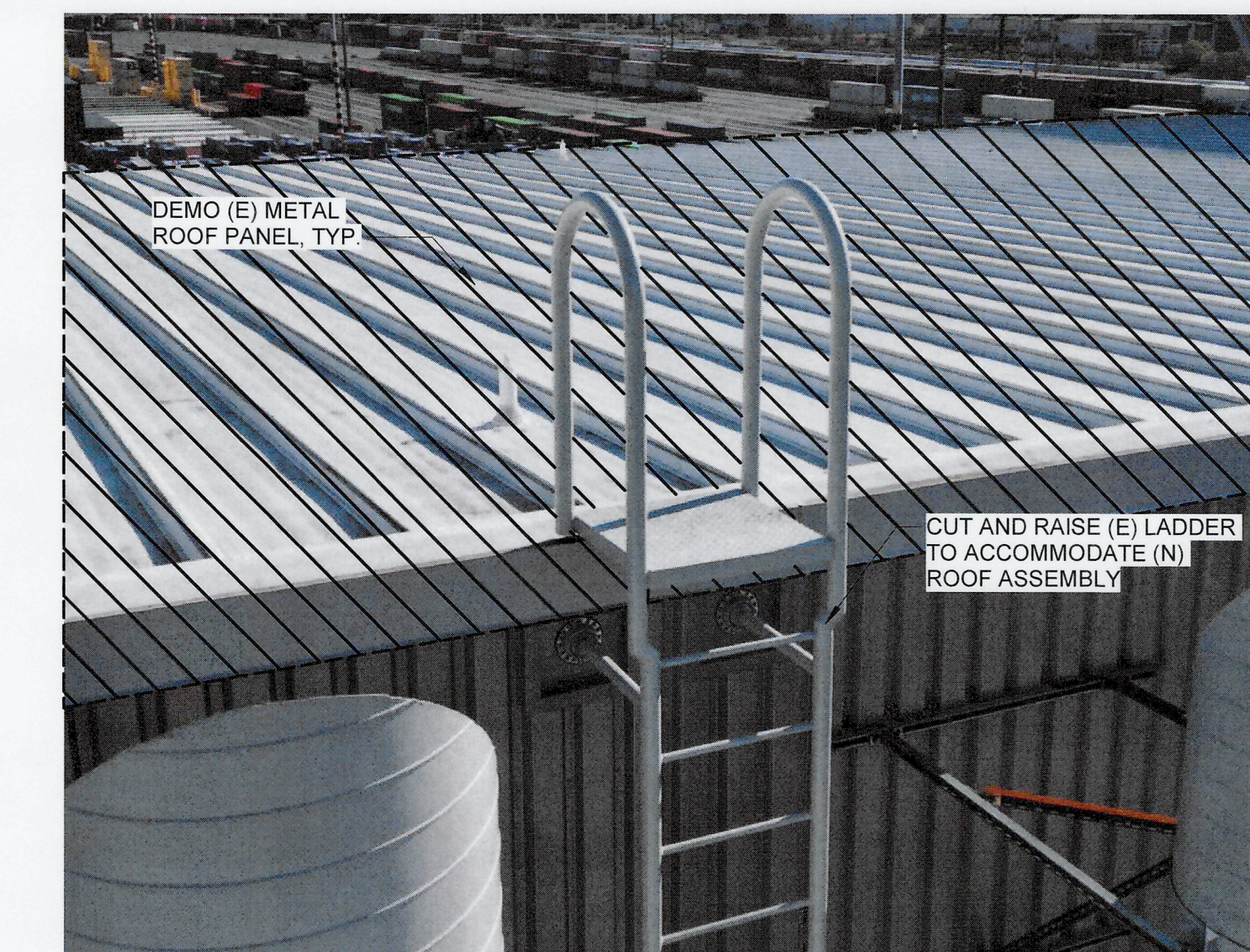
5 CEILING
AD9.10 NTS



6 CEILING
AD9.10 NTS

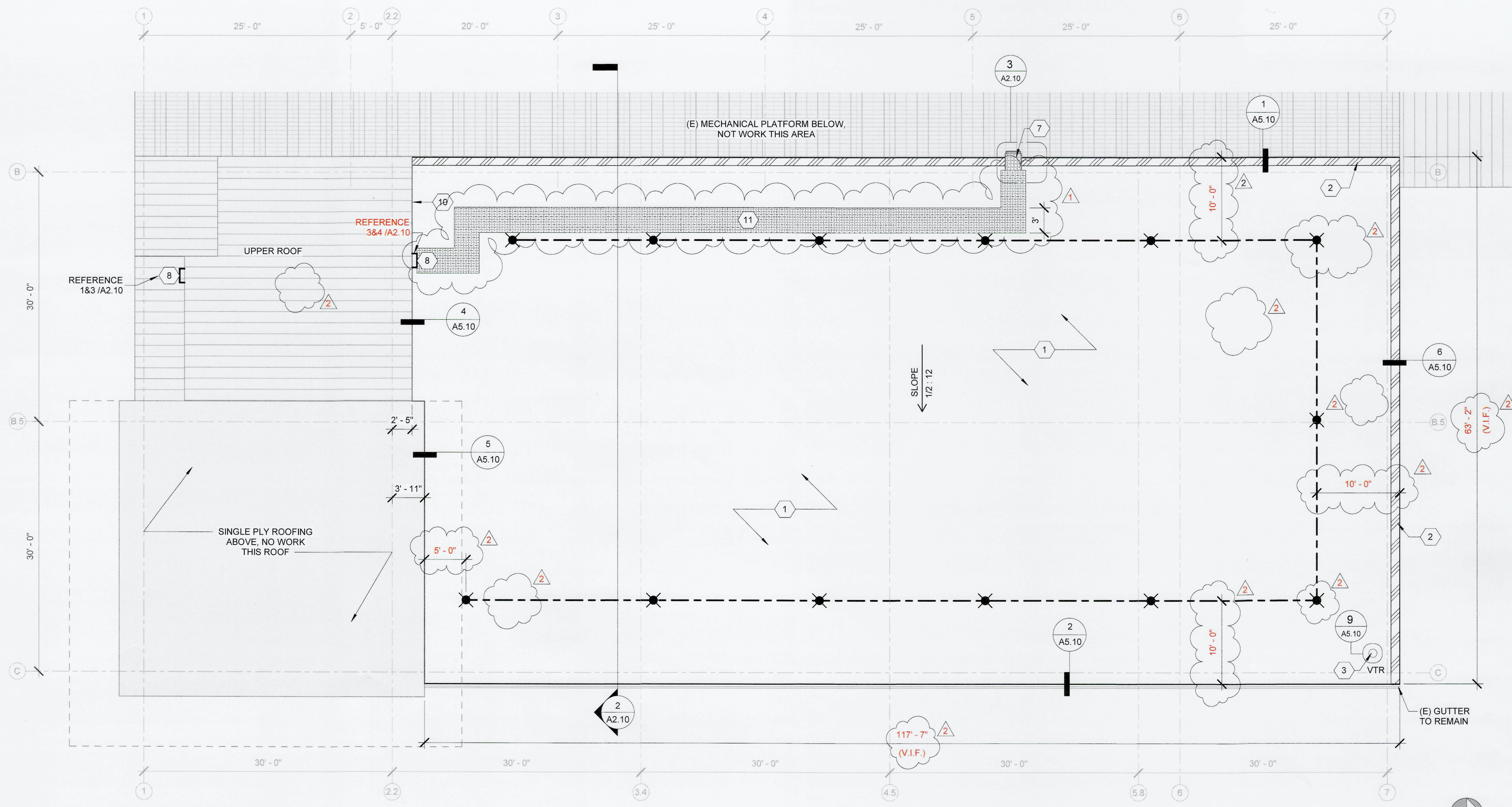


7 UPPER ROOF AREA
AD9.10 NTS



8 (E) ROOF ACCESS LADDER
AD9.10 NTS

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1
A1.10
1/8" = 1'-0"

FALL PROTECTION SYSTEM NOTES:

CONTRACTOR SHALL DESIGN AND PROVIDE A COMPLETE AND ENGINEERED FALL PROTECTION SYSTEM THAT PROVIDES FULL COVERAGE FOR THE ROOF AREA TO RECEIVE NEW PVC ROOFING.

AT A MINIMUM THE SYSTEM SHALL INCLUDE ALL FALL PROTECTION ANCHORS, HORIZONTAL LIFELINES, AND IMPACT ABSORBERS. REFER TO SPECIFICATION 11 01 00 - FALL PROTECTION SYSTEMS FOR BASIS OF DESIGN PRODUCTS AND PERFORMANCE REQUIREMENTS.

FALL PROTECTION SYSTEMS HAVE BEEN DESIGNATED AS A DEFERRED SUBMITTAL FOR THIS PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR THE PREPARATION AND SUBMISSION OF ALL DEFERRED SUBMITTALS TO THE AHJ. DEFERRED SUBMITTALS SHALL BE SUBMITTED BY A REGISTERED DESIGN PROFESSIONAL OTHER THAN THE ARCHITECT OF RECORD. THE ARCHITECT OF RECORD ASSUMES NO RESPONSIBILITY FOR THE DEFERRED SUBMITTALS.

DEFERRED SUBMITTALS SHALL INCLUDE SHOP DRAWINGS, DETAILS, AND STRUCTURAL CALCULATIONS DESIGNED AND STAMPED BY A LICENSED STRUCTURAL ENGINEER IN THE STATE OF WASHINGTON (HIRED BY THE CONTRACTOR). CALCULATIONS SHALL ADDRESS ALL APPLICABLE LOADS IDENTIFIED IN THE IBC, INCLUDING ANCHORAGE TO THE EXISTING BUILDING STRUCTURE. CONTRACTOR SHALL MAKE MODIFICATIONS TO THE SYSTEM AS NEEDED TO COMPLY WITH THE REQUIREMENTS OF THE AHJ.

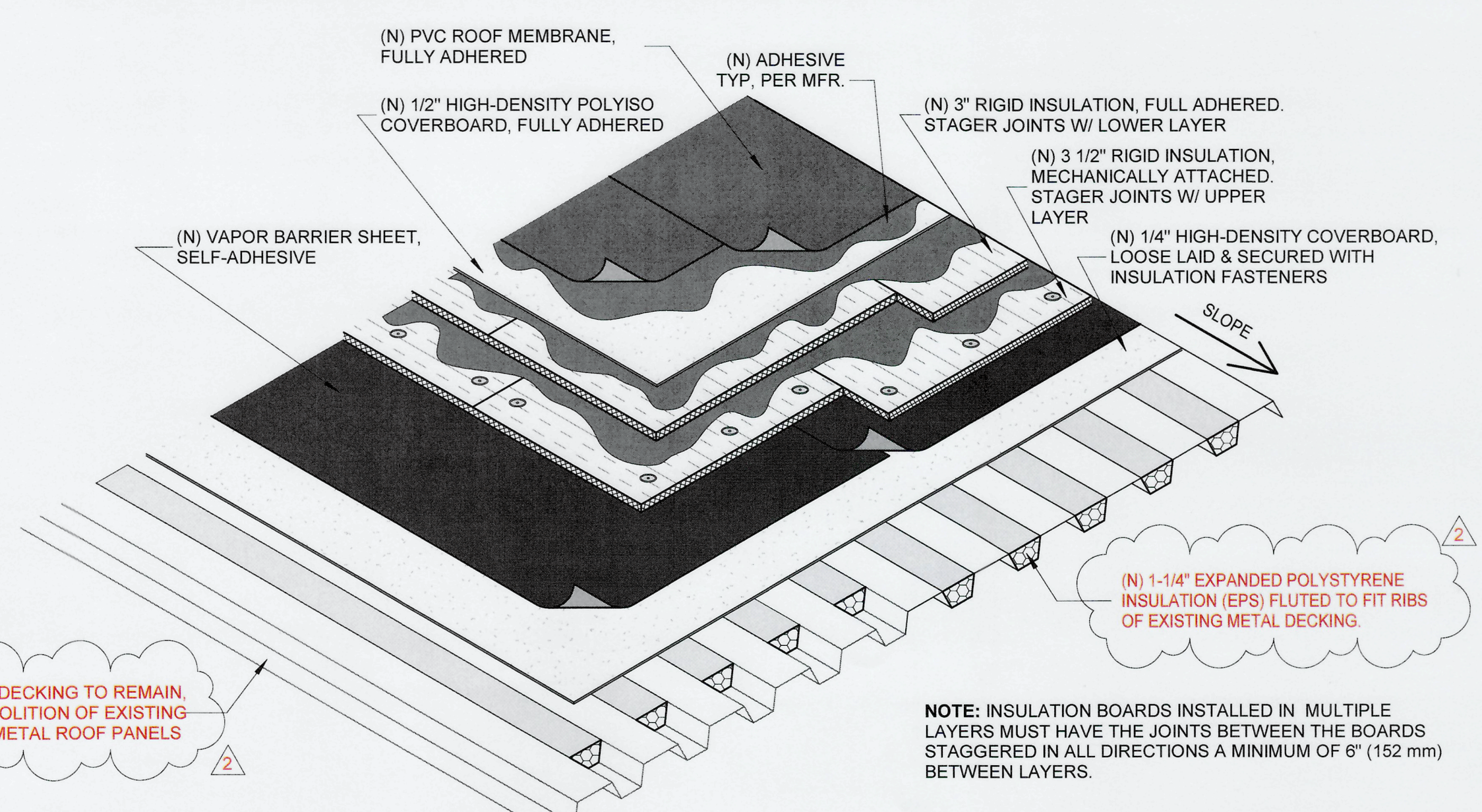
FALL PROTECTION ANCHORS SHOWN ON THE DRAWINGS ILLUSTRATE THE MINIMUM BASIS OF DESIGN. FINAL LAYOUT INCLUDING ALL COMPONENTS AND ACCESSORIES IS THE RESPONSIBILITY OF THE SYSTEM DESIGNER.

ROOF REPLACEMENT KEYNOTES

- 1 INSTALL (N) PVC ROOF ASSEMBLY, PER DETAIL 2/A1.10
- 2 (N) 22GA PREFINISHED METAL ROOF FLASHING, SEE DETAILS
- 3 (N) BOOT FLASHING AT EXISTING VENT THRU ROOF (VTR), PER 9/A5.10
- 4 (N) BIDDER DESIGNED FALL PROTECTION ANCHOR PER 11 01 00
- 5 (N) BIDDER DESIGNED HORIZONTAL CABLE LIFELINE PER 11 01 00
- 6 NOT USED
- 7 CUT & EXTEND (E) ROOF ACCESS LADDER, PER 10/A5.10
- 8 PROVIDE (N) ROOF ACCESS LADDER FOR UPPER ROOF
- 9 NOT USED
- 10 FURNISH & INSTALL "ROOF INSTALLATION INFORMATION PLAQUE" @ LOCATION DETERMINED BY THE ARCHITECT.
- 11 HEAVY DUTY WALK PADS

DRAWING LEGEND

- (E) VENT THROUGH ROOF (VTR) PER NOTE 3
- (N) BIDDER DESIGNED AND ENGINEERED FALL PROTECTION ANCHOR PER SECTION 11 01 00 - FALL PROTECTION SYSTEMS
- (N) BIDDER DESIGNED AND ENGINEERED HORIZONTAL CABLE LIFELINE PER SECTION 11 01 00 - FALL PROTECTION SYSTEMS
- (N) WALK PAD



2
A1.10
3/4" = 1'-0"

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BY: JMM
CY: JMM

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REVISION: 2
APPENDIX #1
APPENDIX #2

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STATE OF WASHINGTON

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DATE: 06/30/2024
PROJ. ENGR: JMM
DATE: 06/30/2024

APPROVED: [Signature]
DIRECTOR ENGR. DATE: 06/30/2024

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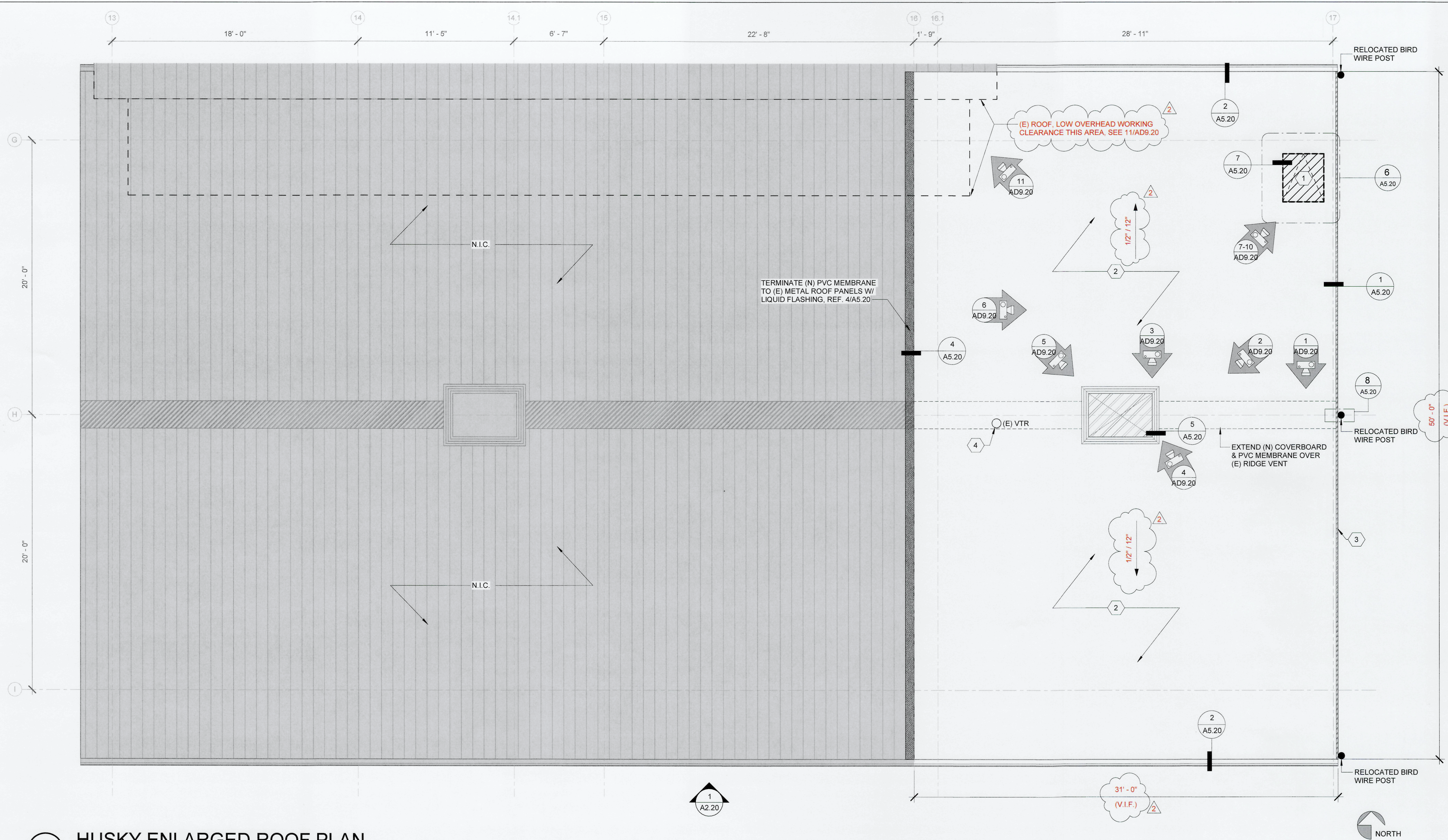
PCT STRAD BAY ROOF & HUSKY
MAINTENANCE TOWER ROOF
REPLACEMENTS
ENLARGED ROOF PLAN - PCT

SECTION: 02
RANGE: 03
TOWNSHIP: 20
DATE-HRZ: 201191-01
PARCEL: 0320024098
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6694
A1.10
SHT # 8 OF 16

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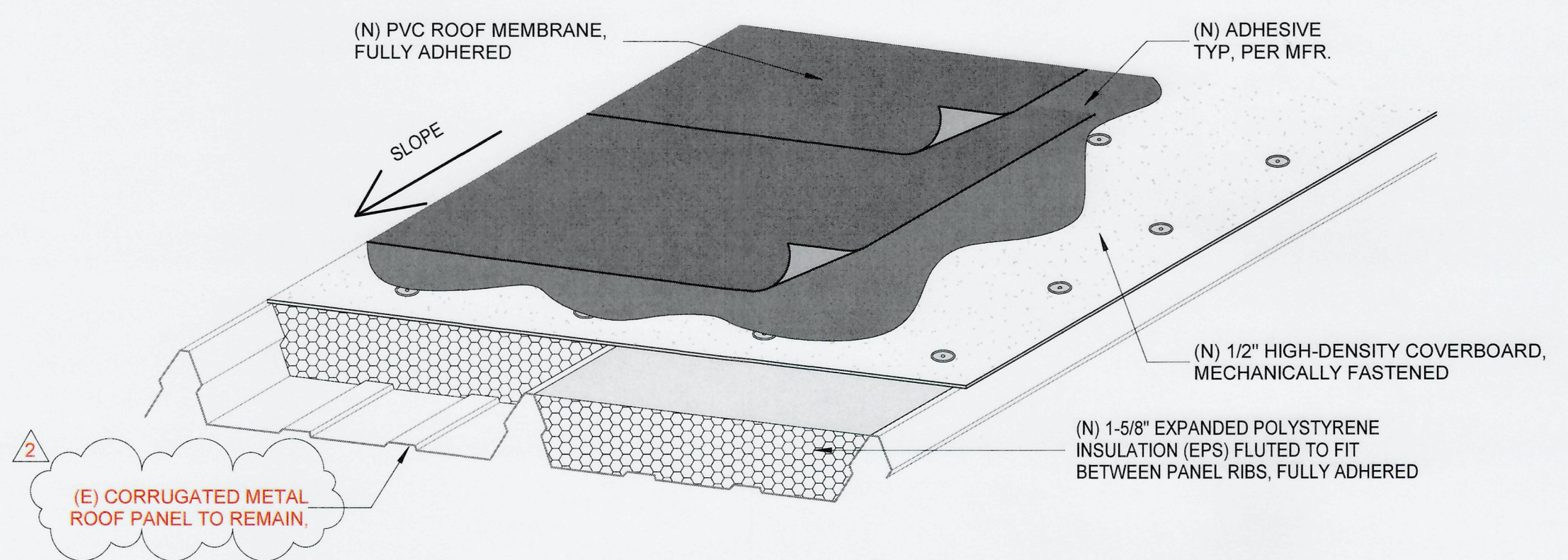
1
A1.20
1/4" = 1'-0"
HUSKY ENLARGED ROOF PLAN

ROOF REPLACEMENT KEYNOTES

- 1 DEMOLISH (E) ROOF ACCESS HATCH AND INFILL DECK, SEE DETAIL 6/A5.20
- 2 INSTALL (N) PVC ROOF ASSEMBLY, SEE DETAIL 2/A1.20
- 3 (N) 22GA PREFINISHED METAL ROOF FLASHING, SEE DETAILS
- 4 (N) BOOT FLASHING AT EXISTING VENT THRU ROOF (VTR), SEE DETAIL 3/A5.20

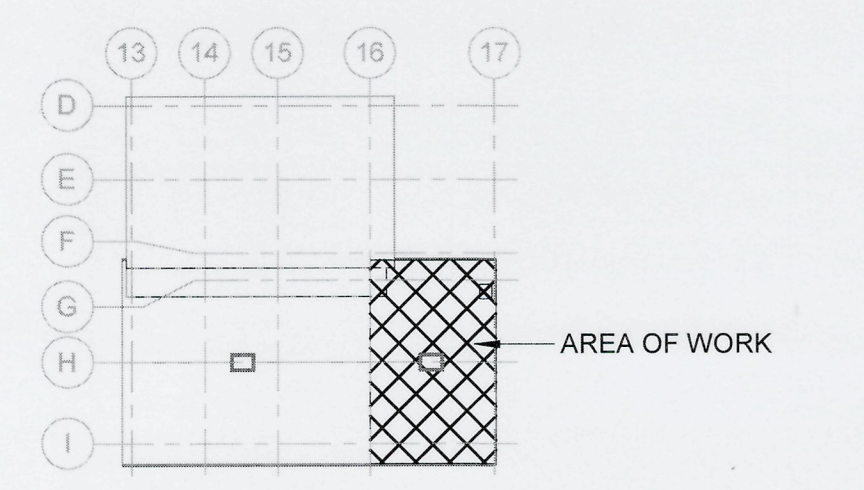
DRAWING LEGEND

- (E) VENT THROUGH ROOF (VTR) PER KEYNOTE 4
- (E) BIRD WIRE POST TO BE RELOCATED PER 8/A5.20
- ▣ (E) LOUVERED DOGHOUSE



2
A1.20
NTS
(N) ROOF ASSEMBLY - HUSKY

GENERAL NOTE: THOROUGHLY CLEAN AND PREPARE ALL EXISTING METAL SURFACE TO BE ADHERED IN ACCORDANCE WITH PVC MANUFACTURER'S RECOMMENDATIONS, TYP.



HUSKY KEY PLAN

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401-1837

DATE: 05/30/2024
APPR: JMM
CY

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BY: JMM
REVISION: 1
ADDENDUM #1
ADDENDUM #2

6273 REGISTERED ARCHITECT
Jerry D. Osborn
JERRY D. OSBORN
STATE OF WASHINGTON

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APPR: JMM
CY

CHECKER: [Signature]
CHECKED BY: [Signature]
DATE: 06/14/24

PROJ. ENGR: [Signature]
DATE: 06/14/24

APPROVED: [Signature]
DIRECTOR ENGR. DATE: 06/14/24

PORT ADDRESS: 3205 PORT OF TACOMA RD
TACOMA, WA 98421

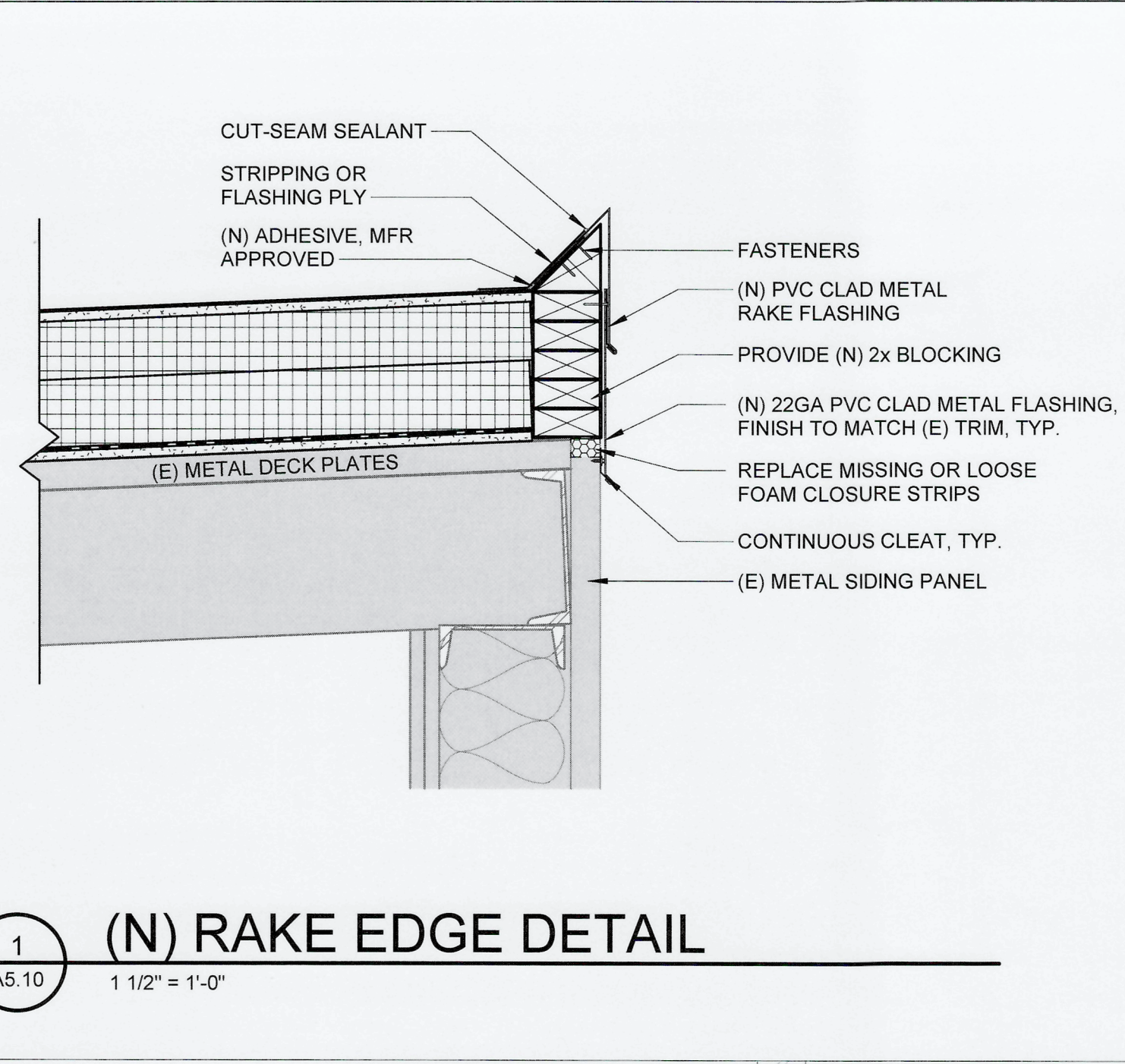
PCT STRAD BAY ROOF & HUSKY MAINTENANCE TOWER ROOF REPLACEMENTS ENLARGED ROOF PLAN - HUSKY

SECTION: 02
RANGE: 03
TOWNSHIP: 20
DATE-HRZ: 201191.01
VERT: 0320024098
DRAWING SCALE: As indicated
PARCEL: [Number]

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A1.20
SHEET # 9 OF 16

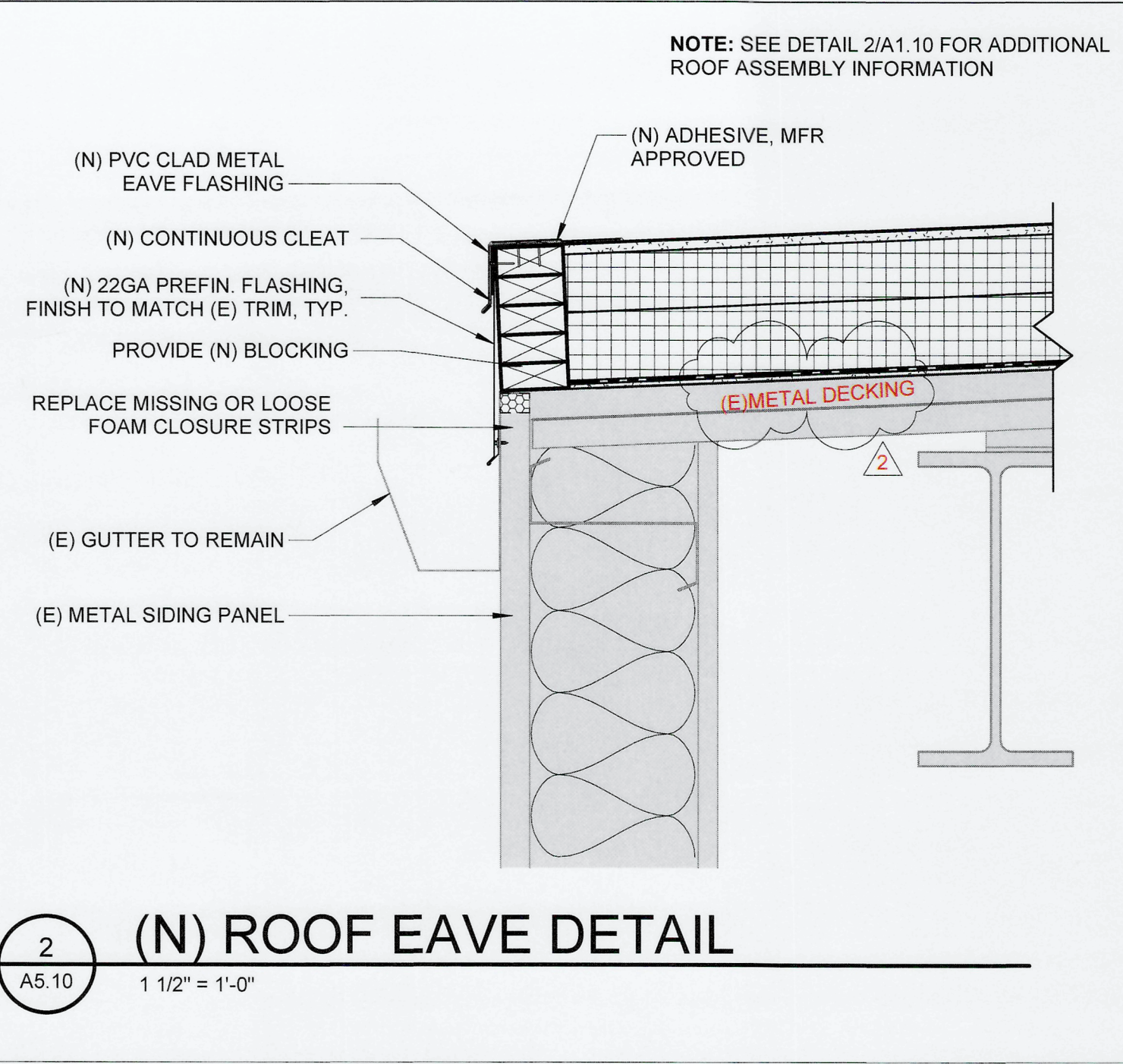
CONTRACT/CONS: 072112
M. ID: 201191.01
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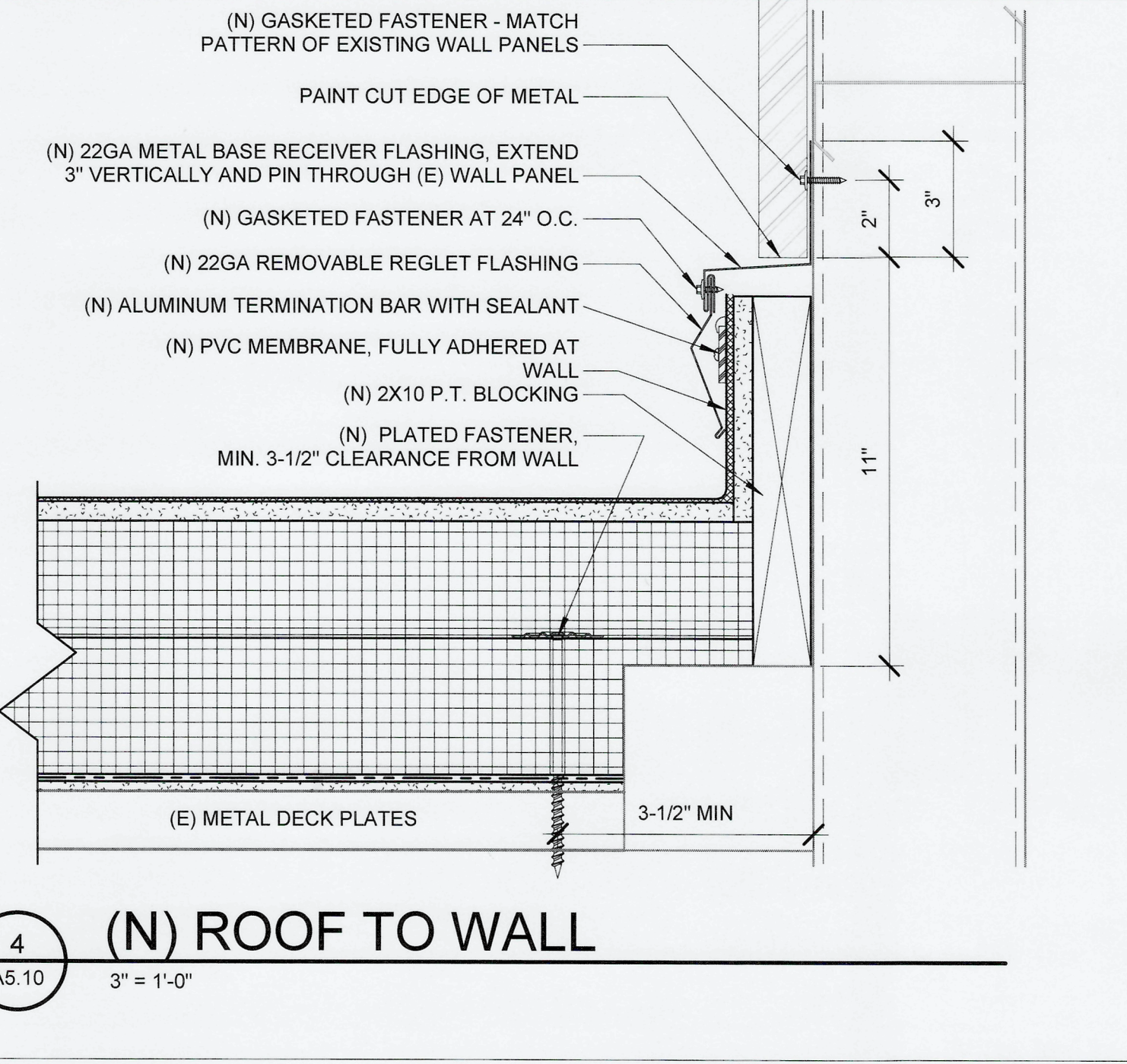
1 (N) RAKE EDGE DETAIL

A5.10 1 1/2" = 1'-0"



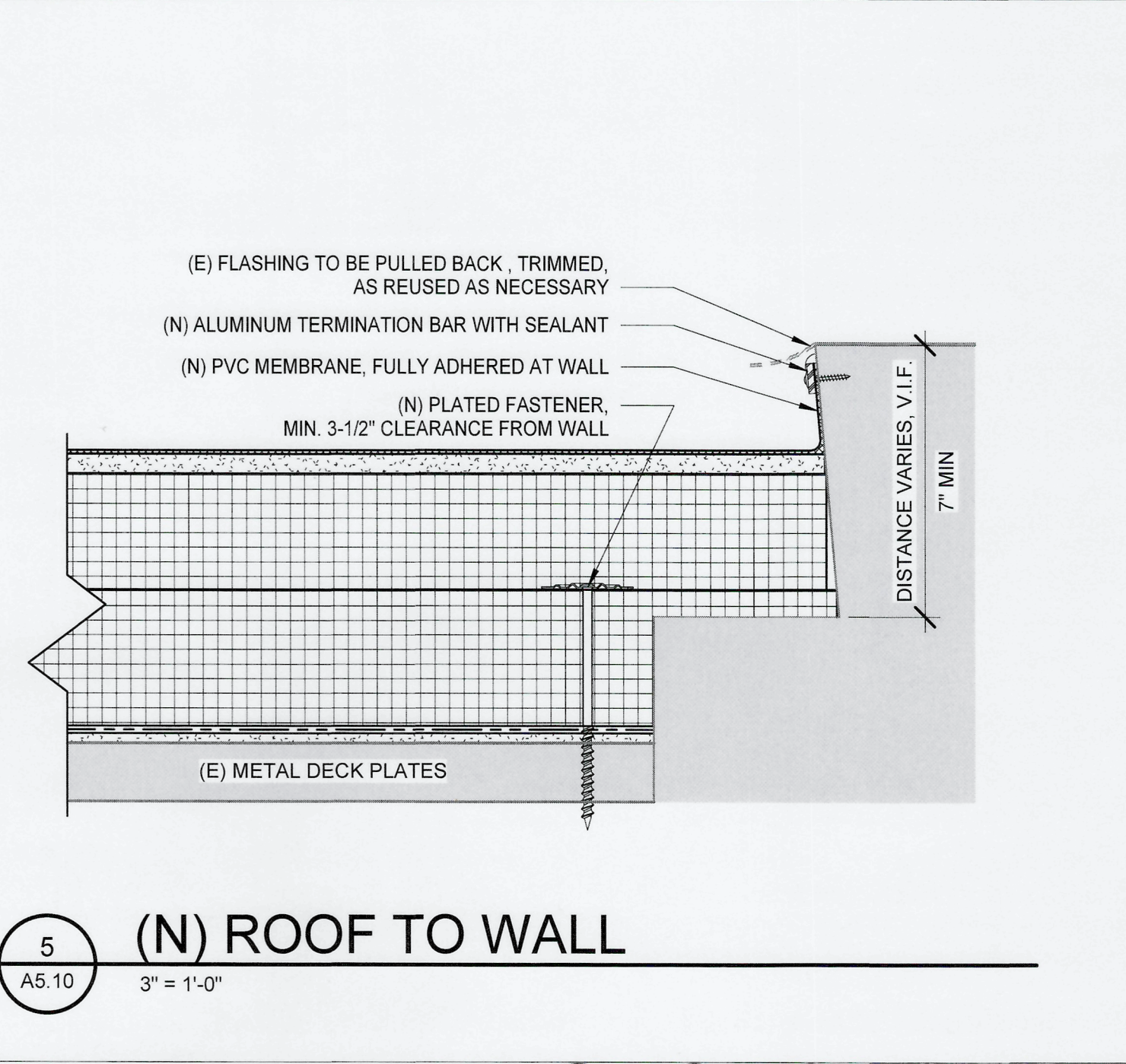
2 (N) ROOF EAVE DETAIL

A5.10 1 1/2" = 1'-0"



4 (N) ROOF TO WALL

A5.10 3" = 1'-0"



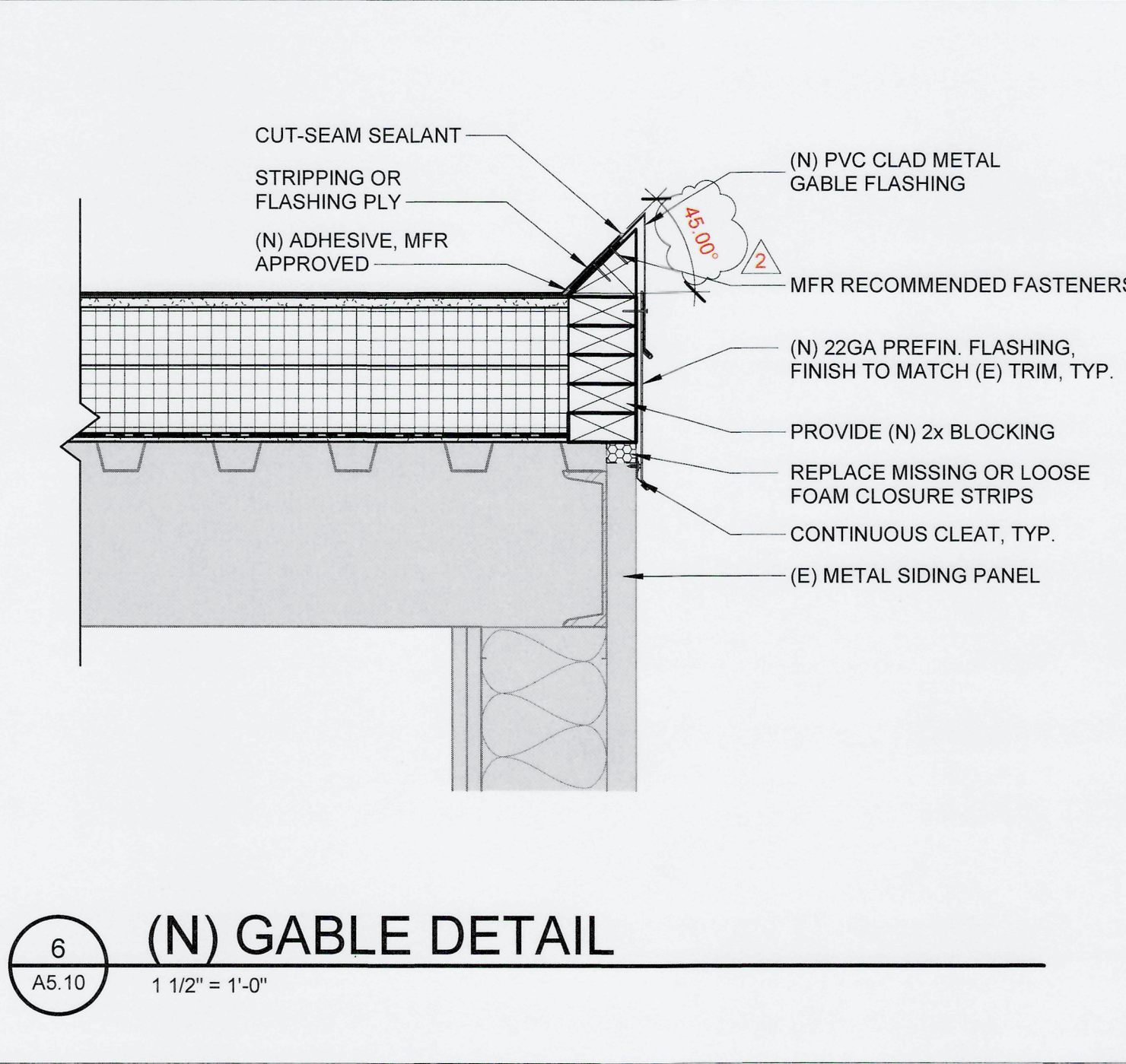
5 (N) ROOF TO WALL

A5.10 3" = 1'-0"

DEFERRED SUBMITTALS:

- ENGINEERED FALL PROTECTION SYSTEMS**

CONTRACTOR SHALL SUBMIT ALL REQUIRED DEFERRED SUBMITTAL DOCUMENTS FOR ENGINEERED FALL PROTECTION SYSTEMS, INCLUDING STRUCTURAL DETAILS AND CALCULATIONS FOR FALL PROTECTION ANCHORS AND LIFELINES. CALCULATIONS AND DETAILS SHALL BE STAMPED BY A WASHINGTON STATE LICENSED ENGINEER. REFER TO SPECIFICATION SECTION 11 01 00 - FALL PROTECTION SYSTEMS.

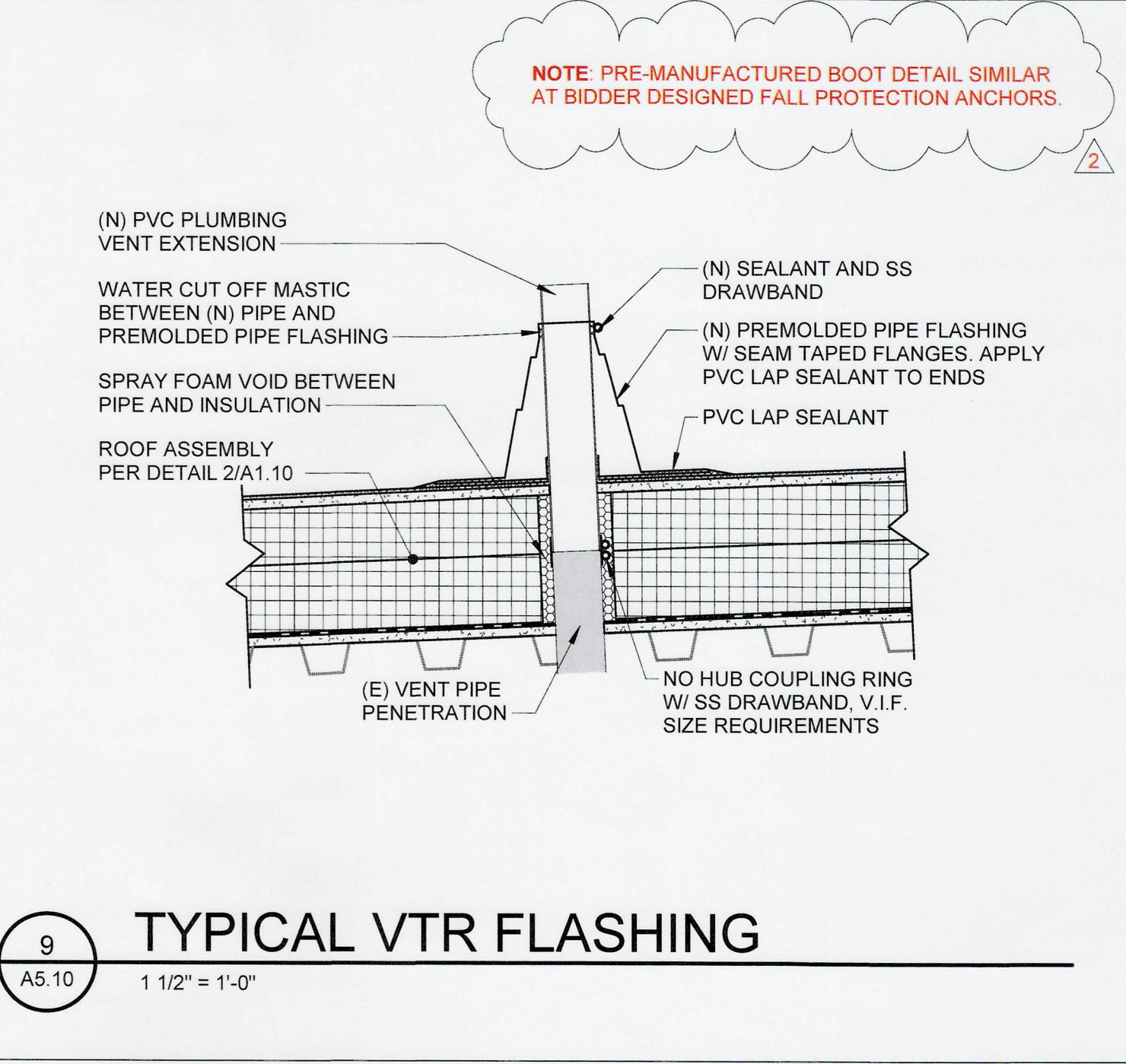


6 (N) GABLE DETAIL

A5.10 1 1/2" = 1'-0"

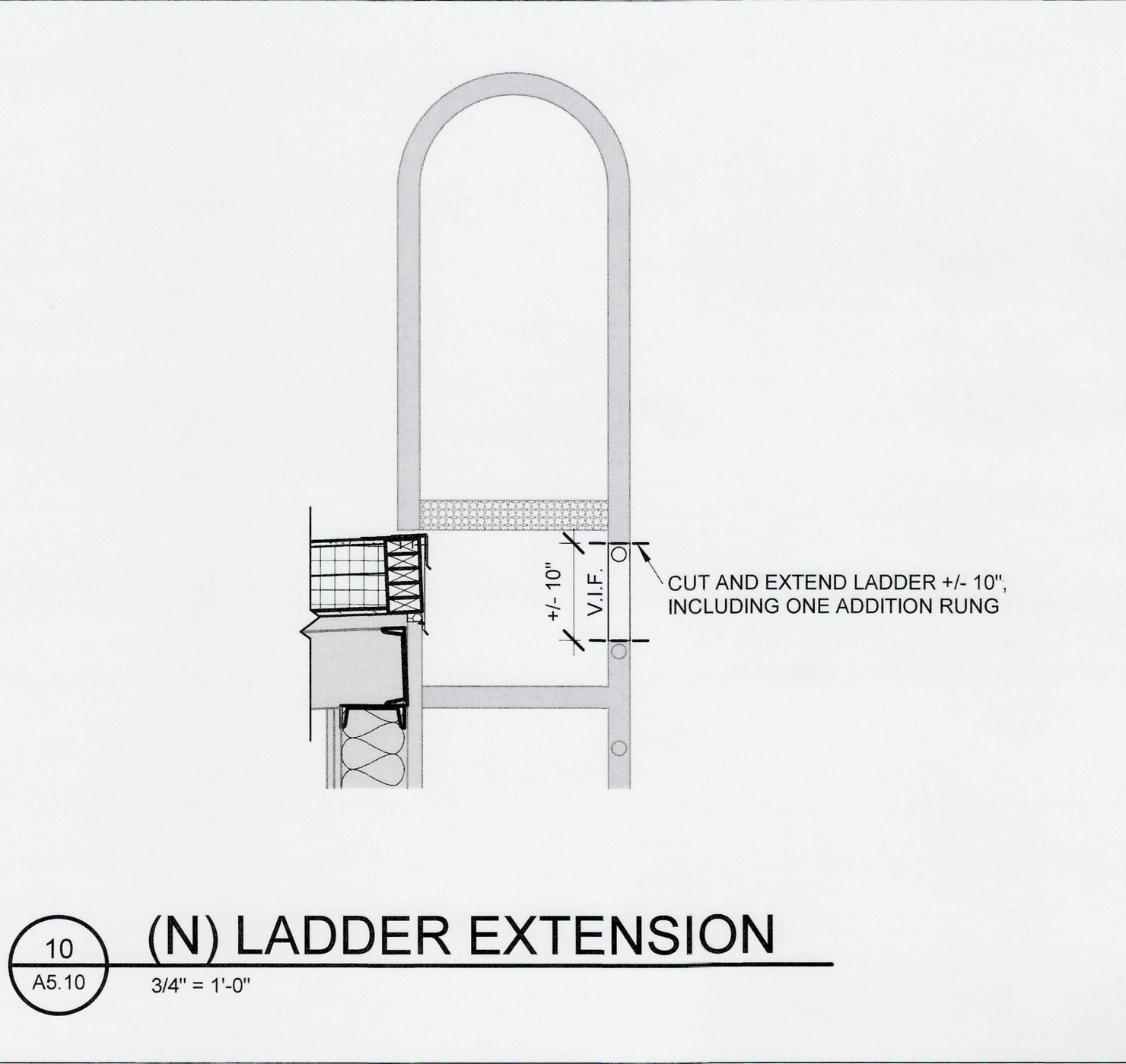
NOT USED

NOT USED



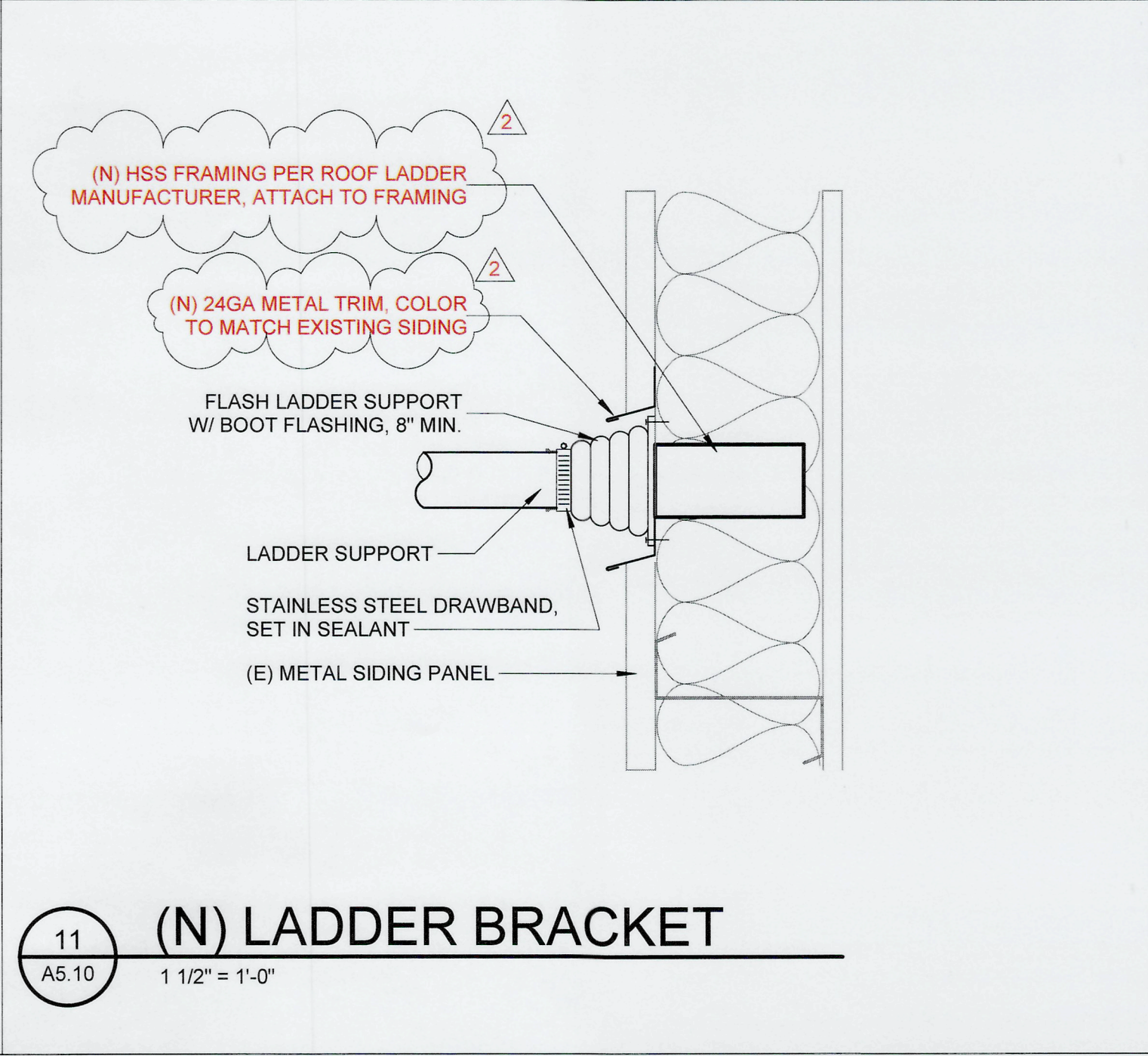
9 TYPICAL VTR FLASHING

A5.10 1 1/2" = 1'-0"



10 (N) LADDER EXTENSION

A5.10 3/4" = 1'-0"



11 (N) LADDER BRACKET

A5.10 1 1/2" = 1'-0"

6694 A5.10 SHIT #13 OF 16

PCT STRAD BAY ROOF & HUSKY MAINTENANCE TOWER ROOF REPLACEMENTS DETAILS - PCT

ARCHITECTURE + PLANNING
1001 SW KLUCKITAW WAY, STE 208
SEATTLE, WA 98134 | (206) 651-6442

REGISTERED ARCHITECT
JERRY D. OSBORN
STATE OF WASHINGTON

6273

APPROVED: *[Signature]* DIRECTOR
CHECKED BY: *[Signature]* DATE: *[Signature]*

DATE: 06/30/2024
APPR: JIM
BY: CY
CY
JIM

MARK: 1 ADDENDUM #1
2 ADDENDUM #2

DATE: 06/05/2024

PHASE: BID SET
TOWNSHIP: 20
RANGE: 03
SECTION: 02
PARCEL: 0320024098
DRAWING SCALE: As indicated

PORT ADDRESS: 3205 PORT OF TACOMA RD
TACOMA, WA 98421

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