

July 26, 2018

To: All Contractors

From: Professional Roof Services (*egem*)

Re: Addendum #2  
Delaware Hospital for the Chronically Ill - Candee Building  
Roof Repair & Restoration Project  
Contract # MJ3514000022

1. Bids are due on Tuesday, August 7, 2018 at 1:30 P.M. Location is the State of Delaware, Office of Management and Budget, Division of Facilities Management, Small Conference Room, at the Thomas Collins Building, 540 S. DuPont Highway, Suite 1 (Third Floor), Dover, DE 19901.
2. Last day of questions will be Wednesday, August 1, 2017 at the end of the day.
3. Appointments to visit the site must be coordinated through the hospital's onsite Maintenance Supervisor Mr. Isaac Henry, his contact information can be found on the sign-in sheet provided with Addendum #1.
4. Due to concerns raised at the Pre-bid meeting, regarding the availability of the Hypalon membrane specified for repairs and the weldability of the existing Hypalon Membrane. Repairs to the membrane roof will be performed using Roofmate Butter Grade Flashing, Roofmate Fabric and a final layer of Roofmate Butter Grade Flashing to completely embed the Fabric. Butter Grade Flashing will be feathered onto the existing substrate. Prior to application of the base coat and finish coat of the specified Roofmate coating.
5. Due to the concerns referenced above the roof membrane replacement used at the areas of wet insulation replacement shall be performed using cured EPDM membrane and splice tape as described below.
6. The quantity of wet insulation referenced in Section 07 54 17 of the specification is incorrect. The amount of wet insulation to be replaced as part of the Base Bid for this project is 2,540 square feet. The replacement of wet insulation will be done with 4.5 inches of Polyisocyanurate insulation. An updated drawing showing the size and location of one additional wet area referenced as # 6 and the correct amount of insulation to be replaced is attached.
7. There are two areas of delaminated membrane shown on the drawing. Delaminated membrane repair shall be performed as described below.

8. Application of the GAF TPO Red Primer will not be required on the existing Hypalon Membrane. However application of the United Cleaning Concentrate prior to powerwashing of the Hypalon membrane is required.
9. GAF's Adhere-it II Primer shall be applied to the cured EPDM roof membrane replacement areas at a rate of 1 gal per 500 square feet with a pump sprayer and then powerwashed after a minimum of 20 minutes and maximum of 2 hours prior to application of the base coat and finish coat of the specified Roofmate coating.
10. Contractor is responsible for all jobsite safety requirements during this project.
11. Professional Roof Services, Inc. and Rhett H. Jones, AIA shall be named as an additionally insured by the awarded roofing contractor on this project.

End of Addendum

Cc: Patrick McKenna, OMB State of DE  
Natalie Curran, OMB State of DE  
John S. Bell, State of DE, DHSS/DMS – D.H.C.I. Facility Operations  
Isaac Henry, State of DE, DHSS/DMS – D.H.C.I. Facility Operations  
Stephen Zerhusen, State of DE, DHSS/DMS – D.H.C.I. Facility Operations  
Blaine Chipola, PRSI  
Brad Smith, PRSI  
Mike McGonigle, PRSI  
File

**1. ROOF MEMBRANE REPLACEMENT AT AREAS OF WET INSULATION:**

- A. The surface of single ply roof membrane will be cleaned of all dirt and debris.
- B. Cleaning of the surface will be by power washing with TSP or Simple Green cleaner and a broom scrub is effective on larger areas. Toluene solvent and clean paper towels are good for smaller work areas. All deposits of dirt will be removed.
- C. Where cleaning is performed prior to wet insulation removal, a secondary cleaning of debris and accumulations of dirt will be made.
- D. Use only **cured** EPDM membrane fully adhered to new insulation. Membrane may be manufactured by Carlisle, Firestone or Versico. New membrane will extend out over existing membrane by at least twelve (12) inches. Leading edges will be strapped with six (6) inch Manufacturer Approved Pressure-Sensitive Cured Coverstrip.

**2. MEMBRANE PLACEMENT AND BONDING:**

**NOTE – ONLY CURED MEMBRANE CAN BE USED IN REPLACEMENT AREAS.**

- A. Membrane Placement And Bonding:
  - i. **Ensure** that water does not flow beneath any completed sections of the membrane system by completing all flashings, terminations and daily seals by the end of each workday.
  - ii. **Sweep** all loose debris from the substrate.
  - iii. **Position** EPDM membrane over the acceptable substrate without stretching.
  - iv. **Allow** membrane to relax approximately 1/2 hour prior to bonding.
  - v. **Fold** membrane sheet back so half of the underside of the sheet is exposed. Sheet fold must be smooth without wrinkles or buckles.

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- vi. **Stir** Bonding Adhesive thoroughly scraping the sides and the bottom of the can (minimum 5 minutes stirring is recommended). Bonding surfaces must be dry and clean.
- vii. **Apply** Low VOC Bonding Adhesive evenly, without globs or puddles with a plastic core medium nap paint roller. A 9 inch (23 cm) roller will easily fit into the 5 gallon (19 l) containers.

**Apply** Low VOC Bonding Adhesive to both the membrane sheet and the substrate to achieve continuous coating of both surfaces at a coverage rate of approximately 120 square feet (11.2 m<sup>2</sup>) per gallon (3.78 l) per one surface (membrane or substrate) or approximately 60 square feet (5.6 m<sup>2</sup>) per gallon (3.78 l) per finished surface (includes coverage on both membrane and substrate).

A mechanical roller dispenser or a mechanical sprayer can be used to apply Bonding Adhesive when the continuous coating and coverage rate noted above are maintained. If a mechanical sprayer is used to apply Bonding Adhesive, the adhesive **must** be rolled after spraying with a plastic core medium nap paint roller to provide 100% coverage.

**CAUTION:** Due to solvent flash off, condensation may form on freshly applied Bonding Adhesive when the ambient temperature is near the dew point. If condensation develops, possible surface contamination may occur and the application of Bonding Adhesive must be discontinued. Allow the surface to dry and apply a thin freshener coat at the coverage rate, which is approximately half of the coverage rate stated above to the previously coated surface when conditions allow for continuing.

- viii. **Allow** adhesive to dry until it is tacky but will not string or stick to a dry finger touch.
- ix. **Roll** the coated membrane into the coated substrate while avoiding wrinkles.
- x. **Brush** down the bonded half of the membrane sheet, immediately after rolling the membrane sheet into the adhesive, with a soft bristle push broom to achieve maximum contact.
- xi. **Fold** back the unbonded half of the membrane sheet and repeat the bonding procedure.

- xii. **Install** adjoining membrane sheets in the same manner, overlapping edges approximately 4 inches (10.5 cm) to achieve a minimum 3 inch (8 cm) wide splice. It is recommended that all splices be shingled to avoid bucking of water.

### **3. MEMBRANE SPLICING WITH MANUFACTURER APPROVED SPLICE TAPE:**

#### **A. General**

- i. Tape splices must be a minimum of 2-1/2 inches (6.5 cm) wide using 3 inch (7.6 cm) wide Splice Tape extending 1/8 inch (3 mm) to 1/2 inch (11 mm) maximum beyond the splice edge.
- ii. **Prior to Splice Tape application, the splice area must be primed with Manufacturer's Approved Low VOC Primer.** Low VOC Primer is required in areas where volatile organic compound (VOC) regulations are in effect.

**Note: Sheets wider than 10 feet (3 m) may contain factory induced wrinkles. When adhering the membrane, care must be exercised to prevent wrinkles/fishmouths in the splice area.**

- iii. **Apply Primer to achieve a thin, even coat** on both membrane surfaces. Splice area must be uniform in color, streak-free and free of globs or puddles.
- iv. Low VOC Primer shall be applied with Manufacturer Approved Splice Wipes. As an option, Sure-Seal Primer Pads can be used to apply Low VOC Primer.
- v. Hycron® Gloves (available from Carlisle) are required for hand protection when primer is being used.
- vi. Follow Manufacturer's recommendations for application of Low VOC Primer.
- vii. **Allow** Primer to dry. **Mark** the bottom membrane sheet with a crayon 1/2 inch (11 mm) from the edge of the top sheet along the entire splice length. The pre-marked line on the membrane edge may also be used as a guide.

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**Note:** Due to solvent flash-off, condensation may form on freshly applied Low VOC Primer when the ambient temperature is near the dew point. If condensation develops, the application of Primer and Splice Tape must be discontinued since proper adhesion will not be achieved. Allow the primer surface to dry and apply a thin freshener coat of Low VOC Primer to the previously coated surface and apply Splice Tape when conditions allow.

- viii. **Unroll** approximately 3 feet (1 m) of Splice Tape and press tape down to bottom sheet using firm, even, hand pressure. Continue for the length of the splice. Tape roll ends must be overlapped 1 inch (2.5 cm). Allow top sheet to rest on release film on back side of tape.

**Note:** Tape placement is critical to obtain a minimum splice width of 2-1/2 inches (6.5 cm). A minimum of 1/8 inch (3 mm) to a maximum of 1/2 inch (11 mm) of tape must extend beyond the splice edge. A continuous piece of Splice Tape must be used at all field splice intersections.

- ix. **Pull** release film from Splice Tape beneath the top sheet and allow the top sheet to fall freely onto exposed tape.
- x. **Press** the top sheet onto the tape using firm, even, hand pressure across the splice towards the splice edge.
- xi. **Immediately roll** the splice with a 2 inch (5 cm) wide steel roller, using positive pressure. Roll across the splice edge, not parallel to it.
- xii. **Install** a 6 inch (15.5 cm) wide section (with rounded corners) of Manufacturer Approved Pressure-Sensitive Cured Coverstrip over **all field splice intersections and overlapped tape ends** and seal edges of flashing with Lap Sealant.

#### **4. DELAMINATED MEMBRANE REPAIR:**

##### **A. Location:**

##### **Areas of delaminated membrane on Roof Area 7 and Roof Area 4 as shown on the drawing:**

- i. Location of Delaminated Membrane will be secured down to the wood deck with approved fasteners and 2 inch seam plates. Fasteners will be installed at a rate of 1 per every 1.5 square feet.
- ii. All fastener locations shall be reinforced with a 8” wide application of Roof Mate Butter Grade Flashing, Roof Mate Fabric and a final layer of Roof Mate Butter Grade Flashing to completely embed the fabric prior to application of the base coat and finish coat.