

ITB DASPS-1547-19
SOLICITATION ADDENDUM # 1

This Solicitation Addendum modifies the Bid Document(s) for Work only to the extent indicated herein. All other areas not specifically mentioned or affected by this Solicitation Addendum shall remain in full force. This Solicitation Addendum shall be added as a part of the Original Bidding Document.

This Solicitation Addendum must be acknowledged by inserting its number on the appropriate blank lines in Attachment A, Section H of the Invitation to Bid, and by providing all required signatures prior to Bid Closing. Failure to do so may result in rejection of Bid.

Requests for clarification, requests for change, and protests of Solicitation Addendum provisions addressed in this Solicitation Addendum must be received by DAS by 5:00 P.M. (Pacific Time) on August 29, 2019, or they will not be considered. DAS will not consider requests or protests of matters not added to or modified by this Solicitation Addendum.

1. ITB, Exhibit 1 Pricing Submittal Form:

Exhibit 1 titled Exhibit 1 DASPS-1547-19 Pricing Submittal Form is replaced per Addendum 1 in its entirety. Use the attached titled; DASPS-1547-19_Addenda 1 Exhibit 1 Pricing Submittal Form revised when submitting bid. This form is hereby incorporated by reference.

2. ITB, Attachment A:

Specification Revisions:

Note: Revisions are shown in bold, and underlined for clarity.

- 00 0110 Table of Contents
 - Added Section: 04 2000 Unit Masonry
 - Added Section: 07 4213 Metal Wall Panels
 - Deleted Section: 07 4646 Fiber Cement Siding
 - Added Section: 07 7200 Roof Accessories
- 00 6325 Substitution Request Form
 - Updated to include 'Architect's Review and Action' with signature line.
- 01 2300 Alternates
 - 1.05, D.Alternate No. 04 - Provide pre-manufactured free-standing pergola in Courtyard in lieu of site-built steel structure. Basis-of-Design-Alternate: Renson 'Ellice' with integrated LED lighting. Refer to Landscape drawings.
- 07 2500 Weather Barriers
 - 2.03, F. Furring Strips: 3/4" or 1x PT furring strips, or as recommended by manufacturer.
- 07 4113 Metal Roof Panels
 - 2.02, B, a. Aluminum-zinc alloy-coated steel complying with ASTM A792/A792M; minimum AZ50 coating.

Added new specifications are attached via Addendum 1 and titled; DASPS-1547-19_Addenda 1_Attachment A 04 2000 Unit Masonry, 07 4213 Metal Wall Panels, 07 7200 Roof Accessories

3. ITB, Attachment B:

Architectural Drawings:

Revised Drawings

Note: Revisions have been clouded and are indicated by a delta 1.

- A0.00
 - Revised Alternates to include updated reference detail in Alternate #3 and added Alternate #4.
 - Updated Drawing Index to include new sheets.
- A1.00
 - Added information to Canopy Plan.
 - Added information to Canopy Roof Framing Plan.
 - Updated reference detail callouts.
 - Added information to Seat/Footing Detail.
 - Added information to Curb/Footing Detail.
 - Revised Exterior Elevation Color & Finish Legend.
 - Revised Site Plan to include new connector sidewalks.
- A1.01
 - Revised Exterior Elevation Color & Finish Legend.
 - Revised canopy details.
- A2.10
 - Added information to Reflected Ceiling Plan 4.
 - Added Reflected Ceiling Plan 5.
- Added information to Floor Plans 1 and 2.A3.00
 - Revised Exterior Elevation Color & Finish Legend.
- A5.10
 - Updated reference detail callouts.
 - Added information to Wall Sections 1 and 3.
- A8.00
 - Interior window sill detail relocated to sheet A9.00.
 - Revised siding to metal wall panel siding, typical.
 - Added information to details.
- A8.20
 - Roof details updated with additional information.
- A9.00
 - Interior details, new sheet.

Structural Drawings:

Revised Drawings

- S1.00 – Structural details, new sheet.

Added new structural drawings via Addendum 1. See the attached titled documents; DASPS-1547-19_Addenda 1_Attachment B revised 8-23-2019 Drawings.

4. Questions and Answers to follow:

Question 1: Is the existing roof leaking?

Answer 1: Not aware of any leaks as of today. It has had some issues in the past.

Question 2: Is there a need for snow guards?

Answer 2: Yes.

Question 3: Will the quantity of gutters be same?

Answer 3: There is an Alternate 1 for this in ITB.

Question 4: Will the electrical be pulled and new circuits placed?

Answer 4: In most locations we are replacing existing light fixtures. There will be some new electrical required in the courtyard.

Question 5: Will the facility still be open for folks?

Answer 5: Yes still functioning normally.

Question 6: Will there be another walk through allowed?

Answer 6: Contact the Home in advance to arrange an escort for the walk through. Contractors can Call 541.296.7160 and ask for the maintenance department. No questions will be responded to at site visits and none will be allowed after August 27, 2019 5:00PM.

Question 7: Do you have the name, style and color of the carpet tile?

Answer 7: Carpet tile spec is added on the drawings attached to this addendum.

Question 8: Has the Owner picked a CMU and Grout Color?

Answer 8: CMU/grout spec added to this addendum.

Question 9: Are there Structural Drawings?

Answer 9: Structural drawings added to this addendum.

Question 10: Which height bench does ODVA want to use 17 ½” or 19”?

Answer 10: The height of bench is 19”.

Question 11: The original panels appear to have been design span standing seam panels, where the seams are engaged by snapping one down over the adjacent seam. The current spec calls for a mechanically seamed panel. Is the intent to also use that mechanically seamed panel where there are currently metal panels on vertical walls?

Answer 11: See revised Attachment A and B specifications and drawings in this addendum to clarify the metal siding material and connection type.

This Solicitation Addendum constitutes a MATERIAL CHANGE to the bid; and it must be acknowledged by inserting its number on the appropriate blank lines in Section H – Addenda Acknowledgement of the Invitation to Bid. Failure to do so may result in rejection of Bid.

Signature: _____ Date: _____

Bidder Name: _____
(Please Print)

SECTION 04 2000
UNIT MASONRY

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Concrete block.
- B. Mortar and grout.
- C. Reinforcement and anchorage.
- D. Accessories.

1.02 REFERENCE STANDARDS

- A. ASTM C129 - Standard Specification for Nonloadbearing Concrete Masonry Units; 2011.
- B. ASTM C140/C140M - Standard Test Methods of Sampling and Testing Concrete Masonry Units and Related Units; 2014.
- C. ASTM C150/C150M - Standard Specification for Portland Cement; 2015.
- D. ASTM C207 - Standard Specification for Hydrated Lime for Masonry Purposes; 2006 (Reapproved 2011).
- E. ASTM C270 - Standard Specification for Mortar for Unit Masonry; 2014a.
- F. ASTM C404 - Standard Specification for Aggregates for Masonry Grout; 2011.
- G. ASTM C476 - Standard Specification for Grout for Masonry; 2010.
- H. ASTM C780 - Standard Test Method for Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry; 2012.
- I. ASTM C1714/C1714M - Standard Specification for Preblended Dry Mortar Mix for Unit Masonry; 2016.
- J. TMS 402/602 - Building Code Requirements and Specification for Masonry Structures; 2016.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data for masonry units, fabricated wire reinforcement, mortar, and masonry accessories.
- C. Shop Drawings: Indicate pertinent dimensions, materials, anchorage, size and type of fasteners, and accessories for brickwork support system.
 - 1. Include calculations or selections from the manufacturer's prescriptive design tables that indicate compliance with the applicable building code and project conditions.
 - 2. Include the design engineer's stamp or seal on each sheet of shop drawings.
- D. Manufacturer's Certificate: Certify that masonry units meet or exceed specified requirements.
- E. Test Reports: Concrete masonry manufacturer's test reports for units with integral water repellent admixture.
- F. Designer's Qualification Statement.
- G. Manufacturer's Qualification Statement.
- H. Installer's Qualification Statement.

1.04 QUALITY ASSURANCE

- A. Comply with provisions of ACI 530/530.1/ERTA, except where exceeded by requirements of Contract Documents.
- B. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section with minimum three years of documented experience.

- C. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, handle, and store masonry units by means that will prevent mechanical damage and contamination by other materials.

PART 2 PRODUCTS

2.01 CONCRETE MASONRY UNITS

- A. Concrete Block: Comply with referenced standards and as follows:
 - 1. Size: Standard units with nominal face dimensions of 16 by 8 inches and nominal depth of 8 inches.
 - 2. Non-Loadbearing Units: ASTM C129.
 - a. Hollow block.
 - b. Ground face, Color to match existing on-site.
 - c. Manufacturers:
 - 1) Mutual Materials.
 - 2) Substitutions: See Section 01 6000 - Product Requirements.

2.02 MORTAR AND GROUT MATERIALS

- A. Portland Cement: ASTM C150/C150M, Type I.
- B. Hydrated Lime: ASTM C207, Type S.
- C. Grout Aggregate: ASTM C404.
- D. Water: Clean and potable.
- E. Packaged Dry Material for Mortar for Unit Masonry: Premixed Portland cement, hydrated lime, and sand; complying with ASTM C1714/C1714M and capable of producing mortar of the specified strength in accordance with ASTM C270 with the addition of water only.
 - 1. Type: Type N.
 - 2. Color: Standard gray.
 - 3. Water-repellent mortar for use with water repellent masonry units.
- F. Packaged Dry Material for Grout for Masonry: Premixed cementitious materials and dried aggregates; capable of producing grout of the specified strength in accordance with ASTM C476 with the addition of water only.
 - 1. Type: Fine.

2.03 REINFORCEMENT AND ANCHORAGE

- A. Manufacturers:
 - 1. Blok-Lok Limited: www.blok-lok.com/#sle.
 - 2. Hohmann & Barnard, Inc: www.h-b.com/#sle.
 - 3. WIRE-BOND www.wirebond.com/#sle.
 - 4. Substitutions: See Section 01 6000 - Product Requirements.
- B. As indicated on drawings.

2.04 MORTAR AND GROUT MIXING

- A. Mortar for Unit Masonry: ASTM C270, using the Proportion Specification.
 - 1. Exterior, non-loadbearing masonry: Type N.
- B. Grout: ASTM C476; consistency required to fill completely volumes indicated for grouting; fine grout for spaces with smallest horizontal dimension of 2 inches or less; coarse grout for spaces with smallest horizontal dimension greater than 2 inches.
- C. Mixing: Use mechanical batch mixer and comply with referenced standards.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive masonry.
- B. Verify that built-in items are in proper location, and ready for roughing into masonry work.

3.02 PREPARATION

- A. Direct and coordinate placement of metal anchors supplied for installation under other sections.
- B. Provide temporary bracing during installation of masonry work. Maintain in place until building structure provides permanent bracing.

3.03 COLD AND HOT WEATHER REQUIREMENTS

- A. Comply with requirements of ACI 530/530.1/ERTA or applicable building code, whichever is more stringent.

3.04 COURSING

- A. Establish lines, levels, and coursing indicated. Protect from displacement.
- B. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness.
- C. Concrete Masonry Units:
 - 1. Bond: Running.
 - 2. Coursing: One unit and one mortar joint to equal 8 inches.
 - 3. Mortar Joints: Concave.

3.05 PLACING AND BONDING

- A. Lay hollow masonry units with face shell bedding on head and bed joints.
- B. Buttering corners of joints or excessive furrowing of mortar joints is not permitted.
- C. Remove excess mortar and mortar smears as work progresses.
- D. Interlock intersections and external corners.
- E. Do not shift or tap masonry units after mortar has achieved initial set. Where adjustment must be made, remove mortar and replace.
- F. Perform job site cutting of masonry units with proper tools to provide straight, clean, unchipped edges. Prevent broken masonry unit corners or edges.

3.06 GROUTED COMPONENTS

- A. Support and secure reinforcing bars from displacement. Maintain position within 1/2 inch of dimensioned position.
- B. Place and consolidate grout fill without displacing reinforcing.

3.07 TOLERANCES

- A. Maximum Variation from Plane of Wall: 1/4 inch in 10 ft and 1/2 inch in 20 ft or more.
- B. Maximum Variation from Level Coursing: 1/8 inch in 3 ft and 1/4 inch in 10 ft; 1/2 inch in 30 ft.
- C. Maximum Variation of Mortar Joint Thickness: Head joint, minus 1/4 inch, plus 3/8 inch.

3.08 FIELD QUALITY CONTROL

- A. An independent testing agency will perform field quality control tests, as specified in Section 01 4000 - Quality Requirements.
- B. Concrete Masonry Unit Tests: Test each variety of concrete unit masonry in accordance with ASTM C140/C140M for compliance with requirements of this specification.

- C. Mortar Tests: Test mortar in accordance with ASTM C780, testing with same frequency as masonry samples.

3.09 CLEANING

- A. Remove excess mortar and mortar droppings.
- B. Replace defective mortar. Match adjacent work.
- C. Clean soiled surfaces with cleaning solution.

END OF SECTION 04 2000

**SECTION 07 4213
METAL WALL PANELS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Manufactured metal panels for exterior wall panels, soffit panels, and subgirt framing assembly, with insulation, related flashings, and accessory components.

1.02 RELATED REQUIREMENTS

- A. Section 07 2500 - Weather Barriers: Weather barrier under wall panels.

1.03 REFERENCE STANDARDS

- A. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels; 2013.
- B. ASTM A792/A792M - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process; 2010 (Reapproved 2015).

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Samples: Submit two samples of wall panel and soffit panel, 12 inch by 12 inch in size, illustrating finish color, sheen, and texture.
- C. Manufacturer's Qualification Statement.
- D. Installer's Qualification Statement.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.
- B. Installer Qualifications: Company specializing in installing products of the type specified in this section with minimum three years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Protect panels from accelerated weathering by removing or venting sheet plastic shipping wrap.
- B. Store prefinished material off the ground and protected from weather; prevent twisting, bending, or abrasion; provide ventilation; slope metal sheets to ensure proper drainage.
- C. Prevent contact with materials that may cause discoloration or staining of products.

1.07 WARRANTY

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Correct defective work within a five year period after Date of Substantial Completion for degradation of panel finish, including color fading caused by exposure to weather.
- C. Correct defective work within a five year period after Date of Substantial Completion, including defects in water tightness and integrity of seals for metal wall panels.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Basis of Design:
 - 1. Metal Wall Panels - Concealed Fasteners: Flush Panel manufactured by AEP Span.
 - 2. Metal Soffit Panels: _____ manufactured by _____.

2.02 MANUFACTURED METAL PANELS

- A. Wall Panel System: Factory fabricated prefinished metal panel system, site assembled.

1. Provide exterior wall panels and subgirt framing assembly.
 2. Design and size components to support assembly dead loads, and to withstand live loads caused by positive and negative wind pressure acting normal to plane of wall.
 3. Design Pressure: In accordance with applicable codes.
 4. Maximum Allowable Deflection of Panel: $L/180$ for length(L) of span.
 5. Movement: Accommodate movement within system without damage to components or deterioration of seals, movement between system and perimeter components when subject to seasonal temperature cycling; dynamic loading and release of loads; and deflection of structural support framing.
 6. Drainage: Provide positive drainage to exterior for moisture entering or condensation occurring within panel system.
 7. Fabrication: Formed true to shape, accurate in size, square, and free from distortion or defects; pieces of longest practical lengths.
 8. Corners: Factory-fabricated in one continuous piece with minimum 2 inch returns.
 9. Provide continuity of air barrier and vapor retarder seal at building enclosure elements in accordance with materials specified in Section 07 2500.
- B. Exterior Wall Panels:
1. Profile: Vertical; Flush Panel, Flat style.
 2. Side Seams: Double-interlocked, tight-fitting, sealed with continuous gaskets.
 3. Material: Precoated steel sheet, 22 gage, 0.0299 inch minimum thickness.
 4. Panel Width: 12 inches.
 5. Color: 'Cool' ZACtique II.
- C. Soffit Panels:
1. Profile: Vented Flush Panel, with one rib.
 2. Material: Precoated steel sheet, 22 gage, 0.0299 inch minimum thickness.
 3. Color: To match adjacent fascia. Color to be selected by Architect.
- D. Subgirt Framing Assembly:
1. 16 gage, 0.0598 inch thick formed non-precoated steel sheet.
 2. Profile as indicated; to attach panel system to building.
- E. Internal and External Corners: Same material, thickness, and finish as exterior sheets; profile to suit system; shop cut and factory mitered to required angles.
- F. Expansion Joints: Same material, thickness and finish as exterior sheets; ___ gage, ___ inch thick; manufacturer's standard brake formed type, of profile to suit system.
- G. Trim: Same material, thickness and finish as exterior sheets; brake formed to required profiles.
- H. Anchors: Galvanized steel.

2.03 MATERIALS

- A. Precoated Steel Sheet: Aluminum-zinc alloy-coated steel sheet, ASTM A792/A792M, Commercial Steel (CS) or Forming Steel (FS), with AZ50/AZM150 coating; continuous-coil-coated on exposed surfaces with specified finish coating and on panel back with specified panel back coating.

2.04 FINISHES

- A. Fluoropolymer Coil Coating System: Manufacturer's standard multi-coat aluminum coil coating system complying with AAMA 2605, including at least 70 percent polyvinylidene fluoride (PVDF) resin, and at least 80 percent of coil coated aluminum surfaces having minimum total dry film thickness (DFT) of 0.9 mil, 0.0009 inch; color and gloss 'Cool' ZACtique II.

2.05 ACCESSORIES

- A. Gaskets: Manufacturer's standard type suitable for use with system, permanently resilient; ultraviolet and ozone resistant.

- B. Concealed Sealants: Non-curing butyl sealant or tape sealant.
- C. Exposed Sealant: Elastomeric; silicone, polyurethane, or silyl-terminated polyether/polyurethane.
- D. Fasteners: Manufacturer's standard type to suit application; with soft neoprene washers, steel, hot dip galvanized.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that building framing members are ready to receive panels.
- B. Verify that weather barrier has been installed over substrate completely and correctly.

3.02 PREPARATION

- A. Install subgirts perpendicular to panel length, securely fastened to substrates and shimmed and leveled to uniform plane. Space at intervals indicated.

3.03 INSTALLATION

- A. Install panels on walls in accordance with manufacturer's instructions.
- B. Fasten panels to structural supports; aligned, level, and plumb.
- C. Locate joints over supports.
- D. Use concealed fasteners unless otherwise approved by Architect.
- E. Seal and place gaskets to prevent weather penetration. Maintain neat appearance.

3.04 TOLERANCES

- A. Maximum Offset From True Alignment Between Adjacent Members Butting or In Line: 1/16 inch.

3.05 CLEANING

- A. Remove site cuttings from finish surfaces.
- B. Remove protective material from wall panel surfaces.
- C. See Section 01 7419 - Construction Waste Management and Disposal, for additional requirements.
- D. Clean and wash prefinished surfaces with mild soap and water; rinse with clean water.

END OF SECTION 07 4213

SECTION 07 7200
ROOF ACCESSORIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Snow guards.

1.02 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's data sheets on each product to be used.
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
 - 4. Maintenance requirements.
- C. Shop Drawings: Submit detailed layout developed for this project and provide dimensioned location and number for each type of roof accessory.
 - 1. Snow Guards: Submit design calculations for loadings and spacings based on manufacturer testing.
 - 2. Submit shop drawings sealed and signed by a Professional Engineer experienced in design of this type of work and licensed in OR.
- D. Warranty Documentation:
 - 1. Submit manufacturer warranty.
 - 2. Ensure that forms have been completed in Owner's name and registered with manufacturer.
 - 3. Submit documentation that roof accessories are acceptable to roofing manufacturer, and do not limit the roofing warranty.

1.03 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store products under cover and elevated above grade.

1.04 WARRANTY

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Correct defective Work within a five year period after Date of Substantial Completion.

PART 2 PRODUCTS

2.01 SNOW GUARDS

- A. Fence Type Snow Guard: Continuous snow guard; manufacturer's standard pipe, bar, channel, or solid rod, set in brackets or posts, with optional plates and metal trim to match roof.
 - 1. Brackets: Aluminum.
 - 2. Extruded Aluminum Channel: Manufacturer's standard shape; prefinished to match roof.
 - 3. Supplemental Plates and Clips: Attached to horizontal component; match finish of pipe, tube, rod, or channel.
 - 4. Clamps for Standing Seam Roof: Aluminum clamps attached to standing seams of roof panels; for attachment of fence type snow guard.
 - a. Seam Profile: Selected by Architect from manufacturer's standard range; match profile of metal roof.
 - 5. Manufacturers:
 - a. PMC Industries, Inc; AceClamp - A2 Snow Retention System:
www.aceclamp.com/#sle.
 - 1) Powder-coated to match roof.

- b. Substitutions: See Section 01 6000 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using methods recommended by manufacturer for achieving acceptable results for applicable substrate under project conditions.

3.03 INSTALLATION

- A. Install in accordance with manufacturer's instructions, in manner that maintains roofing system weather-tight integrity.

3.04 CLEANING

- A. Clean installed work to like-new condition.

3.05 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

END OF SECTION 07 7200

**SECTION 00 0110
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END OF SECTION 00 0110

SUBSTITUTION REQUEST FORM - DURING CONSTRUCTION

SECTION 00 6325

SUBSTITUTION REQUEST FORM - DURING CONSTRUCTION

TO: _____

PROJECT NAME: _____

WE HEREBY SUBMIT FOR CONSIDERATION, THE FOLLOWING PRODUCT INSTEAD OF SPECIFIED ITEM FOR ABOVE PROJECT:

SPECIFICATION SECTION: _____

PARAGRAPH: _____

SPECIFIED ITEM: _____

PROPOSED SUBSTITUTION: _____

Manufacturer: _____

Address: _____

Installer: _____

Address: _____

History: New product 2 - 5 years old 5 - 10 years old More than 10 years old

Differences between proposed substitution and specified product: _____

FOR PROPOSED SUBSTITUTION:

Reason for not providing specified item: _____

Similar Installation:

Project: _____

Address: _____

Architect: _____

Owner: _____

Date Installed: _____

Proposed Substitution affects other parts of Work: No Yes; explain _____

Savings to Owner for accepting substitution: _____

Proposed substitution changes Contract Time: No Yes [Add] [Deduct] _____ days.

Supporting Data Attached: Drawings Product Data Samples Tests Other

THE UNDERSIGNED STATES THAT THE FOLLOWING PARAGRAPHS ARE CORRECT:

- A. The proposed substitution does not affect dimensions and functional clearances.
- B. The undersigned will pay for changes to the building design, including A/E design, detailing and construction costs caused by the requested substitution.
- C. The proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.

SUBSTITUTION REQUEST FORM - DURING CONSTRUCTION

- D. Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- E. Same warranty will be furnished for proposed substitution as for specified product.
- F. Same maintenance service and source of replacement parts, as applicable, is available.
- G. Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- H. Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

SUBMITTED BY: _____

SIGNED BY: _____

DATE: _____

COMPANY: _____

ADDRESS: _____

PHONE: _____

ARCHITECT'S REVIEW AND ACTION

___ NO EXCEPTIONS TO SUBSTITUTION - MAKE SUBMITTALS IN ACCORDANCE WITH SPECIFICATION SECTION 01 2500 SUBSTITUTION PROCEDURES.

___ EXCEPTIONS NOTED TO SUBSTITUTION - MAKE SUBMITTALS IN ACCORDANCE WITH SPECIFICATION SECTION 01 2500 SUBSTITUTION PROCEDURES.

___ SUBSTITUTION REJECTED - USE SPECIFIED MATERIALS.

___ SUBSTITUTION RECEIVED TOO LATE - USE SPECIFIED MATERIALS.

SIGNED BY: _____ DATE: _____

END OF SECTION 00 6325

**SECTION 01 2300
ALTERNATES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Description of Alternates.
- B. Procedures for pricing Alternates.
- C. Documentation of changes to Contract Sum and Contract Time.

1.02 RELATED REQUIREMENTS

- A. State of Oregon General Conditions and Supplemental Conditions.

1.03 ACCEPTANCE OF ALTERNATES

- A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at Owner's option. Accepted Alternates will be identified in the Owner-Contractor Agreement.
- B. The alternates described in this Section may be exercised at the option of the Owner within 30 days of the Contractor's written notice to Owner that decision on an alternate is required.
- C. The Owner reserves the right to accept the alternates without regard to order or sequence.
 - 1. Such acceptance shall not impair the selection of a low, responsible and responsive bidder to whom the Contract may be awarded under an equitable bid procedure.
- D. Itemize on the Contractor's Statement of Construction Costs alternates specified in this Section.
- E. Coordinate related work and modify surrounding work to integrate the Work of each Alternate.
 - 1. Include costs of adjustments to other trades, which may be required to achieve the intent of the selected alternate.
 - 2. Include costs of miscellaneous devices, accessories, and other items incidental to or required for a complete installation whether or not indicated as part of each Alternate.
- F. Clarification:
 - 1. If there is a question regarding the extent, scope, nature, or intent of alternates, request clarification from the Owner's Authorized Representative.
 - 2. Failure on the part of the Contractor to clarify any unclear items does not relieve the Contractor of responsibility for the selected alternates in accordance with the intent and requirements of the Project Manual and Drawings.

1.04 QUALITY ASSURANCE

- A. The description of the alternates in the Schedule of Alternates below is qualitative and not quantitative.
- B. Determine the quantities and extent of labor and materials required to execute alternates selected by the Owner, in accordance with the intent and requirements of the Project Manual and Drawings.

1.05 SCHEDULE OF ALTERNATES

- A. Alternate No. 01 - New pre-finished brake-formed metal gutter at new locations. Refer to drawings.
- B. Alternate No. 02 - Re-paint all exterior siding. See exterior elevations in existing drawings set for reference, and selected colors in finishes legend on sheet A3.00. Refer to drawings.
- C. Alternate No. 03 - Remove and replace window sills in common areas and public spaces with solid surface as scheduled. Refer to drawings.

- D. Alternate No. 04 - Provide pre-manufactured free-standing pergola in Courtyard in lieu of site-built steel structure. Basis-of-Design-Alternate: Renson 'Ellice' with integrated LED lighting. Refer to drawings.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION 01 2300

**SECTION 07 2500
WEATHER BARRIERS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Water-Resistive Barrier: Under exterior wall cladding, over sheathing or other substrate; not air tight or vapor retardant.
- B. Vapor Retarders: Materials to make exterior walls, joints between exterior walls and roof, and joints around frames of openings in exterior walls water vapor resistant and air tight.
- C. Air Barriers: Materials that form a system to stop passage of air through exterior walls, joints between exterior walls and roof, and joints around frames of openings in exterior walls.

1.02 RELATED REQUIREMENTS

- A. Section 07 2100 - Thermal Insulation: Vapor retarder installed in conjunction with batt insulation.
- B. Section 07 6200 - Sheet Metal Flashing and Trim: Metal flashings installed in conjunction with weather barriers.
- C. Section 07 9200 - Joint Sealants: Sealing building expansion joints.

1.03 DEFINITIONS

- A. Weather Barrier: Assemblies that form either water-resistive barriers, air barriers, or vapor retarders.
- B. Air Barrier: Air tight barrier made of material that is relatively air impermeable but water vapor permeable, both to the degree specified, with sealed seams and with sealed joints to adjacent surfaces. Note: For the purposes of this specification, vapor impermeable air barriers are classified as vapor retarders.
- C. Vapor Retarder: Air tight barrier made of material that is relatively water vapor impermeable, to the degree specified, with sealed seams and with sealed joints to adjacent surfaces.
 - 1. Water Vapor Permeance: For purposes of conversion, $57.2 \text{ ng}/(\text{Pa s sq m}) = 1 \text{ perm}$.

1.04 REFERENCE STANDARDS

- A. AATCC Test Method 127 - Water Resistance: Hydrostatic Pressure Test; 2014.
- B. ASTM D1970/D1970M - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection; 2013.
- C. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2015a.
- D. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials; 2014.
- E. ASTM E2178 - Standard Test Method for Air Permeance of Building Materials; 2013.
- F. ICC-ES AC38 - Acceptance Criteria for Water-Resistive Barriers; ICC Evaluation Service, Inc; 2013.
- G. NFPA 285 - Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components; 2012.

1.05 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on material characteristics, performance criteria, and limitations.
- C. Shop Drawings: Provide drawings of special joint conditions.

1.06 QUALITY ASSURANCE

- A. Provide full system by single manufacturer.

1.07 MOCK-UP

- A. Install air barrier, vapor retarder, and water-resistive barrier materials in mock-up specified in Section 01 4000.

1.08 FIELD CONDITIONS

- A. Maintain temperature and humidity recommended by the materials manufacturers before, during and after installation.

PART 2 PRODUCTS

2.01 WEATHER BARRIER ASSEMBLIES

- A. Air Barrier:
 - 1. On outside surface of sheathing of exterior walls use air barrier sheet, mechanically fastened or self-adhered type meeting performance criteria.

2.02 AIR BARRIER MATERIALS (WATER VAPOR PERMEABLE AND WATER-RESISTIVE)

- A. Air Barrier Sheet, Mechanically Fastened:
 - 1. Air Permeance: 0.004 cfm/sq ft, maximum, when tested in accordance with ASTM E2178.
 - 2. Water Vapor Permeance: 5 perms, minimum, when tested in accordance with ASTM E96/E96M Procedure A (Desiccant Method) at 73.4 degrees F.
 - 3. Water Penetration Resistance: Withstand a water head of 21 inches, minimum, for minimum of 5 hours, when tested in accordance with AATCC Test Method 127.
 - 4. Ultraviolet (UV) and Weathering Resistance: Approved in writing by manufacturer for up to 180 days of weather exposure.
 - 5. Surface Burning Characteristics: Flame spread index of 25 or less, and smoke developed index of 50 or less, when tested in accordance with ASTM E84.
 - 6. Water Resistance: Comply with applicable water-resistive requirements of ICC-ES AC38.
 - 7. Seam and Perimeter Tape: Polyethylene self adhering type, mesh reinforced, 2 inches wide, compatible with sheet material; unless otherwise specified.
 - 8. Basis-of-Design Product:
 - a. Fortifiber Building Systems Group; WeatherSmart Commercial: www.fortifiber.com/#sle.
 - b. Substitutions: See Section 01 6000 - Product Requirements.
- B. Air Barrier Sheet, Self-Adhered:
 - 1. Air Permeance: 0.004 cfm/sq ft, maximum, when tested in accordance with ASTM E2178.
 - 2. Water Vapor Permeance: 10 perms, minimum, when tested in accordance with ASTM E96/E96M Procedure A (Desiccant Method) at 73.4 degrees F.
 - 3. Water Penetration Resistance Around Nails: Pass, when tested in accordance with ASTM D1970/D1970M (modified).
 - 4. Ultraviolet (UV) and Weathering Resistance: Approved in writing by manufacturer for up to 90 days of weather exposure.
 - 5. Surface Burning Characteristics: Flame spread index of 25 or less, smoke developed index of 450 or less (Class A), when tested in accordance with ASTM E84.
 - 6. Complies with NFPA 285 wall assembly requirements.
 - 7. Water Resistance: Comply with applicable water-resistive requirements of ICC-ES AC38.
 - 8. Seam and Perimeter Tape: As recommended by sheet manufacturer.
 - 9. Manufacturers:
 - a. Henry Company; Blueskin VP160: www.henry.com/#sle.

2.03 ACCESSORIES

- A. Sealants, Tapes, and Accessories for Sealing Weather Barrier and Sealing Weather Barrier to Adjacent Substrates: As specified or as recommended by weather barrier manufacturer.
- B. Flexible Flashing: Self-adhesive sheet flashing complying with ASTM D1970/D1970M, except slip resistance requirement is waived if not installed on a roof.
 - 1. Composition: Precured silicone rubber.
 - 2. Basis-of-Design Products:
 - a. Fortifiber Building Systems Group; FortiFlash: www.fortifiber.com/#sle.
 - b. Fortifiber Building Systems Group; FortiFlash Commercial: www.fortifiber.com/#sle.
 - c. Fortifiber Building Systems Group; FortiFlex: www.fortifiber.com/#sle.
 - d. Fortifiber Building Systems Group; FortiFlash Butyl: www.fortifiber.com/#sle.
 - e. Substitutions: See Section 01 6000 - Product Requirements.
- C. Pre-formed Transition Membrane: Semi-rigid silicone or polyester composition, tapered edges, tear resistant.
 - 1. Basis-of-Design Product:
 - a. Fortifiber Building Systems Group; Moistop Corner Shield: www.fortifiber.com/#sle.
 - b. Substitutions: See Section 01 6000 - Product Requirements.
- D. Vapor Retarder Tape: Coated polyester film with acrylic adhesive backing; pressure sensitive.
 - 1. Basis-of-Design Product:
 - a. Fortifiber Building Systems Group; Fortifiber Sheathing Tape: www.fortifiber.com/#sle.
 - b. Substitutions: See Section 01 6000 - Product Requirements.
- E. Thinners and Cleaners: As recommended by material manufacturer.
- F. **Furring Strips: 3/4" or 1x PT furring strips, or as recommended by manufacturer.**

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces and conditions are ready to accept the work of this section.

3.02 PREPARATION

- A. Remove projections, protruding fasteners, and loose or foreign matter that might interfere with proper installation.
- B. Clean and prime substrate surfaces to receive adhesives and sealants in accordance with manufacturer's instructions.

3.03 INSTALLATION

- A. Install materials in accordance with manufacturer's instructions and as indicated on drawings.
- B. Air Barriers: Install continuous air tight barrier over surfaces indicated, with sealed seams and with sealed joints to adjacent surfaces.
- C. Apply sealants and adhesives within recommended application temperature ranges. Consult manufacturer if temperature is out of this range.
- D. Mechanically Fastened Sheets - On Exterior:
 - 1. Install sheets shingle-fashion to shed water, with seams generally horizontal.
 - 2. Overlap seams as recommended by manufacturer but at least 6 inches.
 - 3. Overlap at outside and inside corners as recommended by manufacturer but at least 12 inches.
 - 4. Attach to framed construction with fasteners extending through sheathing into framing. Space fasteners at 12 to 18 inches on center along each framing member supporting sheathing.

5. For applications specified to be air tight, seal seams, laps, penetrations, tears, and cuts with self-adhesive tape; use only large-headed, gasketed fasteners recommended by the manufacturer.
 6. Where stud framing rests on concrete or masonry, extend lower edge of sheet at least 4 inches below bottom of framing and seal to foundation with sealant.
 7. Install air barrier and vapor retarder UNDER jamb flashings.
 8. Install head flashings under weather barrier.
 9. At openings to be filled with frames having nailing flanges, wrap excess sheet into opening; at head, seal sheet over flange and flashing.
- E. Self-Adhered Sheets:
1. Prepare substrate in manner recommended by sheet manufacturer; fill and tape joints in substrate and between dissimilar materials.
 2. Lap sheets shingle-fashion to shed water and seal laps air tight.
 3. Once sheets are in place, press firmly into substrate with resilient hand roller; ensure that laps are firmly adhered with no gaps or fishmouths.
 4. Use same material, or other material approved by sheet manufacturer for the purpose, to seal to adjacent construction and as flashing.
 5. At wide joints, provide extra flexible membrane allowing joint movement.
- F. Openings and Penetrations in Exterior Weather Barriers:
1. Install flashing over sills, covering entire sill frame member, extending at least 5 inches onto weather barrier and at least 6 inches up jambs; mechanically fasten stretched edges.
 2. At openings to be filled with frames having nailing flanges, seal head and jamb flanges using a continuous bead of sealant compressed by flange and cover flanges with sealing tape at least 4 inches wide; do not seal sill flange.
 3. At openings to be filled with non-flanged frames, seal weather barrier to each side of opening framing, using flashing at least 9 inches wide, covering entire depth of framing.
 4. At head of openings, install flashing under weather barrier extending at least 2 inches beyond face of jambs; seal weather barrier to flashing.
 5. At interior face of openings, seal gap between window/door frame and rough framing, using joint sealant over backer rod.
 6. Service and Other Penetrations: Form flashing around penetrating item and seal to weather barrier surface.

3.04 FIELD QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements, for additional requirements.
- B. Inspections:
1. Weather resistant barrier materials and installation are subject to inspection for compliance with requirements.
 2. Inspections may include the following:
 - a. Continuity of barrier system has been achieved throughout the building envelope with no gaps or holes.
 - b. Continuous structural support of barrier system has been provided.
 - c. Masonry and concrete surfaces are smooth, clean and free of cavities, protrusions, and mortar droppings.
 - d. Site conditions for application temperature and dryness of substrates have been maintained.
 - e. Maximum exposure time of materials to UV deterioration has not been exceeded.
 - f. Surfaces have been primed.
 - g. Laps in sheet materials have complied with the minimum requirements and have been shingled in the correct direction (or mastic applied on exposed edges), with no fishmouths.

- h. Termination mastic has been applied on cut edges.
 - i. Weather resistant barrier has been firmly adhered to substrate.
 - j. Compatible materials have been used.
 - k. Transitions at changes in direction and structural support at gaps have been provided.
 - l. Connections between assemblies (membrane and sealants) have complied with requirements for cleanliness, preparation and priming of surfaces, structural support, integrity, and continuity of seal.
 - m. All penetrations have been sealed.
- C. Remove and replace deficient barrier components and retest as specified above.
- D. Coordination of ABAA Tests and Inspections:
- 1. Provide testing and inspection required by ABAA QAP.
 - 2. Notify ABAA in writing of schedule for air barrier work, and allow adequate time for testing and inspection.
 - 3. Cooperate with ABAA testing agency.
 - 4. Allow access to air barrier work areas and staging.
 - 5. Do not cover air barrier work until tested, inspected, and accepted.
- E. Do not cover installed weather barriers until required inspections have been completed.
- F. Take digital photographs of each portion of the installation prior to covering up.

3.05 PROTECTION

- A. Do not leave materials exposed to weather longer than recommended by manufacturer.
- B. Do not leave paper- or felt-based barriers exposed to weather for longer than one week.
- C. Repair torn breathable membrane as follows:
 - 1. Insert a full height piece of underlayment extending minimum 12-inches horizontally beyond the damage and extend up and under the membrane above.
 - 2. Mechanically attach underlayment to substrate top and bottom.
- D. Remove mud and similar marks with a water scrub.
 - 1. If chemicals have been spilled on membrane, treat as a tear and repair as stated in 3.5 C above.

END OF SECTION 07 2500

**SECTION 07 4113
METAL ROOF PANELS**

PART 1 GENERAL

1.01 SECTION INCLUDES

1.02 RELATED REQUIREMENTS

- A. Section 06 1000 - Rough Carpentry: Roof sheathing.
- B. Section 06 1500 - Wood Decking: Roof sheathing.
- C. Section 07 2100 - Thermal Insulation: Rigid roof insulation.
- D. Section 07 9200 - Joint Sealants: Sealing joints between metal roof panel system and adjacent construction.

1.03 REFERENCE STANDARDS

- A. ASTM A792/A792M - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process; 2010 (Reapproved 2015).
- B. ASTM D226/D226M - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing; 2009.
- C. ASTM D1970/D1970M - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection; 2013.
- D. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2015a.
- E. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials; 2014.
- F. IAS AC472 - Accreditation Criteria for Inspection Programs for Manufacturers of Metal Building Systems; 2012.
- G. ICC-ES AC188 - Acceptance Criteria for Roof Underlayments; 2012.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Storage and handling requirements and recommendations.
 - 2. Installation methods.
 - 3. Specimen warranty.
- C. Shop Drawings: Include layouts of roof panels, details of edge and penetration conditions, spacing and type of connections, flashings, underlayments, and special conditions.
 - 1. Show work to be field-fabricated or field-assembled.
- D. Verification Samples: For each roofing system specified, submit samples of minimum size 12 inches square, representing actual roofing metal, thickness, profile, color, and texture.
- E. Manufacturer Qualification Statement: Provide documentation showing metal roof panel fabricator is accredited under IAS AC472.
- F. Test Reports: Indicate compliance of metal roofing system to specified requirements.
- G. Warranty: Submit specified manufacturer's warranty and ensure that forms have been completed in Owner's name and are registered with manufacturer.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of documented experience.
 - 1. Accredited by IAS in accordance with IAS AC472.

- B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience demonstrating at least three projects of equal or greater size and scope.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Provide strippable plastic protection on prefinished roofing panels for removal after installation.
- B. Store roofing panels on project site as recommended by manufacturer to minimize damage to panels prior to installation.

1.07 WARRANTY

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Manufacturer's Warranty: Manufacturer's standard 25-year performance warranty, stating the following:
 - 1. Architectural fluorocarbon finish:
 - a. Will be free of fading or color change in excess of 5 Hunter delta-E units as determined by ASTM D2244-02.
 - b. Will not chalk in excess of numerical rating of 8 when measured in accordance with standard procedures specified in ASTM D4214-98 method D659.
 - c. Will not peel, crack, chip, or delaminate.
 - 2. Metal substrate will not rupture, fail structurally, or perforate.
- C. Installer's Warranty: Warrant panels, flashings, sealants, fasteners and accessories against defective materials and/or workmanship, covering repairs required to maintain roof panels watertight and weatherproof with normal usage for two years following Project Substantial Completion date.
 - 1. Furnish written warranty, signed by installer.
- D. Weathertight Performance Warranty: Manufacturer's standard warranty in which manufacturer agrees to repair or replace metal roof panel assemblies that fail to remain weather tight within specified warranty period.
- E. Finish Warranty: Provide manufacturer's special warranty covering failure of factory-applied exterior finish on metal roof panels and agreeing to repair or replace panels that show evidence of finish degradation, including significant fading, chalking, cracking, or peeling within specified warranty period of 20 year period from date of Substantial Completion.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Design is based on Span-Lok hp, manufactured by AEP Span.

2.02 ARCHITECTURAL METAL ROOF PANELS

- A. Architectural Metal Roofing: Provide complete engineered system complying with specified requirements and capable of remaining weathertight while withstanding anticipated movement of substrate and thermally induced movement of roofing system.
- B. Metal Panels: Factory-formed panels with factory-applied finish.
 - 1. Steel Panels:
 - a. **Aluminum-zinc alloy-coated steel complying with ASTM A792/A792M; minimum AZ50 coating.**
 - b. Steel Thickness: Minimum 22 gage (0.0294 inch).
 - 2. Profile: Standing seam, with minimum 1.0 inch seam height; concealed fastener system for field seaming with special tool.
 - 3. Texture: Smooth.

4. Length: Maximum possible length to minimize lapped joints. Where lapped joints are unavoidable, space laps so that each sheet spans over three or more supports.
5. Width: Maximum panel coverage of 16 inches.

2.03 ATTACHMENT SYSTEM

- A. Concealed System: Provide manufacturer's standard stainless steel or nylon-coated aluminum concealed anchor clips designed for specific roofing system and engineered to meet performance requirements, including anticipated thermal movement.

2.04 FABRICATION

- A. Panels: Provide factory fabricated panels with applied finish and accessory items, using manufacturer's standard processes as required to achieve specified appearance and performance requirements.
- B. Joints: Provide captive gaskets, sealants, or separator strips at panel joints to ensure weathertight seals, eliminate metal-to-metal contact, and minimize noise from panel movements.

2.05 FINISHES

- A. Fluoropolymer Coating System: Manufacturer's standard multi-coat thermocured coating system, including minimum 70 percent fluoropolymer color topcoat with minimum total dry film thickness of 0.9 mil; color and gloss 'Cool' ZACTique II.

2.06 ACCESSORIES

- A. Miscellaneous Sheet Metal Items: Provide flashings, trim, moldings, closure strips, caps, and similar sheet metal items of the same material, thickness, and finish as used for the roofing panels. Items completely concealed after installation may optionally be made of stainless steel.
- B. Rib and Ridge Closures: Provide prefabricated, close-fitting components of steel with corrosion resistant finish or combination steel and closed-cell foam.
- C. Sealants:
 1. Exposed Sealant: Elastomeric; silicone, polyurethane, or silyl-terminated polyether/polyurethane.
 2. Concealed Sealant: Non-curing butyl sealant or tape sealant.
 3. Seam Sealant: Factory-applied, non-skinning, non-drying type.
- D. Thermal Insulation: Provide flexible blanket, rigid, or semi-rigid type, faced with white, flexible, non-dusting vapor retarder tested for maximum flame spread index of 50, per ASTM E84; for installation using spacer blocks.
 1. Thickness: As indicated.
- E. Underlayment for Wood Substrate: ASTM D226/D226M roofing felt, perforated type; covered by water-resistant rosin-sized building paper.
- F. Underlayment: Self-adhering rubber-modified asphalt sheet complying with ASTM D1970/D1970M; 22 mil total thickness; with strippable release film and woven polypropylene sheet top surface.
 1. Minimum Requirements: Comply with requirements of ICC-ES AC188 for non-self-adhesive sheet.
 2. Sheet Thickness: 22 mil, 0.022 inch minimum total thickness.
 3. Self Sealability: Passing nail sealability test specified in ASTM D1970/D1970M.
 4. Low Temperature Flexibility: Passing test specified in ASTM D1970/D1970M.
 5. Water Vapor Permeance: 0.1 perm, maximum, when tested in accordance with ASTM E96/E96M Procedure A (desiccant method).
 6. Manufacturers:
 - a. Henry Company; Blueskin RF200: www.henry.com/#sle.
 - b. Henry Company; Blueskin PE200HT: www.henry.com/#sle.

- c. Substitutions: See Section 01 6000 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin installation of preformed metal roof panels until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 PREPARATION

- A. Broom clean wood sheathing prior to installation of roofing system.
- B. Coordinate roofing work with provisions for roof drainage, flashing, trim, penetrations, and other adjoining work to assure that the completed roof will be free of leaks.
- C. Remove protective film from surface of roof panels immediately prior to installation. Strip film carefully, to avoid damage to prefinished surfaces.
- D. Separate dissimilar metals by applying a bituminous coating, self-adhering rubberized asphalt sheet, or other permanent method approved by roof panel manufacturer.
- E. Where metal will be in contact with wood or other absorbent material subject to wetting, seal joints with sealing compound and apply one coat of heavy-bodied bituminous paint.

3.03 INSTALLATION

- A. Overall: Install roofing system in accordance with approved shop drawings and panel manufacturer's instructions and recommendations, as applicable to specific project conditions. Anchor all components of roofing system securely in place while allowing for thermal and structural movement.
 - 1. Install roofing system with concealed clips and fasteners.
 - a. Any fasteners used shall be non-corrosive with deformed shank.
 - 2. Minimize field cutting of panels. Where field cutting is absolutely required, use methods that will not distort panel profiles. Use of torches for field cutting is absolutely prohibited.
- B. Accessories: Install all components required for a complete roofing assembly, including flashings, gutters, downspouts, trim, moldings, closure strips, preformed crickets, caps, equipment curbs, rib closures, ridge closures, and similar roof accessory items.
- C. Install roofing felt and building paper slip sheet on roof deck before installing preformed metal roof panels. Secure by methods acceptable to roof panel manufacturer, minimizing use of metal fasteners. Apply from eaves to ridge in shingle fashion, overlapping horizontal joints a minimum of 2 inches and side and end laps a minimum of 3 inches. Offset seams in building paper and seams in roofing felt.
- D. Roof Panels: Install panels in strict accordance with manufacturer's instructions, minimizing transverse joints except at junction with penetrations.
 - 1. Form weathertight standing seams incorporating concealed clips, using an automatic mechanical seaming device approved by the panel manufacturer.
 - 2. Install sealant or sealant tape, as recommended by panel manufacturer, at end laps and side joints.
- E. Insulation: Install insulation between roof covering and supporting members to present a neat appearance. Fold, staple, and tape seams unless otherwise approved by Architect.

3.04 CLEANING

- A. Clean exposed sheet metal work at completion of installation. Remove grease and oil films, excess joint sealer, handling marks, and debris from installation, leaving the work clean and unmarked, free from dents, creases, waves, scratch marks, or other damage to the finish.

3.05 PROTECTION

- A. Do not permit storage of materials or roof traffic on installed roof panels. Provide temporary walkways or planks as necessary to avoid damage to completed work. Protect roofing until completion of project.
- B. Touch-up, repair, or replace damaged roof panels or accessories before Date of Substantial Completion.

END OF SECTION 07 4113

SECTION 09 8430
SOUND-ABSORBING WALL AND CEILING UNITS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Sound-absorbing ceiling baffles.

1.02 REFERENCE STANDARDS

- A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2015a.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's printed data sheets for products specified.
- C. Shop Drawings: Fabrication and installation details, panel layout, and fabric orientation.
- D. Selection Samples: Manufacturer's color charts for fabric covering, indicating full range of fabrics, colors, and patterns available.
- E. Verification Samples: Fabricated samples of each type of panel specified; 12 by 12 inch, showing construction, edge details, and fabric covering.
- F. Test Reports: Certified test data from an independent test agency verifying that panels meet specified requirements for acoustical and fire performance.
- G. Manufacturer's Qualification Statement.

1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company with not less than five years of experience in manufacturing acoustical products similar to those specified.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Protect acoustical units from moisture during shipment, storage, and handling. Deliver in factory-wrapped bundles; do not open bundles until units are needed for installation.
- B. Store units flat, in dry, well-ventilated space; do not stand on end.
- C. Protect edges from damage.

PART 2 PRODUCTS

2.01 FABRIC-COVERED SOUND-ABSORBING UNITS

- A. Manufacturers:
 - 1. LAMVIN; Sonic Single Core Hanging Baffle: www.lamvin.com/#sle.
 - 2. Substitutions: See Section 01 6000 - Product Requirements.
- B. Sound Absorbing Units: Prefinished, factory assembled fabric-covered panels.
 - 1. Surface Burning Characteristics: Flame spread index of 25 or less and smoke developed index of 450 or less, when tested in accordance with ASTM E84.
- C. Fabric-Covered Acoustical Ceiling Baffles:
 - 1. Baffle Core: Manufacturer's standard core.
 - 2. Baffle Size: 24 inches by 48 inches.
 - 3. Baffle Thickness: 1 1/2 inches.
 - 4. Edges: Perimeter edges reinforced by a formulated resin hardener.
 - 5. Color: As selected by Architect from manufacturer's full range.
 - 6. Mounting: Vertically suspended from ceiling or structure by one edge of panel.

SOUND-ABSORBING WALL AND CEILING UNITS**2.02 FABRICATION**

- A. Fabric Wrapped, General: Fabricate panels to sizes and configurations as indicated, with fabric facing installed without sagging, wrinkles, blisters, or visible seams.
 - 1. For panels suspended from ceiling, provide fabric covering both sides, with seams only at panel edges.
- B. Tolerances: Fabricate to finished tolerance of plus or minus 1/16 inch for thickness, overall length and width, and squareness from corner to corner.

2.03 ACCESSORIES

- A. Ceiling-Suspended Accessories: Manufacturer's standard accessories at locations as indicated on each acoustical unit, sized appropriately for weight of acoustical unit.
 - 1. Provide galvanized wire for suspension from ceiling at heights as indicated.

PART 3 EXECUTION**3.01 INSTALLATION**

- A. Install acoustical units in locations as indicated, following manufacturer's installation instructions.
- B. Suspend ceiling baffles at locations and heights as indicated.
- C. Install acoustical units to construction tolerances of plus or minus 1/16 inch for the following:
 - 1. Plumb and level.
 - 2. Flatness.

3.02 CLEANING

- A. Clean fabric facing upon completion of installation from dust and other foreign materials, following manufacturer's instructions.

3.03 PROTECTION

- A. Provide protection of installed acoustical panels until Date of Substantial Completion.
- B. Replace panels that cannot be cleaned and repaired to satisfaction of the Architect.

END OF SECTION 09 8430