CITY OF HAMMOND

RFP 23-38
ROOF REPLACEMENT CITY OF HAMMOND POLICE/FIRE FLEET BUILDING

November 16, 2022
10:00 a. m.

Received (4) Four Proposals:

Company	Total Price
Rycars Construction , LLC	$98, 978.00
Partin Roofing , LLC	$87, 900.00
Roofing Solutions , LLC	$74, 046.00
Supreme Roofing and Construction, LLC	$87, 557.00

Proposals were due in by 10:00 a. m. Wednesday, November 16, 2022.

Present:

Jana Thurman, Purchasing Manager
Vivian McGee, Buyer
C.Madere, Rycars Construction
Jerry Hiltibidal, Supreme Roofing and Construction
Rolland Lee, Partin Roofing

ATTENDANCE RECORD
A Mandatory Pre-proposal Conference
RFP 23-38
Roof Replacement the City of Hammond Police/Fire Fleet Building.
DATE 11/02/2022 9:00 a.m.

PLEASE PRINT CLEARLY

NAME	COMPANY/ADDRESS	PHONE NO.	FAX NO. & EMAIL
Miguel Plascencia	Partin Roofing	225 715 2550	miguel@partinroofing.com
Ethan Jacobsen	Roofing Solutions	225-317-1864	ejacobsen@roofingsolutionsla.com
Juan Iniguez	Marcore Roofing	(337) 753.2074	office@marcoreroofing.com
Jerry H. Hitibidal	Supreme Roof & Construction	(504) 799-9844	jerry@supremerac.com
Pat McCormick	RYCARS	Pat 504-915-5788 Dale 850-791-7022	aburks@rycars.com dale@rycars.com
Pete Lentini	City of Hammond	[illegible]	[illegible]@Tyler-Townes Roofing.com
Mike Forte	Tyler Townes Roofing	(318) 245-2411	
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Paolina Perez	Grizzly Roofing	337-255-9959	paolina@grizzlyroofing.com

SECTION 01 10 00

SUMMARY OF WORK

PART 1 GENERAL

1.01 RELATED SECTIONS

A. Division 010000 – General Requirements
B. Division 053000 – Steel Roof Deck
C. Division 061000 – Rough Carpentry
D. Division 074100 – Standing Seam Metal Roofing includes Insulation.
E. Division 076200 – Sheet Metal Flashing and Trim

1.02 PROJECT INFORMATION

A. Project Identification: Roof Replacement City of Hammond Fire/Police Administration Building

1. Project Location: 1290 SW Railroad Ave, Hammond, La. 70403

B. Owner Representative: Jana Thurman , City of Hammond Purchasing Department , Purchasing Manager 985-277-5633

1.03 DESCRIPTION

A. The Work includes the provision of all labor, material, equipment, management, coordination, supervision and administration to complete the Work as outlined.

B. The Contractor shall complete the following Work in a safe manner. The following outline of Work is noted by System. The Work includes, but is not limited to the following:

1. Removal of existing roofing system down to the steel deck. (Dispose of all roofing materials in a legal manner in an acceptable location by law.)
2. Install new perimeter 2x6 wood nailers and add wood blocking as appropriate to raise existing mechanical curbs, and penetrations. New wood blocking to meet the requirements of Factory Mutual FM 1-49 requirements.
3. Contractor responsible for raising existing Mechanical/AC Units, Vent Pipes and including electrical work needed to raise the units.

4. Removal of existing old equipment. (Holes in existing metal deck to be covered with minimum 16 gauge Galvanized plate, mechanically attached to the existing steel deck)

5. Replace damaged steel decking that has deflected due to existing gravel built up roof.

6. Install new polyisocyanurate insulation base Layer of 2" and top layer of 1.5" polyiso. Install new high temperature ice and water shield.

7.Install new Standing Seam Metal Roofing System to meet current IBC Code for this projects location.

NEW ROOFING SYSTEM DESCRIPTION

a. Preparation of existing steel roof deck, and all flashing substrates.
b. Installation of new 2x6 nailers at all required locations.
c. Polyisocyanurate Insulation (mechanically fastened).
d. High Temperature Ice and Water Shield.
e. Standing Seam Metal Roofing
f. Sheet Metal Flashing, including but not limited to fascia metal, ridge flashing, rake flashing, eave flashing, Gutters and Downspouts.

1.04 PROJECT COORDINATION RESTRICTIONS:

1. Owner will be occupying the building during reroofing activities. Coordination with the owner will be required to not disturb activities. Safety must be considered and required during construction.
2. Maintain access to the building entrance/exit. Do not close off or prevent exit from the building doors or walkways without owners approval or authorities having jurisdiction.
3. Owner must be notified a minimum of 72 hours in advance of construction activities.

1.05 PERMITS

1. Contractor is responsible for applying and obtaining permits required to successfully complete this projects specific work. Submital to owner required.

1.06 BUILDING CODES

1. Compliance with Current International Building Code is required. Submit all compliance for the roofing system called out in specifications.

END OF SECTION

ANSI/SDI-RD1.0 Standard for Steel Roof Deck

1. General

1.1 Scope:

A. This Specification for Steel Roof Deck shall govern the materials, design, and erection of cold formed steel deck used for the support of roofing materials, design live loads and SDI construction loads.

B. Commentary shall not be considered part of the mandatory document.

1.2 Reference Codes, Standards and Documents:

A. Codes and Standards: For purposes of this Standard, comply with applicable provisions of the following Codes and Standards:

1. American Iron and Steel Institute (AISI) Standard - *North American Specification for the Design of Cold-Formed Steel Structural Members,* 2001 Edition with Supplement 2004
2. American Welding Society - ANSI/AWS D1.3 Structural Welding Code/Sheet Steel - 98 Structural Welding Code - Sheet Steel
3. American Society for Testing and Materials (ASTM) A653 (A653M)-06, A924 (A924M)-06, A1008 (A1008M)-06
4. American Society of Civil Engineering (ASCE) – SEI/ASCE7-05
5. Underwriters Laboratories (UL) Fire Resistance Directory - http://www.ul.com/database 2006

B. Reference Documents: Refer to the following documents:

1. SDI Manual of Construction with Steel Deck - MOC2-2006
2. SDI Standard Practice Details - SPD2-2001
3. SDI Position Statement - Field Painting of Steel Deck-2004
4. SDI Diaphragm Design Manual - DDM03-2004

2. Products

2.1 Material:

A. Sheet steel for galvanized deck shall conform to ASTM A653 (A653M) Structural Quality, with a minimum yield strength of 33 ksi (230 MPa).

B. Sheet steel for cold rolled plus painted deck shall conform to ASTM A1008 (A1008M) with a minimum yield strength of 33 ksi (230 MPa). Other structural sheet steels or high strength low alloy steels are acceptable, and shall be selected from the *North American Specification for the Design of Cold-Formed Steel Structural Members.*

C. Sheet steel for accessories shall conform to ASTM A653 (A653M) Structural Quality for structural accessories, ASTM A653 (A653M) Commercial Quality for non-structural accessories, or ASTM A1008 (A1008M) for either structural or non-structural accessories. Other structural sheet steels or high strength low alloy steels are acceptable, and shall be selected from the *North American Specification for the Design of Cold-Formed Steel Structural Members.*

D. The deck type (profile) and thickness (gage) shall be as shown on the plans.

2.2 Tolerance:

A. Uncoated thickness shall not be less than 95% of the design thickness as listed in Table 2.2.1:

Table 2.2.1

Gage No.	Design Thickness		Minimum Thickness	
	in.	mm.	in.	mm.
22	0.0295	0.75	0.028	0.71
21	0.0329	0.84	0.031	0.79
20	0.0358	0.91	0.034	0.86
19	0.0418	1.06	0.040	1.01
18	0.0474	1.20	0.045	1.14
17	0.0538	1.37	0.051	1.30
16	0.0598	1.52	0.057	1.44

B. Panel length shall be within plus or minus 1/2 inch (12 mm) of specified length.

C. Panel cover width shall be no greater than minus 3/8 inch (10 mm), plus 3/4 inch (20 mm).

D. Panel camber and/or sweep shall be no greater than 1/4 inch in 10 foot length (6 mm in 3 m).

E. Panel end out of square shall not be greater than 1/8 inch per foot of panel width (10 mm per m).

2.3 Finish:

A. Galvanizing shall conform to ASTM A653 (A653M).

B. Painted with a shop coat of primer shall be applied to steel sheet conforming to ASTM A1008 (A1008M).

C. The finish of the steel roof deck shall be suitable for the environment of the structure.

ANSI/SDI-RD1.0 Standard for Steel Roof Deck

2.3 Finish:

Commentary: The primer coat is intended to protect the steel for only a short period of exposure in ordinary atmospheric conditions and shall be considered an impermanent and provisional coating. Field painting of prime painted deck is recommended especially where the deck is exposed. (See SDI *Field Painting of Steel Deck*).

In corrosive or high moisture atmospheres, a galvanized finish is desirable in a G60 (Z180) or G90 (Z275) coating. In highly corrosive or chemical atmospheres or where reactive materials could be in contact with the steel deck, special care in specifying the finish should be used.

2.4 Design:

A. The deck shall be selected by the designer to provide the load capabilities shown on the drawings (design live and dead loads and the SDI construction loads).

1. The section properties of the steel roof unit deck shall be computed in accordance with the *North American Specification for the Design of Cold-Formed Steel Structural Members.*

2. Allowable Stress Design (ASD): Bending stress shall not exceed 0.60 times the yield strength with a maximum of 36 ksi (250 MPa) under the combined dead and design live loads.

3. Load and Resistance Factor Design (LRFD): The load factors are defined in the governing code. ASCE 7 (See section 1.2.A.5) shall be used in the absence of a governing code. The resistance factors and nominal resistances shall be determined in accordance with the *North American Specification for the Design of Cold-Formed Steel Structural Members.*

4. Deck Deflection: Deflection of the deck shall not exceed 1/240 of the span (centerline to centerline) or 1 inch (25 mm), whichever is less, under the uniformly distributed design live load. All spans are to be considered center-to-center of supports.

Commentary: The adequacy of deck edge support details should be reviewed by the designer. At the building perimeter or any other deck termination or direction change, occasional concentrated loading of the roof deck could result in temporary differences in deflection between the roof deck and the adjacent stationary building component. Supplemental support such as a perimeter angle may be warranted.

5. Suspended Loads: All suspended loads shall be included in the analysis and calculations for stress and deflection.

Commentary: The designer must take into account the sequence of loading. Suspended loads may include ceilings, light fixtures, ducts or other utilities. The designer must be informed of any loads applied after the roofing has been installed.

6. Construction and Maintenance Loads: Deck shall be selected by the designer to provide a minimum 30 lbs/sq.ft. (1.44 kPa) construction load. Span lengths shall be governed by a maximum stress of 0.7 Fy and a maximum deflection of 1/240 of the span with a 200-pound (0.89 kN) concentrated load at midspan on a 1 foot (300 mm) wide section of deck. If the designer contemplates loads of greater magnitude, spans shall be decreased or the thickness of the steel deck increased as required. All loads shall be distributed by appropriate means to prevent damage to the completed assembly during construction.

7. Cantilever loads: The cantilever span shall be determined by the lowest value considering,
(a) construction phase load of 10 psf (0.48 kPa) on adjacent span and cantilever, plus 200 pound load (0.89 kN) at end of cantilever with a stress limit of 0.7 Fy (ASD),
(b) a service load of 45 psf (2.15 kPa) on adjacent span and cantilever, plus 100 pound load (0.44 kN) at end of cantilever with a stress limit of 0.6 Fy (ASD), or
(c) with service loads, a deflection limitation of 1/240 of adjacent span for interior span and deflection limitation at end of cantilever of 1/120 of overhang.

Commentary: Under Construction and Maintenance Loads, and Cantilever Loads, 0.7 Fy maximum stress was selected to unify the ASD and LRFD values. Apply a load factor of 1.4 to 200 pound load when LRFD is used.

8. Diaphragm Shear Capacity: Roof deck shear capacity shall be determined in accordance with the SDI Diaphragm Design Manual or from tests conducted by an independent professional engineer.

Commentary: Calculations of diaphragm strength and stiffness should be made using the SDI Diaphragm Design Manual. If testing is used as the means for determining the diaphragm strength and stiffness, then it should follow the AISI TS 7-02 test protocol.

B. Load Tables: Uniform loads determined for published tables shall be based on equal adjacent two and three span conditions and on single spans. Appropriate combinations of shear and bending shall be made to determine the published loads. Lengths of 1-1/2 inches (38 mm) for end bearing and 4 inches (100 mm) for interior bearing shall be used to check web crippling. Deflection coefficients shall be 0.013 for single spans, 0.0054 for double spans and 0.0069 for triple spans.

Commentary: For deck layouts that provide more than three equal spans, the user can apply the loads published for three spans. Published uniform load tables do not apply for adjacent spans that differ in length by more than 10%.

2.5 Accessories:

A. Ridge and valley plates, and flat plates at change of deck direction shall be furnished as shown on plans to provide a flat (finished) surface for the application of roof insulation and roof cover.

B. Sump pans shall be furnished to receive roof drains as shown on plans. Holes for drains are to be field cut (by others) in the field.

C. Mechanical fasteners or welds shall be permitted for deck and accessory attachment.

3. Execution

3.1 Installation/General:

A. Support framing and field conditions shall be examined for compliance with requirements for installation tolerances and other conditions affecting performance of work of this section. All OSHA rules for erection shall be followed.

B. Deck panels and accessories shall be installed according to the SDI Manual of Construction with Steel Deck, placement plans, and requirements of this Section.

C. Deck panels shall be placed on structural supports and adjusted to final position with ends aligned, and attached securely to the supports immediately after placement in order to form a safe working platform. All deck sheets shall have adequate bearing and fastening to all supports to prevent slip off during construction. Deck ends over supports shall be installed with a minimum end bearing of 1-1/2 inches (38 mm). Deck areas subject to heavy or repeated traffic, concentrated loads, impact loads, wheel loads, etc. shall be adequately protected by planking or other approved means to avoid overloading and/or damage.

D. Lapped or Butted Ends: Deck ends shall be either lapped or butted over supports. Gaps up to 1 inch (25 mm) shall be permitted at butted ends.

E. Deck units and accessories shall be cut and neatly fit around scheduled openings and other work projecting through or adjacent to the decking.

Commentary: It is the responsibility of the designer to designate holes/openings to be decked over in compliance with applicable federal and state OSHA directives. Care should be taken to analyze spans between supports at openings, when determining those holes/openings to be decked over. When a framed opening span exceeds the maximum deck span limits for construction loads, the opening must be detailed around instead of decked over. (Minimum roof construction load 30 lbs/sq ft (1.44kPa), unless job specific requirements dictate otherwise).

F. Trades that subsequently cut unscheduled openings through the deck shall be responsible for reinforcing these openings based upon an approved engineered design.

ANSI/SDI-RD1.0 Standard for Steel Roof Deck

3.2 Installation/Anchorage:

A. Roof deck units shall be anchored to steel supporting members including perimeter support steel and/or bearing walls by arc spot welds of the following diameter and spacing, fillet welds of equal strength, or mechanical fasteners. Anchorage shall provide lateral stability to the top flange of the supporting structural members and resist the following minimum gross uplifts; 45 pounds per square foot (2.15 kPa) for eave overhang; 30 pounds per square foot (1.44 kPa) for all other roof areas. The dead load of the roof deck construction shall be deducted from the above forces.

1. All welding of deck shall be in accordance with ANSI/AWS D1.3, Structural Welding Code - Sheet Steel. Each welder shall demonstrate an ability to produce satisfactory welds using a procedure such as shown in the SDI Manual of Construction with Steel Deck, and/or as described in ANSI/AWS D1.3.
2. Welding washers shall be used on all deck units with metal thickness less than 0.028 inches (0.7 mm). Welding washers shall be a minimum thickness of 0.0598 inches (16 gage, 1.50 mm) and have a nominal 3/8 inch (10 mm) diameter hole.
3. Where welding washers are not used, a minimum visible 5/8 inch (15 mm) diameter arc puddle weld shall be used. Weld metal shall penetrate all layers of deck material at end laps and shall have good fusion to the supporting members.
4. Weld spacing: Ribs of panels shall be welded at each support. Space additional welds an average of 12 inches (300 mm) apart but not more than 18 inches (460 mm).
5. When used, fillet welds shall be at least 1-1/2 inches (38 mm) long.
6. Mechanical fasteners, either powder actuated, pneumatically driven, or screws, shall be permitted in lieu of welding to fasten deck to supporting framing if fasteners meet all project service requirements. When the fasteners are powder actuated or pneumatically driven, the load value per fastener used to determine the maximum fastener spacing is based on a minimum structural support thickness of not less than 1/8 inch (3 mm) and on the fastener providing a minimum 5/16 inch (8 mm) diameter bearing surface (fastener head size). When the structural support thickness is less than 1/8 inch (3 mm), powder actuated or pneumatically driven fasteners shall not be used, but screws are acceptable.

Commentary: Mechanical fasteners (screws, powder or pneumatically driven fasteners, etc.) are recognized as viable anchoring methods, provided the type and spacing of the fastener satisfies the design criteria. Documentation in the form of test data, design calculations, or design charts should be submitted by the fastener manufacturer as the basis for obtaining approval.

7. For deck units with spans greater than 5 feet (1.5 m), side laps and perimeter edges of units between span supports shall be fastened at intervals not exceeding 36 inches (1 m) on center, using one of the following methods:
   a. #10 self drilling screws.
   b. Crimp or button punch.
   c. Arc puddle welds 5/8 inch (15 mm) minimum visible diameter, or minimum 1 inch (25 mm) long fillet weld.

Commentary: The above side lap spacing is a minimum. Service loads or diaphragm design may require closer spacing. Good metal to metal contact is necessary for a good side lap weld. Burn holes are to be expected.

B. Accessory Attachment:

1. Accessories shall be anchored to supporting members by arc spot welds or self drilling screws at 12 inches (300 mm) maximum intervals or as shown on design drawings.

Roof Replacement City of Hammond Fire/Police Fleet Building
1290 SW Railroad Ave
Hammond, La. 70403

SECTION 06 10 00

ROUGH CARPENTRY

PART 1 GENERAL

1.01 SUMMARY

1. Section Includes:
   a. Rooftop equipment Bases and Supporting Curbs.
   b. Wood Nailers around Perimeter
   c. Wood Sleepers and Furring

1.02 RELATED SECTIONS

A. Division 011000 – Summary of Work
B. Division 053000 – Steel Roof Deck
C. Division 074100 – Standing Seam Metal Roofing and Insulation
D. Division 076200 – Sheet Metal Flashing and Trim

1.03 QUALITY ASSURANCE

A. Factory mark each piece of lumber to identify type, grade, agency providing inspection service. Producing mill, and other qualities as specified.
B. Only competent carpenters shall be employed and used to install materials.
C. Provide dressed lumber, S4S, unless otherwise indicated.
D. Maximum moisture content of Lumber, 19 % percent unless otherwise noted.
E. Remove and do not use any boards that are warped or show signs of defects.

1.04 DELIVERY AND STORAGE

A. Materials must be kept dry during delivery and storage
   1. Protect against weather and contact with wet or damp surfaces.
   2. Stack lumber and provide air circulation within stacks.

PART 2 PRODUCTS

2.01 MATERIALS

A. GENERAL WOOD PRODUCTS

1. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. Provide Lumber that complies with applicable rules of any ruling agency certified by ALSC board of review.

B. WOOD PRESERVATIVE TREATED LUMBER

1. Preservative Treatment by pressure process: AWPA U1; Sue Category UC3b for exterior construction not in contact with the ground
   a. Preservative Chemicals: acceptable to authorities having jurisdiction.

2.02 FASTENERS

1. Use only the type, size, material and finish recommended by applicable Federal specifications for screws, bolts, nuts, washers and anchoring devices. New wood nailers must meet requirements of Factory Mutual 1-49. Fastener type and finish/material must be acceptable for use with treated wood.

2.03 INSTALLATION

A. Provide new treated wood blocking as show in shop drawings.
B. Wood Blocking must match the height of the new roofing system's cover board.
C. Set rough carpentry to required levels and lines with boards plumb, true to line, cut and fitted.
D. Where wood preservative-treated lumber is installed adjacent or in contact with metal decking, install continuous flexible flashing separator between wood and metal decking.
E. Securely attach rough carpentry work to substrate by fastening and anchoring as indicated. Comply with NES NER-272 for power driven fasteners.

END OF SECTION

SECTION 07410
STANDING SEAM METAL ROOFING

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

A. This section covers the pre-finished, pre-fabricated Architectural standing seam roof system. All metal trim, accessories, fasteners, high temperature underlayment and sealants indicated on the drawings as part of this section.

B. Drawings and general provisions of the Contract, including general and Supplementary Conditions and Division 01 Specifications, apply to this section.

C. Related Work Specified Elsewhere

1. Steel Roof Deck. (repair of section of steel roof deck that is deflected.)

1.2 SUMMARY

A. Section Includes

1. Standing Seam metal roof panels
2. Polyisocyanurate Insulation
3. High Temperature Underlayment

B. Related work specified elsewhere.

1. Section 06100 – Rough Carpentry
2. Section 07600 - Flashing and Sheet Metal

C. System Summary (Main Building and Side Roofs)

1. Existing Steel Roof Deck
2. New Polyisocyanurate Insulation 2" Base Layer and 1.5" Top Layer
3. New High Temperature Underlayment
4. New Standing Seam Metal Roofing System
5. New Gutters and Downspouts

1.3 DEFINITIONS

A. Metal Roof Panel Assembly: Metal roof panels, attachment system components, and accessories necessary for a complete weathertight roofing system.

B. References:

1. American Society for Testing and Materials (ASTM)
    a. ASTM A 653: Steel Sheet, Zinc Coated by the Hot Dip Process
    b. ASTM A 792: Steel Sheet, Aluminum-Zinc Alloy Coated by the Hot Dip Process
    c. ASTM D 1970 Standard Specification for Peel n Stick High Temperature Underlayment
2. Sheet Metal and Air Conditioning Contractors National Association (SMACNA)
    a. SMACNA Architectural Sheet Metal Manual, 1993 edition
3. Metal Construction Association
4. Code References
    a. ASCE 7-10, Minimum Loads for Buildings and Other Structures
    b. BOCA National Building Codes
    c. UBC Uniform Building Code
    d. SBC Standard Building Code
    e. IBC International Building Code

1.4 QUALITY ASSURANCE

A. Manufacturer and erector shall demonstrate experience of a minimum of five (10) years in this type of project.

B. Installer to provide documentation that they are certified to install and obtain manufacturer's 30 year weather-tight warranty including flashings.

C. Installer to provide stamped engineering verify the new roof system meets current IBC Code requirements.

1.5 SUBSTITUTIONS

A. The material, products and equipment specified in this section establish a standard for required function, dimension, appearance and quality to be met by any proposed substitution.

1.6 SYSTEM DESCRIPTION

A. Material to comply with:

1. ASTM A792/A792M Standard Specification for Sheet Steel, 55% Aluminum-Zinc Alloy Coated by the Hot-Dip process. Steel to be minimum 24 gauge.

1.6 ROOF SYSTEM PERFORMANCE TESTING

A. General Performance: Metal roof panels shall comply with performance requirements without failure due to defective manufacture, fabrication, installation or other defects in construction.

B. Roof System shall be designed to meet 130 mph wind speed including International Building Code Wind Load requirements. Stamped engineering by a Louisiana registered engineer shall be provided to designer of record.

C. Panels to meet:

1. Water Penetration: When tested per ASTM E-283/1680 and ASTM E-331/1646 there shall be no uncontrolled water penetration or air infiltration through the panel joints.

2. Roof System shall be designed to meet a UL Class 90 wind uplift in accordance with UL standard 580 and panel system shall be ASTM 1592 Tested and approved

3. UL 2218 - Impact Resistance rated

D. Polyisocyanurate Insulation to meet ASTM C 1289, Type II Class 1, Grade 2 20 psi

1. 2 Layers of 2.6" to meet and R value of 30. To be fastened with a minimum of 5 each #12 fasteners and 3" Steel plates per 4x8 board.

1.7 WARRANTIES

A. Weathertight warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace standing seam metal roof panel assemblies that fail to remain weathertight, including leaks, within specified warranty period. (Warranty to include flashings, excluding gutters and downspouts)

1. Warranty Period: 20 Years from date of Substantial Completion

B. Finish warranty: Manufacturer's standard form in which manufacturer agrees to repair finish or replace standing seam metal roof panels that show evidence of deterioration of factory-applied finish within specified warranty period.

1. Exposed Panels Finish - deterioration includes the following:

a. Color fading more than 5 hunter units when tested according to ASTM D 2244

b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214

c. Cracking, checking, peeling or failure of a paint to adhere to a bare metal.

2. Warranty Period: 30 Years from the date of substantial completion

C. Applicator shall furnish written warranty for a two (2) year period from date of substantial completion of building covering repairs required to maintain roof and flashings in watertight condition.

1.8 SUBMITTALS

A. Furnish detailed shop drawings showing profile and gauge of exterior sheets, location and type of fasteners, location, gauges, shape and method of attachment of all trim locations and types of sealants, and any other details as may be required for a weather-tight installation.

B. Stamped Engineering showing roof system meeting 130 mph wind speed. Stamped engineering to provide clip spacing.

C. Shop drawings: Show fabrication and installation layouts of metal roof panels, metal wall panels or metal soffit panels, details of edge conditions, side-seam joints, panel profiles, corners, anchorages, trim, flashings, closures and accessories, and special details. Distinguish between factory and field-assembled work

D. Coordination Drawings: Roof plans, drawn to scale, on which the following are shown and coordinated with each other, based on input from installer of the items involved:

1. Roof panels and attachments
2. Roof-mounted items including roof curbs.

1.9 DELIVERY, STORAGE AND HANDLING

A. Ordering: Comply with manufacturer's ordering instruction and lead time requirements to avoid construction delays.

B. Deliver components, sheets, metal roof panels and other manufactured items so as not to be damaged or deformed. Package metal roof panels for protection during transportation and handling.

C. Unload, store and erect metal roof panels in a manner to prevent bending, warping, twisting and surface damage.

D. Stack metal roof panels on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal roof panels to ensure dryness. Do not store metal roof panels in contact with other materials that might cause staining, denting or other surface damage.

E. Protect strippable protective coating on any metal coated product from exposure to sunlight and high humidity, except to the extent necessary for material installation.

1.10 PROJECT CONDITIONS

A. Weather Limitations: proceed with installation only when existing and forecasted weather conditions permit metal roof panel work to be performed.

B. Field Measurements: Verify actual dimensions of construction contiguous with metal roof panels by field measurements before fabrication.

1.11 COORDINATION

A. Coordinate sizes and locations of roof curbs, equipment supports and roof penetrations with actual equipment provided.

B. Coordinate metal roof panels with rain drainage work, flashing, trim and construction of decks, parapet walls and other adjoining work to provide a leakproof, secure and noncorrosive installation.

PART 2 - PRODUCTS

2.1 PANEL DESIGN

A. General: Provide factory-formed metal roof panels designed to be installed by lapping and interconnecting raised side edges of adjacent panels with joint type indicated and mechanically attaching panels to supports using concealed clips in side laps. Include clips, cleats, pressure plates and accessories required for a weathertight installation.

B. Roof panels shall be standing seam in minimum 24 gauge thickness, 16" widths with 2" high seams that are mechanically seamed together @ 180 degrees.

C. Panels are recommended to be produced with Striations.

D. Panels to be designed for attachment with concealed fastener clips, spaced as required by the manufacturer to provide for both positive and negative design loads, while allowing for the expansion and contraction of the entire roof system resulting from variations in temperature.

E. Forming: Use continuous end rolling method. No end laps on panels.

2.2 ACCEPTABLE MANUFACTURERS

A. Petersen Aluminum Corp, Tyler, TX, 800-441-8661, Tite-Loc Plus. Basis of Design

B. Imetco

C. Prior Approved equals

2.3 MATERIALS AND FINISHES

A. Preformed roofing panels shall be fabricated of 24 GA Steel

B. Finish shall be Kynar 500 or Hylar 5000 Fluorocarbon coating with a top side film thickness of 0.70 to 0.90 mil over a 0.25 to 0.3 mil prime coat to provide a total dry film thickness of 0.95 to 1.25 mil, to meet AAMA 621. Bottom side shall be coated with a primer with a dry film thickness of 0.25 mil. Finish shall conform to all tests for adhesions, flexibility and longevity as specified by Kynar 500 or Hylar 5000 finish supplier.

C. If Strippable coating to be applied on the pre-finished panels to the top side to protect the finish during fabrication, shipping and handling, film shall be removed before installation.

D. Trim: Trim shall be fabricated of the same material and finish to match the profile, and will be press broken in lengths of 10 to 12 feet. Trim shall be formed only by the manufacturer of their approved dealer. Trim to be erected in overlapped condition. Use lap strips only as indicated on drawings.

E. Closures: use composition or metal profiled closures at the top of each elevation to close ends of the panels. Metal closures to be made in the same material and finish as face sheet.

F. Fasteners: Fasteners shall be of type, material, size, corrosion resistance, holding power and other properties required to fasten miscellaneous framing members to substrates.

G. Substrate shall be Steel Decking.

H. Polyisocyanurate Insulation 2 layers of 2.6" thick meeting an R Value of 30.

I. Roofing Underlayment (entire main roof and side roof)

1. On all surfaces to be covered with roofing material, furnish and install a 40 mil "Peel & Stick membrane", required as outlined by metal panel manufacturer. Membrane to be a minimum of 40 mil thickness, smooth, non-granular, by one of the following manufacturers:

    a. Carlisle WIP

    b. Soprema Lastobond Shield HT

    c. Grace Ice and Water Shield

    d. Prior approved equal or as required to obtain warranty.

2. Underlayment shall be laid in horizontal layers with joints lapped toward the eaves a minimum of 6", and well secured along laps and at ends as necessary to properly hold the felt in place. All underlayment shall be preserved unbroken and whole.

3. Ice and Water Shield shall lap all hips and ridges at least 12" to form double thickness and shall be lapped 6" over the metal of any valley or built-in gutters and shall be installed as required by the Standing Seam Panel Manufacturer to attain the desired 30 Year Weathertightness Warranty.

J. Bearing Plates under clips. As required and provided by manufacturer.

K. Sealants

1. Provide two-part polysulfide class B non-sag type for vertical and horizontal joints

2. one part polysulfide not containing pitch or phenolic extenders or
3. Exterior grade silicone sealant recommended by roofing manufacturer or
4. One part non-sag, gun grade exterior type polyurethane recommended by the roofing manufacturer.
5. Manufacturer's
   A. Chem Link Durasil 35
   B. NP1

2.4 FABRICATION

A. Comply with dimensions, profile limitations, gauges and fabrication details shown and if not shown, provide manufacturer's standard product fabrication.

B. Fabricate components and assemble units to comply with fire performance requirements specified.

C. Apply specified finishes in conformance with manufacturer's standard, and according to manufacturer's instructions.

PART 3 - EXECUTION

3.1 INSPECTION

A. Examine alignment of structural steel and related supports, primary and secondary roof framing, solid roof sheathing, prior to installation.

B. For the record, prepare written report, endorsed by installer, listing conditions detrimental to performance of the Work.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 FASTENERS

A. Secure units to supports

B. Place fasteners as indicated in manufacturer's standards.

3.3 INSTALLATION

A. Panels shall be installed plumb and true in a proper alignment and in relation to the structural framing. The erector must have at least five years successful experience with similar applications.

B. Install metal panels, fasteners, trim and related sealants in accordance with approved shop drawings and as may be required for a weather-tight installation.

C. Remove all strippable coating and provide a dry-wipe down cleaning of the panels as they are erected.

3.4 DAMAGED MATERIAL

A. Upon determination of responsibility, repair or replace damaged metal panels and trim to the satisfaction of the Architect and Owner.

END OF SECTION

SECTION 07 62 00

SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

1.01 SUMMARY

A. Work shall include, but is not limited to, the following:
   1. Preparation of existing substrates and new wood nailers.
   2. Sheet metal flashings and sheet metal roof edge system, gutter sand downspouts.
   3. All related materials and labor required to complete specified roofing necessary to receive specified manufacturer's warranty.

1.02 RELATED SECTIONS

A. Division 011000 – Summary of Work
B. Division 061000 – Rough Carpentry
C. Division 074100 – Standing Seam Metal Roofing

1.03 DEFINITIONS

A. ASTM D 1079-Definitions of Term Relating to Roofing, Waterproofing and Waterproofing.
B. The National Roofing Contractors Association (NRCA) Roofing and Waterproofing Manual, Fifth Edition Glossary.

1.04 REFERENCES

A. AMERICAN SOCIETY OF CIVIL ENGINEERS - Reference Document ASCE 7, Minimum Design Loads for Buildings and Other Structures.
B. AMERICAN STANDARD OF TESTING METHODS (ASTM):
   1. ASTM C 920 - Standard Specification for Elastomeric Joint Sealants
   2. ASTM D 41 - Standard Specification for Asphalt Primer Used in Roofing, Damp proofing, and Waterproofing.
   3. ASTM D 4586 - Standard Specification for Asphalt Roof Cement, Asbestos-Free.
C. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)::
   1. ANSI/SPRI/FM 4435/ES-1 Wind Design Standard for Edge System Used with Low Slope Roofing System.
   2. ANSI/SPRI FX-1, Standard Field Test Procedure for Determining the Withdrawal Resistance of Roofing Fasteners.

D. INTERNATIONAL CODES COUNCIL (ICC):
   1. 2012 International Building Code (IBC).
E. NATIONAL ROOFING CONTRACTORS ASSOCIATION (NRCA) Roofing and Waterproofing Manual.
F. SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION INC. (SMACNA) Architectural Sheet Metal Manual.

1.05 ACTION SUBMITTALS

A. Product Data Sheets: Submit manufacturer's product data sheets, installation instructions and/or general requirements for each component.
B. Safety Data Sheets: Submit manufacturer's Safety Data Sheets (SDS) for each component.
C. Sample/Specimen Warranty from the manufacturer and contractor.
D. Shop Drawings: Provide roof plan and applicable roof system detail drawings.

1.06 INFORMATIONAL SUBMITTALS

A. Contractor Certification: Submit written certification from roofing system manufacturer certifying that the applicator is authorized by the manufacturer to install the specified materials and system.

1.07 CLOSEOUT SUBMITTALS

A. Warranty: Provide manufacturer's and contractor's warranties upon substantial completion of the roofing system.

1.08 QUALITY ASSURANCE

A. MANUFACTURER QUALIFICATIONS:
   1. Manufacture shall have 20 years of experience manufacturing roofing materials.
   2. Trained Technical Field Representatives, employed by the manufacturer, independent of sales.
   3. Provide reports in a timely manner of all site visit reports.
   4. Provide specified warranty upon satisfactory project completion.
B. CONTRACTOR QUALIFICATIONS:
   1. Contractor shall be authorized by the manufacturer to install specified materials prior to the bidding period through satisfactory project completion.
   2. Applicators shall have completed projects of similar scope using same materials as specified herein.

3. Contractor shall provide full time, on-site superintendent or foreman experienced with the specified roof system through satisfactory project completion.
4. Applicators shall be skilled in the application methods for all materials.
5. Contractor shall maintain a daily record, on-site, documenting material installation and related project conditions.
6. Contractor shall maintain a copy of all submittal documents, on-site, available at all times for reference.

1.09 DELIVERY, STORAGE AND HANDLING

A. Refer to each product data sheet or other published literature for specific requirements.
B. Deliver materials and store them in their unopened, original packaging, bearing the manufacturer's name, related standards, and any other specification or reference accepted as standard.
C. Protect and store materials in a dry, well-vented, and weatherproof location. Only materials to be used the same day shall be removed from this location.
D. When materials are to be stored outdoors, store away from standing water, stacked on raised pallets or dunnage, at least 4 in or more above ground level. Carefully cover storage with "breathable" tarpaulins to protect materials from precipitation and to prevent exposure to condensation.
E. Properly dispose of all product wrappers, pallets, cardboard tubes, scrap, waste, and debris. All damaged materials shall be removed from job site and replaced with new, suitable materials.

1.10 SITE CONDITIONS

A. SAFETY:
   1. The contractor shall be responsible for complying with all project-related safety and environmental requirements.
   2. The contractor shall refer to product Material Safety Data Sheets (MDS) for health, safety, and environment related hazards, and take all necessary measures and precautions to comply with exposure requirements.
B. ENVIRONMENTAL CONDITIONS:
   1. Monitor substrate temperature and material temperature, as well as all environmental conditions such as ambient temperature, moisture, sun, cloud cover, wind, humidity, and shade. Ensure conditions are satisfactory to begin work and ensure conditions remain satisfactory during the installation of specified materials. Materials and methods shall be adjusted as necessary to accommodate varying project conditions.

Materials shall not be installed when conditions are unacceptable to achieve the specified results.

2. Precipitation and dew point: Monitor weather to ensure the project environment is dry before, and will remain dry, during the application of roofing materials. Ensure all roofing materials and substrates remain above the dew point temperature as required to prevent condensation and maintain dry conditions.

1.11 PERFORMANCE REQUIREMENTS

A. ROOF EDGE SYSTEM:
1. Performance testing shall be in accordance with ANSI/SPRI/FM 4435/ES-1 Wind Design Standard for Edges Systems Used with Low Slope Roofing Systems. To meet ASCE 7-10.

PART 2 PRODUCTS

2.01 MANUFACTURER

A. PRODUCT QUALITY ASSURANCE PROGRAM: Manufacturer shall be an ISO 9001 registered company. A 'Quality Compliance Certificate (QCC) for reporting/confirming the tested values of the SBS-Modified Bitumen Membrane Materials will be supplied upon request.

B. ACCEPTABLE MANUFACTURER:
1. Petersen Aluminum Corporation
2. Imetco
3. Prior Approved equal

C. Contractor shall furnish all sheet metal flashings, counter flashings, roof edge system, and all other related sheet metal flashings, fasteners and sealants necessary to flash and counter flash the specified roofing system at all roof terminations, transitions and penetrations.

D. Sheet metal flashing materials and fasteners shall be compatible with adjacent materials, to accommodate all project related exposures.

E. Pre-Finished Sheet Metal Flashing Material: Galvanized.

2.02 SHEET METAL FLASHING

A. SHEET METAL, ROOF EDGE SYSTEM:
1. Roof edge system shall include all components and associated fasteners necessary to comply with specified performance requirements. Contractor to shop break flashings and provide all other related fasteners and sealants necessary for the roof edge system.

a. Material: 22 gauge Cleat with 24 gauge face material
b. Gauge/Thickness: 22 gauge/24 gauge
c. Finish: Kynar 500 Color selected from manufacturer's color chart.

2. GUTTERS AND DOWNSPOUTS: Sized per Drawings
a. Material: 24 gauge

3. REGLET AND FLASHING: Engineered, formed metal counterflashing metal.
a. Material: Stainless Steel
b. Gauge/Thickness: 24 gauge

B. FASTENERS:
1. #9 Stainless Steel Screw w/ Neoprene Washer
a. Length as required.
2. #12 Galvanized Self-Drilling Screw:
a. Length as required.
3. Stainless Steel Ring Shank Nails:
a. Length as required.
4. 3/16" Tapcon Screws:
a. Length as required.
5. Flat Head Screw w/ Extruded Washer:
a. Length as required.

C. GENERAL PURPOSE SEALANT
1. General purpose, paintable, gun-grade, elastomeric, polyether moisture curing sealant for sealing SBS and PVC membrane terminations, Kynar 500 PVDF, horizontal and vertical construction joints.
a. VOC Content: 20 g/L or less.
b. Meets or exceeds ASTM C920, Type S, Grade NS, Class 50.
c. Standard color,
2. Butyl Sealant: Butyl rubber and polyisobutylene water resistant sealant for concealed sheet metal joints.
3. Butyl Sealant Tape: Butyl rubber and polyisobutylene water resistant sealant tape for concealed sheet metal joints.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examination includes visual observations, qualitative analysis, and quantitative testing measures as necessary to ensure conditions remain satisfactory throughout the project.

B. The contractor shall examine all roofing substrates including, but not limited to: insulation materials, roof decks, walls, curbs, rooftop equipment, fixtures, and wood blocking.

C. The applicator shall not begin installation until conditions have been properly examined and determined to be clean, dry and, otherwise satisfactory to receive specified roofing materials.

D. During the application of specified materials, the applicator shall continue to examine all project conditions to ensure conditions remain satisfactory to complete the specified roofing system.

3.02 PREPARATION

A. Before commencing work each day, the contractor shall prepare all roofing substrates to ensure conditions are satisfactory to proceed with the installation of specified roofing materials. Preparation of substrates includes, but is not limited to, substrate repairs, securement of substrates, eliminating all incompatible materials, and cleaning.

B. Where conditions are found to be unsatisfactory, work shall not begin until conditions are made satisfactory to begin work. Commencing of work shall indicate contractor's acceptance of conditions.

3.03 SHEET METAL FLASHING APPLICATION

A. Refer to manufacturer's sheet metal flashing and roof edge system detail drawings, and follow product data sheets and published general requirements for installation instructions.

B. General Requirements:

1. Follow the most recent edition of the SMACNA Architectural Sheet Metal Manual for fabrication and installation requirements.
2. Follow the most recent edition of the NRCA Roofing and Waterproofing Manual for fabrication and installation requirements for specified roofing and flashing.

C. Isolate all metal components from ACQ treated wood or other incompatibles material using specified membrane flashing materials.

D. Appliances such as lightning rods, signs, or antennae shall be separate from the roof edge system.

3.04 GENERAL PURPOSE SEALANT

A. Refer to published installation instructions. Ensure sheet metal and adjacent substrates are clean and free of oils, dust and other incompatible materials.

B. Apply SOPREMA SOPRAMASTIC SP1 general purpose, paintable, gun-grade, elastomeric, polyether moisture curing sealant to seal SBS and PVC membrane

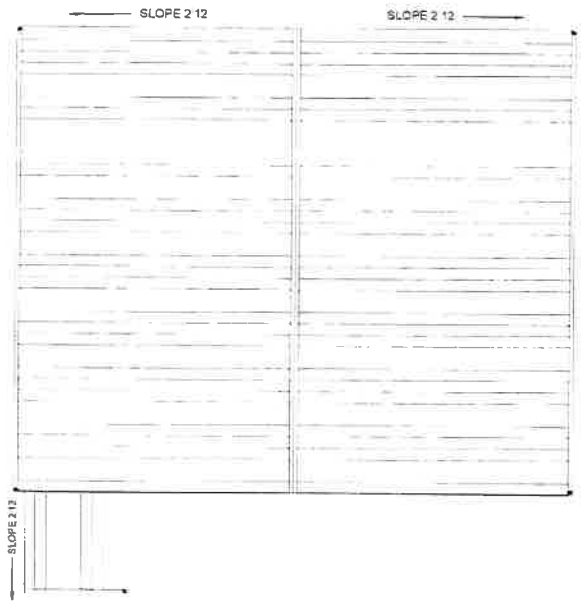
terminations, exposed fasteners, Kynar 500 PVDF, and other compatible sheet metal horizontal and vertical joints, laps and transitions.

3.05 CLEAN-UP

A. Clean-up and properly dispose of waste and debris resulting from these operations each day as required to prevent damages and disruptions to operations.

END OF SECTION

HAMMOND FIRE/POLICE FLEET BLDG



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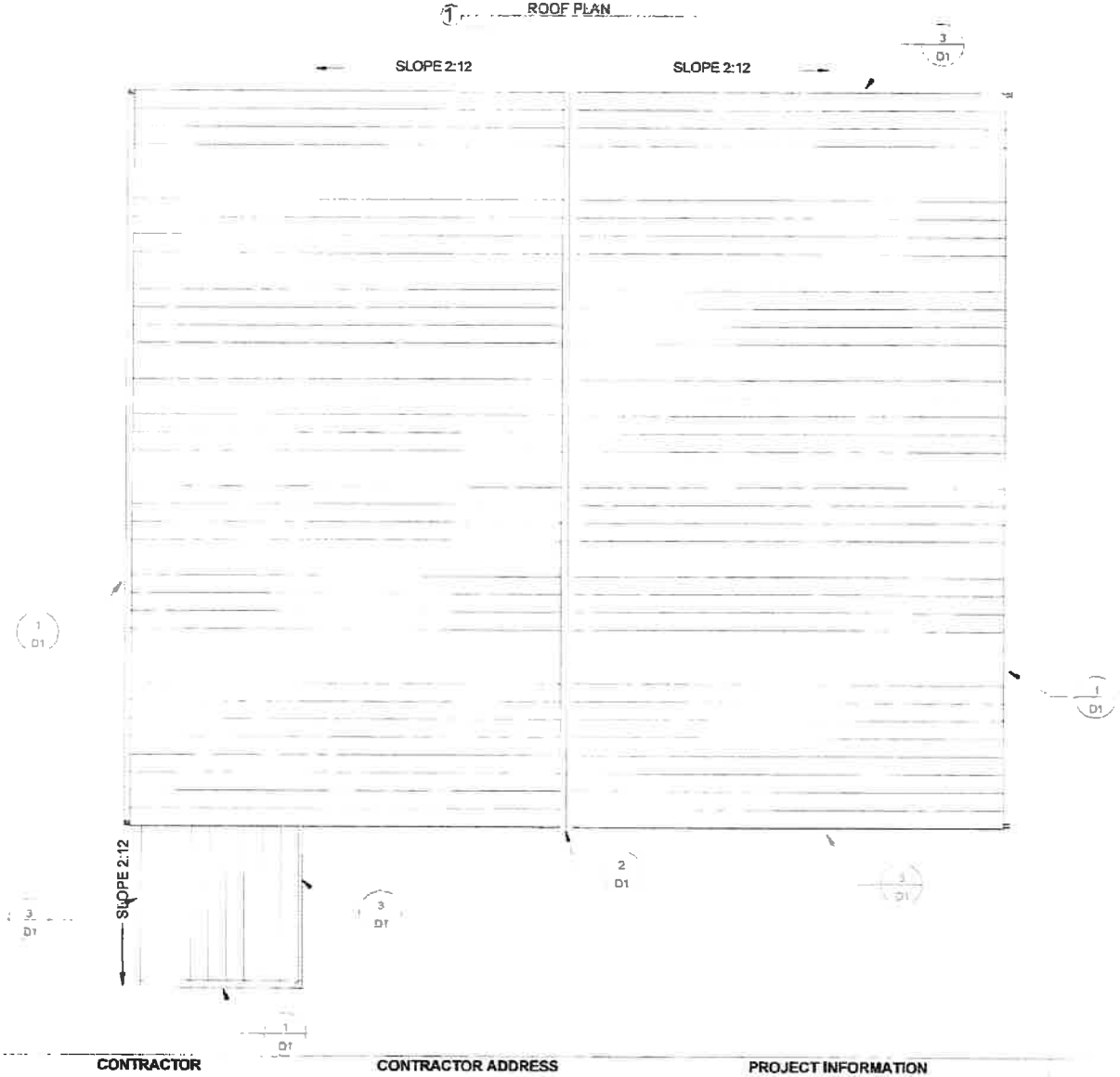
DATE	REVISION #	PAGE NUMBER
April 21, 2021	0	1 of 4

1 ROOF PLAN



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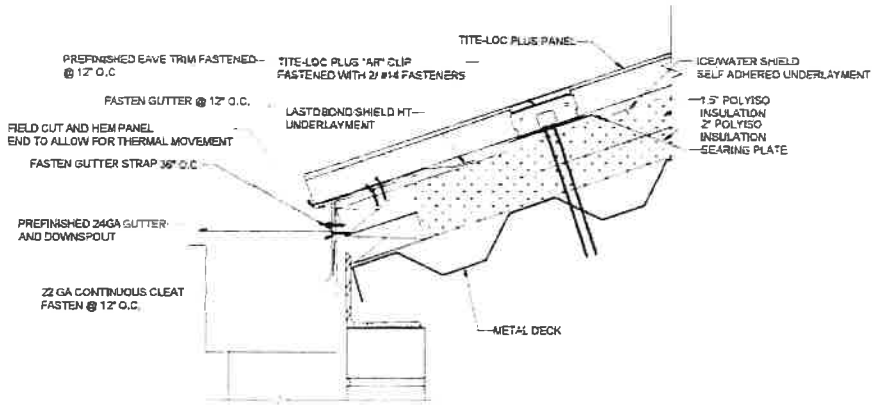

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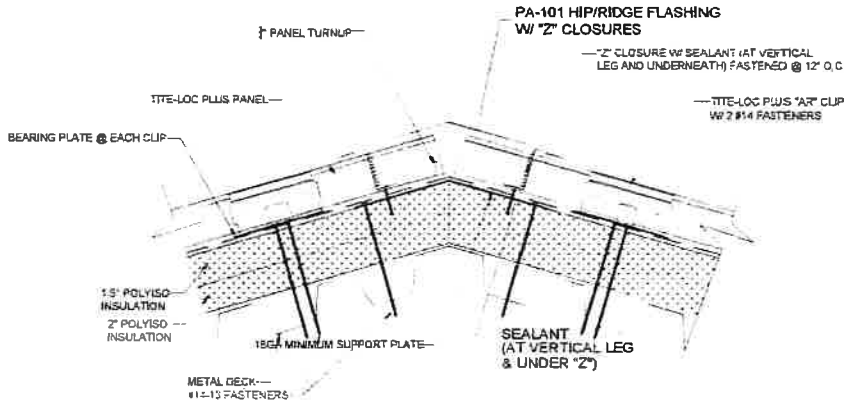

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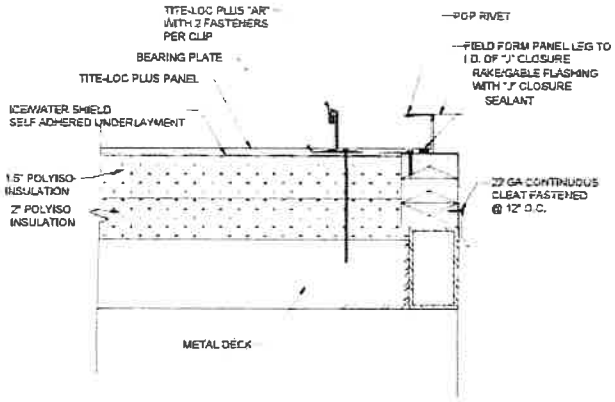

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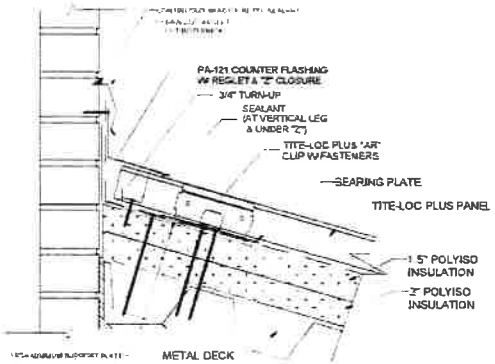

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