



Schenectady County  
Purchasing Department  
**ADDENDUM**

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**RFB-2023-49**  
Schenectady County Roofing Projects

**ADDENDUM #1**

5/31/2023

The purpose of this addendum is to provide detailed information to all Bidders. This addendum is hereby included in and made part of the Contract Documents, whether or not attached thereto. Receipt of this Addendum must be acknowledged on the bid form.

The following documents is hereby included in the documents posted on Bidnet and provided to plan holders:

**Purpose: To replace pages in the Bid Packet:**

**Section 01 23 00**

**Section 07 53 23**

**Please see attached documents**

**Please acknowledge this addendum on your bid form.**

**END OF ADDENDUM #1**

ALTERNATES  
SECTION 01 23 00

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
  - 1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
  - 2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

- A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
  - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

**Add Alternate #1:** 80 Kellar Avenue roof only: Add tapered insulation as required for minimum required roof slope. See detail 2/A100 for additional information.

END OF SECTION 01 23 00

**SECTION 07 53 23**

**RUBBERGARD™ EPDM ADHERED ROOFING SYSTEM  
ELEVATE™ ROOFING, WALL, AND LINING SYSTEMS**

**PART 1 GENERAL**

The project, County Jail Building (Complete Tear Off) 320 Veeder Ave., Public Works (Complete Tear Off) 80 Kellar Ave., Records Building (Complete Tear Off) 100 Kellar Ave., Business Center (Recovery) 920 Albany St. located in Schenectady, New York includes the provision of a complete Elevate roofing, RubberGard™ EPDM Adhered Membrane Roofing System.

**1.01 SUMMARY**

- A. Furnish and install elastomeric sheet roofing system, including:
  - 1. "Elevate" Roofing requirements for the specified warranty.
  - 2. Preparation of roofing substrates.
  - 3. Wood nailers for roofing attachment.
  - 4. Vapor barrier
  - 5. Insulation.
  - 6. Coverboard
  - 7. Elastomeric EPDM membrane roofing.
  - 8. Metal roof edging and copings.
  - 9. Flashings.
  - 10. Walkway pads.
  - 11. Other roofing-related items specified or indicated on the drawings or otherwise necessary to provide a complete weatherproof roofing system.
- B. Disposal of demolition debris and construction waste is the responsibility of Contractor. Perform disposal in manner complying with all applicable federal, state, and local regulations.
- C. Comply with the published recommendations and instructions of the roofing membrane manufacturer, at [www.holcimelevate.com](http://www.holcimelevate.com).
- D. Commencement of work by the Contractor shall constitute acknowledgement by the Contractor that this specification can be satisfactorily executed, under the project conditions and with all necessary prerequisites for warranty acceptance by "Elevate".

**1.02 RELATED SECTIONS**

- A. Section 06 10 00 – Rough Carpentry: Wood nailers associated with roofing and roof insulation.
- B. Section 07 62 00 – Sheet Metal Flashing and Trim: Formed metal flashing and trim items associated with roofing.

**1.03 REFERENCES**

- A. Referenced Standards: These standards form part of this specification only to the extent they are referenced as specification requirements.
  - 1. ASTM C 1177/C 1177M – Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing; 2006.
  - 2. ASTM C 1289 – Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2013.
  - 3. ASTM D 3273 – Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber; 2012.
  - 4. ASTM D 4637 – Standard Specification for EPDM Sheet used in Single-Ply Roof Membrane;

2004.

5. ASTM D 4811 – Standard Specification for Nonvulcanized (Uncured) Rubber Sheet Used as Roof Flashing; 2004.
6. ASTM E 84 – Standard Test Method for Surface Burning Characteristics of Building Materials; 2013a.
7. ASTM E 136 – Standard Test Method for Behavior of Materials in a Vertical Tube Furnace At 750 Degrees C; 2012.
8. FM 1-28 – Design Wind Loads; Factory Mutual System; 2007.
9. FM 1-29 – Roof Deck Securement and Above Deck Roof Components; Factory Mutual System; 2006.
10. FM 4470 – Approval Standard - Class I Roof Covers; current version.
11. PS 1 – Construction and Industrial Plywood; 2009.
12. PS 20 – American Softwood Lumber Standard; 2010.
13. SPRI ES-1 – Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems; 2007. (ANSI/SPRI ES-1).

#### 1.04 SUBMITTALS

- A. Product Data:
  1. Provide "Elevate's" printed data sufficient to show that all components of roofing system, including insulation and fasteners, comply with the specified requirements and with the membrane manufacturer's requirements and recommendations for the system type specified; include data for each product used in conjunction with roofing membrane.
  2. Where UL or FM requirements are specified, provide documentation that shows that the roofing system to be installed is UL-Classified or FM-approved, as applicable; include data itemizing the components of the classified or approved system.
  3. Installation Instructions: Provide manufacturer's instructions to installer, marked up to show exactly how all components will be installed; where instructions allow installation options, clearly indicate which option will be used.
- B. Shop Drawings: Provide:
  1. The roof membrane manufacturer's standard details customized for this project for all relevant conditions, including flashings, base tie-ins, roof edges, terminations, expansion joints, penetrations, and drains.
- C. Pre-Installation Notice: Copy to show that manufacturer's required Pre-Installation Notice (PIN) has been accepted and approved by the manufacturer.
- D. Executed Warranty as a requirement of project close-out.
- E. Specimen Warranty: Submit prior to starting work.
- F. Samples: Submit samples of each product to be used.

#### 1.05 QUALITY ASSURANCE

- A. Applicator Qualifications: Roofing installer shall have the following:
  1. Current Elevate Red Shield Contractor status.
  2. At least five years' experience installing specified system.
  3. Capability to provide payment and performance bond to building owner.
- B. Pre-Installation Conference: Before start of roofing work, Contractor shall hold a meeting to discuss the proper installation of materials and requirements to achieve the warranty.
  1. Require attendance with all parties directly influencing the quality of roofing work or affected

- by the performance of roofing work.
- 2. Notify Architect well in advance of meeting.

### 1.06 DELIVERY, STORAGE AND HANDLING

- A. Deliver products in manufacturer's original containers, dry and undamaged, with seals and labels intact and legible.
- B. Store materials clear of ground and moisture with weather protective covering.
- C. Keep combustible materials away from ignition sources.

### 1.07 WARRANTY

- A. Comply with all warranty procedures required by Elevate, including notifications, scheduling, and inspections.
- B. Warranty: Elevate 20-year Red Shield™ Limited Warranty covering membrane, roof insulation, and membrane accessories.
  - 1. Limit of Liability: No dollar limitation.
  - 2. Scope of Coverage: Repair leaks in the roofing system caused by:
    - a. Ordinary wear and tear of the elements.
    - b. Manufacturing defect in Elevate brand materials.
    - c. Defective workmanship used to install these materials.
    - d. Damage due to winds up to 90 mph.
  - 3. Not Covered:
    - a. Damage due to winds in excess of 90 mph.
    - b. Damage due to hurricanes or tornadoes.
    - c. Hail.
    - d. Intentional damage.
    - e. Unintentional damage due to normal rooftop inspections, maintenance, or service.

## PART 2 PRODUCTS

### 2.01 MANUFACTURERS

- A. Acceptable Manufacturer - Roofing System: Elevate roofing, wall, and lining systems only.  
[www.holcimelevate.com](http://www.holcimelevate.com).
- B. Manufacturer of Insulation and Cover Board: Elevate roofing.
- C. Manufacturer of Metal Roof Edging: Elevate Roofing systems.
  - 1. Metal roof edging products by other manufacturers are not acceptable.
  - 2. Field- or shop-fabricated metal roof edgings are not acceptable.
- D. Substitution Procedures: See Instructions to Bidders.
  - 1. None

### 2.02 ROOFING SYSTEM DESCRIPTION

- A. Roofing System:
  - 1. Membrane: Ethylene propylene diene monomer (EPDM).
  - 2. Thickness: As specified elsewhere.
  - 3. Membrane Attachment: Fully adhered.
  - 4. Slope: Deck is not sloped; provide additional slope of 1/8 inch per foot by means of tapered insulation – County Jail Building, Add alternate #1.
  - 5. Comply with applicable local building code requirements.
  - 6. Provide assembly having Underwriters Laboratories, Inc. (UL) Class A Fire Hazard Classification.

- B. Vapor Barrier over concrete deck: County Jail Building and Building 80 Kellar ave.
  - 1. Membrane: High density polyethylene sheet with SBS modified bitumen adhesive.
  - 2. Attachment: Self adhering.
- C. Insulation:
  - 1. Total System R Value: 30 (Coverboard R Value to be included)
  - 2. Maximum Board Thickness: 3 inches; use as many layers as necessary; stagger joints in adjacent layers. Tapered Insulation
  - 3. Base Layer: Tapered Polyisocyanurate foam board, non-composite. County Jail Building, Add Alt. #1 (80 Kellar Building).
    - a. Attachment: Low-rise polyurethane adhesive.
  - 4. Top Layer: Tapered Polyisocyanurate foam board, non-composite. County Jail Building, Add Alt. #1 (80 Kellar Building).
    - a. Attachment: Low-rise polyurethane adhesive.
  - 5. Base Layer: 2.5" Polyisocyanurate foam board, non-composite. 100 Kellar Bldg.
    - a. Attachment: Loose Laid on Deck Commonly Fastened.
  - 6. Top Layer: 2.5" Polyisocyanurate foam board, non-composite. 100 Kellar Bldg.
    - a. Attachment: Mechanically Attached.
  - 7. Base Layer: 2.5" Polyisocyanurate foam board, non-composite. 80 Kellar Bldg.
    - a. Attachment: Low-rise polyurethane adhesive.
  - 8. Top Layer: 2.5" Polyisocyanurate foam board, non-composite. 80 Kellar Bldg.
    - a. Attachment: Low-rise polyurethane adhesive.
  - 9. Top Layer: 2.0" Polyisocyanurate foam board, non-composite. 920 Albany St.
    - a. Attachment: Mechanically Attached.
- C. Cover Board: High Density Polyisocyanurate Cover Board: At all Buildings.
  - 1. Thickness: 0.5 inch (12.7mm).
  - 2. R-Value: 2.5 based on ASTM tests C158 and C177.
    - a.Attachment: Low-rise polyurethane adhesive.

### 2.03 EPDM MEMBRANE MATERIALS

- A. Roofing and Flashing Membrane: Black cured synthetic single-ply membrane composed of ethylene propylene diene terpolymer (EPDM) with the following properties:
  - 1. Thickness: 0.060 inch (1.5 mm).
  - 2. Non - Reinforcement: Polyester weft inserted scrim; membrane complying with ASTM D 4637 Type I.
  - 3. Nominal Thickness Tolerance: Plus/minus 10 percent.
  - 4. Sheet Width: Provide the widest available sheets to minimize field seaming.
  - 5. Acceptable Product: RubberGard Non-Reinforced EPDM Membrane by Elevate Or EPDM SA Membrane with Secure Bond Technology by Elevate.
- B. Membrane Fasteners: Type and size as required by "Elevate" for roofing system and warranty to be provided; use only fasteners furnished by roof membrane manufacturer. Heavy Duty Fasteners
- C. Flashing Membrane: Self-curing, non-reinforced membrane composed of nonvulcanized EPDM rubber, complying with ASTM D 4811 Type II, and with the following properties:
  - 1. Thickness: 0.055 inch (1.4 mm).
  - 2. Color: Same as field membrane
  - 3. Acceptable Product: RubberGard EPDM FormFlash™ by Elevate.
- D. Self-Adhesive Flashing Membrane: Semi-cured 45 mil EPDM membrane laminated to 35 mil (0.9 mm) EPDM tape adhesive; QuickSeam™ Flashing by Elevate.
- E. Pre-Molded Pipe Flashings: EPDM, molded for quick adaptation to different sized pipes; "Elevate" EPDM Pipe Flashing.
- F. Self-Adhesive Lap Splice Tape: 35 mil (0.9 mm) EPDM-based, formulated for compatibility with

EPDM membrane and high-solids primer; QuickSeam Splice Tape by Elevate.

- G. Bonding Adhesive: Neoprene-based, formulated for compatibility with EPDM membrane and wide variety of substrate materials, including masonry, wood, and insulation facings; Bonding Adhesive Single Ply LVOC Bonding Adhesive or Elevate Jet Bond Spray Adhesive.
- H. Adhesive Primer: Synthetic rubber-based primer formulated for compatibility with EPDM membrane and tape adhesive, with VOC content less than 2.1 lb/gal (250 g/L); QuickPrime Plus LVOC by Elevate.
- I. Low Rise Foam Adhesive: Two-component, low-rise polyurethane adhesive designed to attach polyisocyanurate insulation to a variety of acceptable substrates; ISO Stick or ISO Spray R by Elevate.
- J. Seam Edge Treatment: EPDM rubber-based sealant, formulated for sealing exposed edges of membrane at seams; Lap Sealant HS by Elevate.
- K. Pourable Sealer: Two-part polyurethane, two-color for reliable mixing; Pourable Sealer by Elevate.
- L. Water Block Seal: Butyl rubber sealant for use between two surfaces, not exposed; Water Block Seal by Elevate.
- M. Metal Plates and Strips Used for Fastening Membrane and Insulation: Steel with Galvalume coating; corrosion-resistance meeting FM 4470 criteria.
  - 1. Termination Bars: Aluminum bars with integral caulk ledge; 1.3 inches (33 mm) wide by 0.10 inch (2.5 mm) thick; Termination Bar by Elevate.
- N. Roof Walkway Pads: EPDM, 0.30 inch (7.6 mm) thick by 30 by 30 inches (760 by 760 mm) with EPDM tape adhesive strips laminated to the bottom; QuickSeam Walkway Pads by Elevate.

## 2.04 ROOF INSULATION AND COVER BOARDS

- A. Polyisocyanurate Board Insulation: Closed cell polyisocyanurate foam with black glass reinforced mat laminated to faces, complying with ASTM C 1289 Type II Class 1, with the following additional characteristics:
  - 1. Thickness: As indicated elsewhere.
  - 2. Size: 48 inches (1220 mm) by 96 inches (2440 mm), nominal.
    - a. Exception: Insulation to be attached using adhesive or asphalt may be no larger than 48 inches (1220 mm) by 48 inches (1220 mm), nominal.
  - 3. R-Value (LTTR): 1.0-inch (25 mm) Thickness: 5.7, minimum.
  - 4. Compressive Strength: 20 psi (138 kPa) when tested in accordance with ASTM C 1289.
  - 5. Ozone Depletion Potential: Zero; made without CFC or HCFC blowing agents.
  - 6. Recycled Content: 19 percent post-consumer and 15 percent post-industrial, average.
  - 7. Acceptable Product: Tapered ISOGARD GL polyiso board insulation by Elevate
- B. High Density Polyisocyanurate Cover Board: Non-combustible, water-resistant high density, closed cell polyisocyanurate core with coated glass mat facers, complying with ASTM D 1623, and with the following additional characteristics:
  - 1. Size: 48 inches (1220 mm) by 96 inches (2440 mm), nominal.
    - a. Exception: Board to be attached using adhesive or asphalt may be no larger than 48 inches (1220 mm) by 48 inches (1220 mm), nominal.
  - 2. Thickness: 0.5 inch (12.7mm).
  - 3. R-Value: 2.5 based on ASTM tests C158 and C177.
  - 4. Surface Water Absorption: <3%, maximum, when tested in accordance with ASTM C 209.
  - 5. Compressive Strength: 120psi, when tested in accordance with ASTM 1621.
  - 6. Density: 5pcf, when tested in accordance with ASTM 1622.
  - 7. Factory Mutual approved for use with FM 1-60 and 1-90 rated roofing assemblies.
  - 8. Mold Growth Resistance: Passed, when tested in accordance with ASTM D 3273.
  - 9. Acceptable Product: ISOGARD™ HD Cover Board by Elevate.
- C. Adhesive for Insulation Attachment: Type as required by roof membrane manufacturer for roofing



system and warranty to be provided; use only adhesives furnished by "Elevate".

## 2.05 VAPOR BARRIER

- A. Vapor Barrier Membrane: Comprised of SBS modified bitumen adhesive, factory-laminated to a tri-laminate woven, high-density polyethylene top surface. Release liner protecting adhesive.
1. Intended for use as a direct to deck air/vapor barrier in roofing systems and may be used as a temporary roof membrane for up to ninety (90) days.
  2. Thickness: 0.0325" (0.826 mm) minimum, when tested in accordance with ASTM D 5147.
  3. Max Load at Break at 73 °F (23 °C): 64 lbf/in, MD (11 kN/m) 88 lbf/in, XMD (15 kN/m) when tested in accordance with ASTM D 5147.
  4. Low Temperature Flexibility: -30 °F (-34 °C) when tested in accordance with ASTM D 5147.
  5. Moisture Vapor Permeance, 0.02 Perms (0.92 Ng/Pa•s•m<sup>2</sup>) maximum, when tested in accordance with ASTM E 96.
  6. Air Permeability: 0.00114 ft<sup>3</sup>/min•ft<sup>2</sup> (0.007 L/sec•m<sup>2</sup>) maximum, when tested in accordance with ASTM E 2178.
- B. Acceptable Product: V-Force™ Vapor Barrier Membrane by Elevate.

## 2.06 METAL ACCESSORIES

- A. Metal Roof Edging and Fascia: Continuous metal edge member serving as termination of roof membrane and retainer for metal fascia; watertight with no exposed fasteners; mounted to roof edge nailer.
1. Wind Performance:
    - a. Membrane Pull-Off Resistance: 100 lbs/ft (1460 N/m), minimum, when tested in accordance with ANSI/SPRI ES-1 Test Method RE-1, current edition.
    - b. Fascia Pull-Off Resistance: At least the minimum required when tested in accordance with ANSI/SPRI ES-1 Test Method RE-2, current edition.
  2. Description: Two-piece; 45 degree sloped galvanized steel sheet edge member securing top and bottom edges of formed metal fascia; Elevate Snap On Fascia.
  3. Fascia Face Height: Verify In Field
  4. Edge Member Height Above Nailers: 1-1/4 inches (31 mm).
  5. Fascia Material and Finish: 24 gage, 0.024 inch (0.06 mm) galvanized steel with Kynar 500 finish in manufacturer's standard color; matching concealed joint splice plates; factory-installed protective plastic film.
  6. Length: 144 inches (3650 mm).
  7. Functional Characteristics: Fascia retainer supports while allowing for free thermal cycling of fascia.
  8. Anchor Bar Cleat: 20 gage, 0.036-inch (0.9 mm) G90 coated commercial type galvanized steel with pre-punched holes.
  9. Fasteners: Factory-provided corrosion resistant fasteners, with drivers; no exposed fasteners permitted.
  10. Special Shaped Components: Provide factory-fabricated pieces necessary for complete installation, including miters, scuppers, and end caps; minimum 14 inch (355 mm) long legs on corner pieces.
  11. Accessories: Provide matching brick wall cap, downspout, extenders, and other special fabrications as shown on the drawings.
- B. Parapet Copings: Formed metal coping with galvanized steel anchor/support cleats for capping any parapet wall; watertight, maintenance free, without exposed fasteners; butt type joints with concealed splice plates; mechanically fastened as indicated; Elevate PTCF.
1. Wind Performance:
    - a. At least the minimum required when tested in accordance with ANSI/SPRI ES-1 Test Method RE-3, current edition.
    - b. Provide product listed in current Factory Mutual Research Corporation Approval Guide with at least FM 1-90 rating.
  2. Description: Coping sections allowed to expand and contract freely while locked in place on anchor cleats by mechanical pressure from hardened stainless steel springs factory attached

- to anchor cleats; 8 inch (200 mm) wide splice plates with factory applied dual non-curing sealant strips capable of providing watertight seal.
3. Material and Finish: 24 gage, 0.024 inch (0.06 mm) thick galvanized steel with Kynar 500 finish in manufacturer's standard color; matching concealed joint splice plates; factory-installed protective plastic film.
  4. Dimensions:
    - a. Wall Width: Verify In Field
    - b. Piece Length: Minimum 144 inches (3650 mm).
    - c. Curved Application: Factory fabricated in true radius.
  5. Anchor/Support Cleats: 20 gage, 0.036 inch (0.9 mm) thick pre-punched galvanized cleat with 12 inch (305 mm) wide stainless-steel spring mechanically locked to cleat at 72 inches (1820 mm) on center.
  6. Special Shaped Components: Provide factory-fabricated pieces necessary for complete installation, including miters, corners, intersections, curves, pier caps, and end caps; minimum 14 inch (355 mm) long legs on corner, intersection, and end pieces.
  7. Fasteners: Factory-furnished; electrolytically compatible; minimum pull out resistance of 240 pounds (109 kg) for actual substrate used; no exposed fasteners.

## 2.07 ACCESSORY MATERIALS

- A. Wood Nailers: PS 20-dimension lumber, Structural Grade No. 2 or better Southern Pine, Douglas Fir; or PS 1, APA Exterior Grade plywood; pressure preservative treated.
  1. Width: 3-1/2 inches (90 mm), nominal minimum, or as wide as the nailing flange of the roof accessory to be attached to it.
  2. Thickness: Same as thickness of roof insulation.

## PART 3 INSTALLATION

### 3.01 GENERAL

- A. Install roofing, insulation, flashings, and accessories in accordance with "Elevate's" published instructions and recommendations for the specified roofing system. Where manufacturer provides no instructions or recommendations, follow good roofing practices and industry standards. Comply with federal, state, and local regulations.
- B. Obtain all relevant instructions and maintain copies at project site for duration of installation period.
- C. Do not start work until Pre-Installation Notice has been submitted to "Elevate" as notification that this project requires a manufacturer's warranty.
- D. Perform work using competent and properly equipped personnel.
- E. Temporary closures, which ensure that moisture does not damage any completed section of the new roofing system, are the responsibility of the applicator. Completion of flashings, terminations, and temporary closures shall be completed as required to provide a watertight condition.
- F. Install roofing membrane only when surfaces are clean, dry, smooth, and free of snow or ice; do not apply roofing membrane during inclement weather or when ambient conditions will not allow proper application; consult "Elevate" for recommended procedures during cold weather. Do not work with sealants and adhesives when material temperature is outside the range of 60 to 80 degrees F (15 to 25 degrees C).
- G. Protect adjacent construction, property, vehicles, and persons from damage related to roofing work; repair or restore damage caused by roofing work.
  1. Protect from spills and overspray from bitumen, adhesives, sealants, and coatings.
  2. Particularly protect metal, glass, plastic, and painted surfaces from bitumen, adhesives, and sealants within the range of wind-borne overspray.
  3. Protect finished areas of the roofing system from roofing related work traffic and traffic by other trades.

- H. Until ready for use, keep materials in their original containers as labeled by the manufacturer.
- I. Consult Elevate's instructions, container labels, and Safety Data Sheets (SDS) for specific safety instructions. Keep all adhesives, sealants, primers, and cleaning materials away from all sources of ignition.

### **3.02 EXAMINATION**

- A. Examine roof deck to determine that it is sufficiently rigid to support installers and their mechanical equipment, and that deflection will not strain or rupture roof components or deform deck.
- B. Verify that surfaces and site conditions are ready to receive work. Correct defects in the substrate before commencing with roofing work.
- C. Examine roof substrate to verify that it is properly sloped to drains.
- D. Verify that the specifications and drawing details are workable and not in conflict with the roofing manufacturer's recommendations and instructions; start of work constitutes acceptable of project conditions and requirements.

### **3.03 PREPARATION**

- A. Take appropriate measures to ensure that fumes from adhesive solvents are not drawn into the building through air intakes.
- B. Prior to proceeding, prepare roof surface so that it is clean, dry, and smooth, and free of sharp edges, fins, roughened surfaces, loose or foreign materials, oil, grease, and other materials that may damage the membrane.
- C. Fill all surface voids in the immediate substrate that are greater than 1/4 inch (6 mm) wide with fill material acceptable insulation to membrane manufacturer.
- D. Seal, grout, or tape deck joints, where needed, to prevent bitumen seepage into building.

### **3.04 VAPOR BARRIER INSTALLATION**

- A. All deck/deck cover substrates (except metal decks) must be primed prior to application. Use only primer supplied by membrane manufacturer.
- B. Expanded Polystyrene, Extruded Polystyrene, Common Polyisocyanurate, Fiberglass, Wood Fiber, Perlite, and existing single-ply roofs are not acceptable substrates for SBS bitumen adhesive.
- C. Application can be made at ambient temperatures as low as 25 °F (-4 °C) as long as membrane has been stored in a heated area so that it will be between 50 °F (10 °C) and 100 °F (38 °C) at the time of application.
- D. Install with minimum 3" (76.2 mm) side laps and 6" (152.4 mm) end laps.
- E. Roll in with a 75 lb (34 kg) roller to fully mate each roll to substrate, including all lap areas.

### **3.05 INSULATION & COVER BOARD INSTALLATION**

- A. Install insulation in configuration and with attachment method(s) specified in PART 2, under Roofing System.
- B. Install only as much insulation as can be covered with the completed roofing system before the end of the day's work or before the onset of inclement weather.
- C. Lay roof insulation in courses parallel to roof edges.
- D. Neatly and tightly fit insulation to all penetrations, projections, and nailers, with gaps not greater than 1/4 inch (6 mm). Fill gaps greater than 1/4 inch (6 mm) with acceptable insulation. Do not leave the roofing membrane unsupported over a space greater than 1/4 inch (6 mm).
- E. PART 2 and membrane manufacturer "Elevate", whichever is more stringent.

- F. Adhesive Attachment: Apply in accordance with "Elevate's" instructions and recommendations; "walk-in" individual roof insulation boards to obtain maximum adhesive contact.

### 3.06 SINGLE-PLY MEMBRANE INSTALLATION

- A. Beginning at low point of roof, place membrane without stretching over substrate and allow to relax at least 30 minutes before attachment or splicing; in colder weather allow for longer relax time.
- B. Lay out the membrane pieces so that field and flashing splices are installed to shed water.
- C. Install membrane without wrinkles and without gaps or fishmouths in seams; bond and test seams and laps in accordance with membrane manufacturer's instructions and details.
- D. Install membrane adhered to the substrate, with edge securement as specified.
- E. Adhered Membrane: Bond membrane sheet to substrate using Elevate recommended bonding material, application rate, and procedures.
- F. Edge Securement: Secure membrane at all locations where membrane terminates or goes through an angle change greater than 2 in 12 inches (1:6) using mechanically fastened reinforced perimeter fastening strips, plates, or metal edging as indicated or as recommended by Elevate.
  - 1. Exceptions: Round pipe penetrations less than 18 inches (460 mm) in diameter and square penetrations less than 4 inches (200 mm) square.
  - 2. Metal edging is not merely decorative; ensure anchorage of membrane as intended by Elevate.

### 3.07 FLASHING AND ACCESSORIES INSTALLATION

- A. Install flashings, including laps, splices, joints, bonding, adhesion, and attachment, as required by Elevate's recommendations and details.
- B. Metal Accessories: Install metal edgings, gravel stops, and copings in locations indicated on the drawings, with horizontal leg of edge member over membrane and flashing over metal onto membrane.
  - 1. Follow Elevate's instructions.
  - 2. Remove protective plastic surface film immediately before installation.
  - 3. Install water block sealant under the membrane anchorage leg.
  - 4. Flash with Elevate's recommended flashing sheet unless otherwise indicated.
  - 5. Where single application of flashing will not completely cover the metal flange, install additional piece of flashing to cover the metal edge.
  - 6. If the roof edge includes a gravel stop and sealant is not applied between the laps in the metal edging, install an additional piece of self-adhesive flashing membrane over the metal lap to the top of the gravel stop; apply seam edge treatment at the intersections of the two flashing sections.
  - 7. When the roof slope is greater than 1:12, apply seam edge treatment along the back edge of the flashing.
- C. Scuppers: Set in sealant and secure to structure; flash as recommended by Elevate.
- D. Roofing Expansion Joints: Install as shown on drawings and as recommended by Elevate.
- E. Flashing at Walls, Curbs, and Other Vertical and Sloped Surfaces: Install weathertight flashing at all walls, curbs, parapets, curbs, skylights, and other vertical and sloped surfaces that the roofing membrane abuts to; extend flashing at least 8 inches (200 mm) high above membrane surface.
  - 1. Use the longest practical flashing pieces.
  - 2. Evaluate the substrate and overlay and adjust installation procedure in accordance with Elevate's recommendations.
  - 3. Complete the splice between flashing and the main roof sheet with specified splice adhesive before adhering flashing to the vertical surface.

4. Provide termination directly to the vertical substrate as shown on roof drawings.

F. Roof Drains:

1. Taper insulation around drain to provide smooth transition from roof surface to drain. Use specified pre-manufactured tapered insulation with facer or suitable bonding surface to achieve slope; slope not to exceed manufacturer's recommendations.
2. Position membrane, then cut a hole for roof drain to allow 1/2 to 3/4 inch (12 to 19 mm) of membrane to extend inside clamping ring past drain bolts.
3. Make round holes in membrane to align with clamping bolts; do not cut membrane back to bolt holes.
4. Apply sealant on top of drain bowl where clamping ring seats below the membrane
5. Install roof drain clamping ring and clamping bolts; tighten clamping bolts to achieve constant compression.

G. Flashing at Penetrations: Flash all penetrations passing through the membrane; make flashing seals directly to the penetration.

1. Pipes, Round Supports, and Similar Items: Flash with specified pre-molded pipe flashings wherever practical; otherwise use specified self-curing elastomeric flashing.
2. Pipe Clusters and Unusual Shaped Penetrations: Provide penetration pocket at least 2 inches (50 mm) deep, with at least 1 inch (25 mm) clearance from penetration, sloped to shed water.
3. Structural Steel Tubing: If corner radii are greater than 1/4 inch (6 mm) and longest side of tube does not exceed 12 inches (305 mm), flash as for pipes; otherwise, provide a standard curb with flashing.
4. Flexible and Moving Penetrations: Provide weathertight gooseneck set in sealant and secured to deck, flashed as recommended by manufacturer.

### 3.08 FINISHING AND WALKWAY INSTALLATION

A. Install walkways at access points to the roof, around rooftop equipment that may require maintenance, and where indicated on the drawings.

1. Use specified walkway pads unless otherwise indicated.

B. Walkway Pads: Adhere to the roofing membrane, spacing each pad at minimum of 1.0 inch (25 mm) and maximum of 3.0 inches (75 mm) from each other to allow for drainage.

1. If installation of walkway pads over field fabricated splices or within 6 inches (150 mm) of a splice edge cannot be avoided, adhere another layer of flashing over the splice and extending beyond the walkway pad a minimum of 6 inches (150 mm) on either side.
2. Prime the membrane, remove the release paper on the pad, press in place, and walk on pad to ensure proper adhesion.

### 3.09 FIELD QUALITY CONTROL

A. Inspection by Elevate: Provide final inspection of the roofing system by a Technical Representative employed by Elevate specifically to inspect installation for warranty purposes (i.e., not a salesperson).

B. Perform all corrections necessary for issuance of warranty.

### 3.10 CLEANING

A. Clean all contaminants generated by roofing work from building and surrounding areas, including bitumen, adhesives, sealants, and coatings.

B. Repair or replace building components and finished surfaces damaged or defaced due to the work of this section; comply with recommendations of Elevate of components and surfaces.

C. Remove leftover materials, trash, debris, equipment from project site and surrounding areas.

### 3.11 PROTECTION

A. Where construction traffic must continue over finished roof membrane, provide durable

protection, and replace or repair damaged roofing to original condition.

**END OF SECTION**