

May 21, 2025

To All Prospective Bidders

SUBJECT: IFB #PW25-3, HGH & Siemens Hall Roof Replacement, Project XPL310/311

Addendum #1

The following changes, omissions and/or additions to the Bidding Documents shall apply to proposals made for and to the execution of the various parts of the work affected thereby and all other conditions shall remain the same. In case of conflict between Bidding Documents and this Addendum, this Addendum shall govern.

1. Bid Proposal Submittal Due Date

Bid Proposal Submittal due date has not changed and remains Thursday, June 5, 2025 by 3:00 p.m.

ADDITIONAL BID DOC EDIT: On page 1 of the IFB Notice to Contractors, the due date for questions is listed as February 20, 2023. This date should be updated to align with this IFB timeline.

OTHER UPDATES:

- Updates to Siemens Hall drawings:
 - AD2.10 Demolition Keynotes, Note 5 changed "remove" to "remain".
- Updates to Siemens Hall specifications
 - Section 07 5419 POLYVINYL-CHLORIDE (PVC) ROOFING Replace section in its entirety
 - Section 2.6, A, 2, Added "Duro-Last"
- Updates to Harry Griffith Hall drawings:
 - AD2.10 Modified key note #10
 - A2.10 At low roof on south side of building, add scupper and downspout.
 - Added key note #13.
 - Added key note #14.
- Updates to Harry Griffith Hall specifications:
 - Section 07 5419 POLYVINYL-CHLORIDE (PVC) ROOFING Replace section in its entirety
 - section 2.6, A, 2, Added "Duro-Last"

2. Questions and Answers

- Q1: Substation Request: Harry Griffith Hall & Siemens Hall Roof Replacement, Project XPL310/XPL311
 - Section 075419 PVC Roofing, Basis of Design Manufacture and Product: Sika, PVC Fleece Back Membrane.
 - \circ $\,$ Can we substitute DuroLast PVC for Sika PVC.
 - Answer: Specifications Section 07 54 19 (2.6)(A)(2) has been amended to include Duro-Last in the list of "acceptable manufacturers." A Duro-Last product may be submitted as a BOD alternate subject to the contractor's demonstration that the product meets spec conformance requirements.
- Q2: Are there abatement report available for both projects?
 - Answer: Yes, there are asbestos and lead survey reports for both roofs. The survey reports have been included with the bid documents that are available on the Humboldt Contracts & Procurement website.
- Q3: The drawings and specification show a min R value and tapered system. Will the tapered and R value be achieved with the insulating concrete?
 - Answer: The project documents specify an average R-value of 20, which can be achieved through the use of concrete over insulation.
- **Q4:** Will the insulating concrete use range 3 for the compression strength?
 - Answer: Contractor to contact manufacturer for compression strength.
- **Q5:** What is the recommended dry time from the insulated concrete manufacturer before the roof can be installed?

The specs specify the insulating concrete roof deck should not be exposed for more than 7 days. How many days will be left to install the new roof?

- Answer: Per the AOR, previous project experience with the Basis of Design roofing system indicated that the PVC membrane could be successfully installed the day following concrete placement. Contractor to coordinate with the manufacturer to confirm appropriate drying times.
- **Q6:** Can the vapor barrier be installed on top light weight concrete? The benefits of having the vapor barrier on top:
 - The vapor barrier can act as a temporary waterproofer. Helping with the time frame to cover the exposed concrete.
 - We can fully adhere the PVC directly over it if we prime the light weight concrete first.
 Answer: The vapor barrier must be installed under the concrete.
- Q7: Do you have the result of the test cuts to the existing roof (type of materials, layers and thickness)? If the test cuts are not available can the University preform the test cuts to minimize holes and patching of the existing roof?
 - Answer: Test cuts have not been performed. As-builts indicate typical roof thickness over the main roofs to be approximately five (5) to six (6) inches.
- **Q8:** Drawing A8.10 details D1,F1 and H1 show different size blocking. The blocking will vary the elevations of the edge metal. Can the elevation of the blocking be set at the same height? If the insulating concrete sets below the blocking we can still transition the PVC with the same details as a parapet wall.
 - Answer: The intent is to hold the edge metal at constant elevation. Please bid blocking of different sizes to achieve a uniform edge height. Alternate methods to achieve the design intent may be proposed by the contractor for University review.
- **Q9:** After the existing roof is removed there will be existing hot tar and roofing that will be stuck to the existing concrete deck. The remaining tar and roofing can not be removed with normal tear off procedures. Will the remaining hot tar be acceptable?
 - Answer: It is acceptable to install insulation and concrete fill over remnant roofing and tar adhered to the existing concrete deck. Coordinate with the manufacturer to verify acceptable installation limits and conditions.
- **Q10:** A min of 8" is required at all termination heights for an NDL warranty. All curbs, pipes, walls etc. may need to be modified to get the required height. Do you have a detail for raising the curbs?
 - Answer: An eight (8) inch minimum termination height will not be achievable at all locations on this project. Where it is possible to achieve an eight (8) inch minimum termination height, the minimum height shall be maintained.
- Q11: Can the minimum height of the gate be changed to 8" min above finished roof so the gate and pipe boot will not interfere with each other.
 - Answer: Yes, this detail can be modified to have min 8" termination height.
- Q12: The railing is shown with a distance of 6" away the edge of the roof at some locations. Can the minimum distance be changed to 12" so the wood blocking, edge metal and railing don't interfere with each other? It may need to be pulled back even more with the 24" railing base plates?
 - Answer: Yes, the railing system setback distance can be modified to avoid conflicts. Any deviation from the permitted 100% CDs must be reviewed and approved by the University before installation.
- **Q13:** Siemens drawing A2.10 K1 roof canopy.
 - a) Detail A8.10 H5. There a retrofit steel beam that is blocking the access to the windows, making it not possible to remove and install the new roofing. Installing the insulating concrete with the average min thickness and roof pitch may also put the new roof above the window height. The 8" min termination height will not meet for the NDL requirements.
 - Answer:
 - 1. At this location, the R value can be reduced to zero. Use insulation and concrete fill to achieve drainage only.
 - 2. An 8" termination height is not possible at this location.
 - b) We recommend raising the wood nailers above the light weight concrete to minimize the water running over the raised edge metal.
 - Answer: This project does not include overflow drains; therefore, water overflow will be directed

through scuppers integrated into the edge flashing system.

- Q14: We are unable to install any temporary safety anchors into the light weight concrete due to the low compression strength. Can more of the permanent safety anchors be installed as shown in drawing A8.11 detail B8 to both roofs?
 - Answer: Permanent anchors would be considered provided that such anchor points can be precisely coordinated to avoid interference with the future solar arrays planned for both buildings. If permanent anchors are not feasible because they would conflict with the layout and support infrastructure of the future solar system, then Cal/OSHA-compliant temporary fall protection solutions compatible with low-compression-strength lightweight concrete should be utilized to maintain site safety.
- **Q15:** The upper penthouse on Griffith Hall has a cold tar roof still installed on it. The cold tar pitch is listed on the special health hazard list. Is the penthouse part of the abatement.
 - Answer: The roofing materials at the HGH penthouse have not been tested for coal tar pitch. The contractor shall comply with Cal/OSHA worker safety regulations, including the requirement to provide appropriate hazard communication training to their workers for all hazards to which employees are expected to be exposed (including coal tar pitch, as applicable). If employees may be exposed above a given Cal/OSHA permissible exposure limit (PEL), then the contractor must implement appropriate administrative and engineering controls, as well as provide their workers with personal protective equipment to ensure that personnel are not exposed above the PEL. The Cal/OSHA PEL for coal tar pitch volatiles is 0.2 mg/m3 (benzene-soluble fraction) as a time weighted average (TWA) over an 8-hour workday. In accordance with the project specifications (01 35 00, others), the contractor is responsible for ensuring that dust and fumes generated by their work do not migrate beyond the work area. Dust and odor control must be addressed under the contractor's Environmental Protection Plan required to be submitted prior to construction per Section 01 35 00.
- **Q16:** Are there intake vents on the roofs? With the tear off of the existing roof and VOCs in the adhesives will the intakes need to covered or filtered?
 - Answer: As the buildings will remain occupied throughout the project, vents must generally remain operational for the duration of demolition and construction work. It will be the contractor's responsibility to protect building fresh air intakes from dust, fumes, and vapors. The contractor shall implement control methods to protect the building's air intakes, including the use of filters as necessary. Dust and odor control must be addressed under the contractor's Environmental Protection Plan required to be submitted prior to construction per Section 01 35 00). Temporary shutdown of the HVAC system is acceptable, provided that the timing and duration of such shutdowns are coordinated in advance and approved by the University. Per 01 11 00, requests for utility shutdowns shall be submitted a minimum of 14 calendar days in advance of the requested shutdown date.
- Q17: The penthouse and stairway roof on Griffith Hall have a steel pan deck. Are there any other sections on both buildings that have a steel deck? Will any of the details change with a steel deck?
 - Answer: Current details are applicable for metal decks with concrete fill.
- **Q18:** The stairway roof on Griffith Hall has a drain that is recessed into the wall similar to Siemens Hall Drawing A2.1 detail 11. The existing drain does not appear to have a way to terminate to it correctly. The drain and plumbing are buried into the brick wall and not accessible from underneath. Can details similar to Siemens Hall Drawing A2.1 K1 be used to eliminate the existing drain?
 - Answer: The existing drain will be eliminated and a new scupper and downspout will be installed per H8/A8.10. Route new downspout to adjacent brick wall and daylight in planter below per A2.10 (revised 05/18/2025).
- **Q19:** Griffith Hall Drawing A2.10 note 10 roof. The existing small south east section approximately 8'X10' sets 1"-2" lower than the main roof. Can the concrete be installed to match the elevation to the main roof and pitch? This will eliminate the note 10 drain and the edge metal will be at the same elevations.
 - Answer: The University takes no exception to the proposed solution to match the elevator shaft roof elevation to the main roof and omit the existing note 10 drain. Any deviation from the permitted 100% CDs must be reviewed and approved by the University before installation.
- **Q20:** The existing camera on Griffith Hall is mounted through the roof. Do you have a new detail that is compatible with the PVC? The cable that is connected to the camera is zipped tied and runs along the existing siren conduit.

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The cable will require new routing details.

• Answer: The camera will be mounted at the northeast corner of the roof so that there is no additional penetration through the roofing membrane. Per A2.10 (note 10), the contractor is required to install new one (1) inch conduit from the point of connection to the camera. Note: the installation of the Cat6 cable within the new conduit may be omitted from the contractor's scope.

-END OF ADDENDUM-

Contracts & Procurement

Cisco Haggerty Procurement Specialist



Project Name:	Cal Poly Humboldt-Siemens Hall Roof Repair
Project Number:	1485-0004
ID:	ADD 001
Date:	5/18/2025
Subject:	Pre-Bid Updates
Initiated By:	Tom Hall

This addendum has been prepared to clarify, modify, delete, or add to the drawings and/or specifications for the above referenced project. The items listed herein supersede descriptions prior to the date listed above. All conditions not specifically referenced here shall remain the same. It is the obligation of the general contractor to make all trade partners aware of any items herein.

Description

Updates to drawings:

AD2.10 - Demolition Keynotes, Note 5 changed "remove" to "remain".

Updates to Specifications

Section 07 5419 - POLYVINYL-CHLORIDE (PVC) ROOFING Replace section in its entirety section 2.6, A, 2, Added "Duro-Last"



SECTION 07 54 19

POLYVINYL-CHLORIDE (PVC) ROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Polyvinyl chloride (PVC) roofing system.
- B. Related Requirements:
 - 1. Section 03 52 16 "Lightweight Insulating Concrete Roof Decks". For insulation that is part of roof assembly.

1.3 REFERENCES

- A. See Division 01 "References".
- B. Codes:
 - 1. California Building Code (CBC): Title 24 Part 2.
 - 2. California Energy Code, Title 24 Part 6.
 - 3. California Green Building Standards Code (CALGreen): Title 24 Part 11.
- C. Reference Standards:
 - 1. ASTM D4434: Standard Specification for Poly(Vinyl Chloride) Sheet Roofing.
- D. Definitions:
 - 1. Roofing Terminology: Definitions in ASTM D1079 and glossary in NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" apply to work of this Section.
- 1.4 SUBMITTALS, GENERAL
 - A. See Division 01 "Submittal Procedures".
 - B. See Division 01 "Material Contaminant Restrictions" for additional submittals.

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1.5 ACTION SUBMITTALS

- A. Product Data: For each item to be installed.
 - 1. For insulation and roof system component fasteners, include copy of FM Approvals' RoofNav listing.
- B. Shop Drawings: Include roof plans, sections, details, and attachments to other work, including the following:
 - 1. Layout and thickness of insulation.
 - 2. Base flashings and membrane terminations.
 - 3. Flashing details at penetrations.
 - 4. Tapered insulation thickness and slopes.
 - 5. Roof plan showing orientation of steel roof deck and orientation of roof membrane, fastening spacings, and patterns for mechanically fastened roofing system.
 - 6. Insulation fastening patterns for corner, perimeter, and field-of-roof locations.
 - 7. Tie-in with air barrier.
- C. Samples for Verification: Roof membrane and flashing, of color required.

1.6 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For roofing system to include in maintenance manuals.
- B. Certified statement from existing roof membrane manufacturer stating that existing roof warranty has not been affected by Work performed under this Section.
- 1.7 QUALITY ASSURANCE
 - A. Qualifications: See Division 01 "Quality Assurance".
 - 1. Manufacturer Qualifications: A qualified manufacturer that is UL listed or listed in FM Approvals' RoofNav for roofing system identical to that used for this Project.
 - 2. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's special warranty.
 - B. Preinstallation Meeting: See Division 01 "Project Meetings".
 - 1. Convene minimum two weeks before starting work of this Section.
 - 2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
 - 3. Review and finalize construction schedule, and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.

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- 4. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
- 5. Review structural loading limitations of roof deck during and after roofing.
- 6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that affects roofing system.
- 7. Review governing regulations and requirements for insurance and certificates if applicable.
- 8. Review temporary protection requirements for roofing system during and after installation.
- 9. Review roof observation and repair procedures after roofing installation.
- 1.8 DELIVERY, STORAGE, AND HANDLING
 - A. See Division 01 "Product Requirements".
 - B. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.
 - C. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.
 - 1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
 - D. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
 - E. Handle and store roofing materials, and place equipment in a manner to avoid permanent deflection of deck.
 - F. Packaging Waste Management: See Division 01 "Construction Waste Management and Disposal".

1.9 FIELD CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

1.10 WARRANTY

A. Special (NDL) Warranty: Manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within specified warranty period.
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- 1. Special warranty includes all components of roofing system.
- 2. Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

- 2.1 REGULATORY REQUIREMENTS
 - A. See Division 01 "Regulatory Requirements".
 - B. Roof assemblies and components to meet requirements of CBC Chapter 15 "Roof Assemblies and Rooftop Structures".
 - 1. PVC Material: ASTM D4434 (CBC 1507.13.2).
 - 2. Glass-faced Gypsum Board: ASTM C1177 (CBC Table 1508.2).
 - 3. Polyisocyanurate Board: ASTM C1289, Type I or II (CBC Table 1508.2).
 - C. See Division 01 "Material Contaminant Restrictions", for allowable VOC content.
 - D. See Division 01 "Exterior Enclosure Performance Requirements" for minimum performance requirements for exterior insulation and roof products.
- 2.2 PERFORMANCE REQUIREMENTS
 - A. General Performance: Installed roofing and base flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Roof system and flashings shall remain watertight.
 - 1. Accelerated Weathering: Roof membrane shall withstand 2,000 hours of exposure when tested according to ASTM G152, ASTM G154, or ASTM G155.
 - 2. Impact Resistance: Roof membrane shall resist impact damage when tested according to ASTM D3746, ASTM D4272, or the "Resistance to Foot Traffic Test" in FM Approvals 4470.
 - B. Material Compatibility: Roofing materials shall be compatible with one another and adjacent materials under conditions of service and application required, as demonstrated by roof membrane manufacturer based on testing and field experience.
 - C. ENERGY STAR Listing: Roofing system shall be listed on the DOE's ENERGY STAR "Roof Products Qualified Product List" for low-slope roof products.
 - D. Energy Performance: See Division 01 "Exterior Enclosure Performance Requirements".
 - E. Exterior Fire-Test Exposure: ASTM E108 or UL 790, Class A; for application and roof slopes indicated; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

- F. Fire-Resistance Ratings: Comply with fire-resistance-rated assembly designs indicated. Identify products with appropriate markings of applicable testing agency.
- 2.3 SUSTAINABILITY REQUIREMENTS
 - A. See Division 01 "Sustainable Design Requirements".
 - B. Solar Reflectance Index (SRI): Three-year-aged SRI not less than 64, or initial SRI not less than 82, when calculated according to ASTM E1980, based on testing identical products by a qualified testing agency.
- 2.4 POLYVINYL CHLORIDE (PVC) ROOF ASSEMBLY
 - A. Source Limitations: Obtain components for roofing system from roof membrane manufacturer or manufacturers approved by roof membrane manufacturer.
 - B. Assembly, excluding auxiliary components:
 - 1. Substrate.
 - a. Refer to architectural drawings and specifications.
 - 2. Vapor barrier.
 - 3. Rigid insulation.
 - a. Section 03 52 16 "Lightweight Insulating Concrete Roof Decks".
 - 4. PVC membrane.
 - a. Application: Fully-adhered.
 - 5. Walkway pads.

2.5 VAPOR BARRIER

- A. Self-Adhering-Sheet Vapor Barrier: ASTM D1970/D1970M, polyethylene film laminated to layer of rubberized asphalt adhesive, minimum 40-mil-total thickness; maximum permeance rating of 0.1 perm; cold applied, with slip-resisting surface and release paper backing. Provide primer when recommended by vapor barrier manufacturer.
 - 1. Acceptable Manufacturers and Products:
 - a. Johns Manville, JM Vapor Barrier SA.

- B. Self-Adhering-Sheet Vapor Barrier: Polyethylene film laminated to layer of butyl rubber adhesive, minimum 30-mil-total thickness; maximum permeance rating of 0.1 perm; cold applied, with slip-resisting surface and release paper backing. Provide primer when recommended by vapor barrier manufacturer.
- 2.6 POLYVINYL CHLORIDE (PVC) ROOFING
 - A. PVC Sheet: ASTM D4434, Type III, fabric-reinforced and fleece-backed.
 - 1. Basis of Design Manufacturer and Product:
 - a. Sika, PVC Fleece-Back Membrane.
 - 2. Subject to compliance with requirements, acceptable manufacturers include:
 - a. Duro-Last
 - b. Carlisle.
 - c. GAF.
 - d. Johns Manville.
 - e. Sika Sarnafil.
 - f. Soprema.
 - g. Substitutions: See Division 01 "Substitution Procedures".
 - 3. Physical Properties:
 - a. Membrane Thickness: 80 mils.
 - b. Exposed Face Color: Gray.
 - c. Breaking Strength (ASTM D751): 500 lbf/in minimum.
 - d. Elongation at Break (ASTM D751): 30 percent, minimum.
 - e. Seam Strength (ASTM D751): Pass, minimum 75 percent of breaking point.
 - f. Low Temperature Bend (ASTM D2136): Pass.
 - g. Linear Dimensional Change (ASTM D1204): 0.1 percent maximum.
 - h. Static Puncture Resistance (ASTM D5602): Pass, at 33 lbf minimum.
 - i. Dynamic Puncture Resistance (ASTm D5635): Pass, at 10 J minimum.

2.7 WALKWAY PADS

- A. Flexible Walkways: Factory-formed, nonporous, heavy-duty, slip-resisting, surfacetextured walkway pads or rolls, approximately 3/16 inch thick and acceptable to roofing system manufacturer.
 - 1. Width: Approximately 36 inches or as noted on plans
 - 2. Color: Contrasting with roof membrane.

2.8 AUXILIARY ROOFING MATERIALS

A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with other roofing components, for a complete roof system.

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- B. Adhesives and Sealants: See Division 01 "Material Contaminant Restrictions", for maximum allowable VOC content.
 - 1. Bonding Adhesive: Manufacturer's standard, for horizontal and vertical applications.
- C. Sheet Flashing: Manufacturer's standard sheet flashing of same material, type, reinforcement, thickness, and color as PVC sheet.
- D. PVC-Coated Metal: Manufacturer's standard sheet metal with PVC membrane laminated to one side.
- E. Prefabricated Pipe Flashings: As recommended by roof membrane manufacturer.
- F. Metal Termination Bars: Manufacturer's standard, predrilled stainless steel or aluminum bars, approximately 1 by 1/8 inch thick; with anchors.
- G. Metal Battens: Manufacturer's standard, aluminum-zinc-alloy-coated or zinc-coated steel sheet, approximately 1 inch wide by 0.05 inch thick, prepunched.
- H. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening roofing components to substrate, and acceptable to roofing system manufacturer.
- I. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, and other accessories.

2.9 INSULATION ACCESSORIES

- A. General: Roof insulation accessories recommended by insulation manufacturer for intended use and compatibility with other roofing system components.
- B. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening roof insulation and cover boards to substrate, and acceptable to roofing system manufacturer.
- C. Adhesives and Sealants: See Division 01 "Material Contaminant Restrictions", for maximum allowable VOC content.
 - 1. Insulation Adhesive: Insulation manufacturer's recommended adhesive formulated to attach roof insulation to substrate or to another insulation layer.
- D. Protection Mat: Woven or nonwoven polypropylene, polyolefin, or polyester fabric, water permeable and resistant to UV degradation, type and weight as recommended by roofing system manufacturer for application.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. See Division 01 "Execution".
- B. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements and other conditions affecting performance of the Work.
 - 1. Verify that roof openings and penetrations are in place, curbs are set and braced, and roof-drain bodies are securely clamped in place.
 - 2. Verify that wood blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
- C. Concrete Roof Decks:
 - 1. Verify that minimum concrete drying period recommended by roofing system manufacturer has passed.
 - 2. Verify that concrete substrate is visibly dry and free of moisture, and that minimum concrete internal relative humidity is not more than as recommended by roofing system manufacturer, when tested according to ASTM F2170.
 - a. See Division 01 "Quality Control" for additional information.
 - 3. Verify that concrete-curing compounds that will impair adhesion of roofing components to roof deck have been removed.
 - 4. Verify that joints in precast concrete roof decks have been grouted flush with top of concrete.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing system installation according to roofing system manufacturer's written instructions. Remove sharp projections.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- 3.3 INSTALLATION OF ROOFING, GENERAL
 - A. See Division 01 "Execution".
 - B. Install roofing system according to roofing system manufacturer's written instructions, approved shop drawings, FM Approvals' RoofNav assembly requirements, and FM Global Property Loss Prevention Data Sheet 1-29.

- C. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at end of workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.
- D. Install roof membrane and auxiliary materials to tie in to existing roofing to maintain weathertightness of transition[and to not void warranty for existing roofing system].
- E. Coordinate installation and transition of roofing system component serving as an air barrier with other air barrier components.
- 3.4 INSTALLATION OF MECHANICALLY-FASTENED ROOFING
 - A. Mechanically fasten roof membrane over area to receive roofing according to roofing system manufacturer's written instructions.
 - B. Unroll roof membrane and allow to relax before installing.
 - C. Start installation of roofing in presence of roofing system manufacturer's technical personnel.
 - D. Accurately align roof membrane, and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
 - E. Mechanically fasten or adhere roof membrane securely at terminations, penetrations, and perimeter of roofing.
 - F. Apply roof membrane with side laps shingled with slope of roof deck where possible.
 - G. In-Seam Attachment: Secure one edge of PVC sheet using fastening plates or metal battens centered within seam, and mechanically fasten PVC sheet to roof deck.
 - H. Seams: Clean seam areas, overlap roof membrane, and hot-air weld side and end laps of roof membrane and sheet flashings to ensure a watertight seam installation.
 - 1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of roof membrane and sheet flashings.
 - 2. Verify field strength of seams a minimum of twice daily, and repair seam sample areas.
 - 3. Repair tears, voids, and lapped seams in roof membrane that do not comply with requirements.
 - I. Spread sealant bed over deck-drain flange at roof drains, and securely seal roof membrane in place with clamping ring.

3.5 INSTALLATION OF BASE FLASHING

- A. Install sheet flashings and preformed flashing accessories, and adhere to substrates according to roofing system manufacturer's written instructions.
- B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate, and allow to partially dry. Do not apply to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.
- D. Clean seam areas, overlap, and firmly roll sheet flashings into the adhesive. Hot-air weld side and end laps to ensure a watertight seam installation.
- E. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.
- 3.6 CLEANING
 - A. See Division 01 "Progress Cleaning and Final Cleaning".
 - B. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.
- 3.7 PROTECTING AND CLEANING
 - A. Correct deficiencies in or remove roofing system that does not comply with requirements, repair substrates, and repair or reinstall roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
 - B. Protect roofing system from damage and wear during remainder of construction period. When remaining construction does not affect or endanger roofing, inspect roofing system for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.

END OF SECTION

CAL POLY HUMBOLDT SIEMENS HALL ROOF REPAIR – XPL311 LPAS Project No.: 1485-0004