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# VersiFlex Mechanically Attached Form-Spec

April, 2007

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## East Providence Police Station, East Providence, RI

### PART 1 GENERAL

#### 1.01 DESCRIPTION

A. The East Providence Police Station is located at 750 Waterman Ave. in Providence RI. Ed Catelli Project Manager/Coordinator, is the Owner's Representative and may be contacted regarding any questions concerning the mandatory pre-bid job site inspection, phone 1-401-639-3130

B. The project consists of installing Versico's VersiFlex (PVC) Mechanically Attached Roofing System as outlined below:

Apply the VersiFlex Mechanically Attached Roofing System in conjunction with 6 mil pvc vapor barrier, 3 inch min at drains ¼ inch tapered Versico Polyisocyanurate insulation and 5/8 inch Dencdeck prime after tear off of the existing roofing to expose the Steel roof deck for verification of suitable substrate as specified in this specification.

#### 1.02 EXTENT OF WORK

A. Provide all labor, material, tools, equipment, and supervision necessary to complete the installation of the VersiFlex .060" thick white reinforced PVC (polyvinyl chloride) membrane Mechanically Attached Roofing System including flashings and insulation as specified herein and as indicated on the drawings in accordance with the manufacturer's most current specifications and details.

B. The roofing contractor shall be fully knowledgeable of all requirements of the contract documents and shall make themselves aware of all job site conditions that will affect their work.

C. The roofing contractor shall confirm all given information and advise the building owner, prior to bid, of any conflicts that will affect their cost proposal.

D. All bids to be Versico Roofing Systems with no voluntary alternative. All bidders must be rated by Versico as "Excalibur" in performance.

#### 1.03 SUBMITTALS

A. Prior to starting work, the roofing contractor must submit the following:

1. Shop drawings showing layout, details of construction and identification of materials.

2. Sample of the manufacturer's Membrane Total System Warranty.

3. Submit a letter of certification from the manufacturer which certifies the roofing contractor is authorized to install the manufacturer's roofing system and lists foremen who have received training from the manufacturer along with the dates training was received.

4. Certification from the membrane manufacturer indicating the fasteners are capable of providing a

static backout resistance of 10 inch pounds minimum is required.

5. Certification of the manufacturer's warranty reserve.

#### **1.04 PRODUCT DELIVERY, STORAGE AND HANDLING**

- A. Deliver materials to the job site in the manufacturer's original, unopened containers or wrappings with the manufacturer's name, brand name and installation instructions intact and legible. Deliver in sufficient quantity to permit work to continue without interruption.
- B. Comply with the manufacturer's written instructions for proper material storage.
  1. Store VersiFlex membrane on provided pallets in the original undisturbed plastic wrap in a cool, shaded area and cover with light-colored, breathable, waterproof tarpaulins.
  2. Store curable materials (adhesives and sealants) between 60°F and 80°F in dry areas protected from water and direct sunlight. If exposed to lower temperature, restore to 60°F minimum temperature before using.
  3. Store materials containing solvents in dry, well ventilated spaces with proper fire and safety precautions. Keep lids on tight. Use before expiration of their shelf life.
- C. Insulation must be on pallets, off the ground and tightly covered with waterproof materials.
- D. Any materials which are found to be damaged shall be removed and replaced at the Contractor's expense.

#### **1.05 WORK SEQUENCE**

- A. Schedule and execute work to prevent leaks and excessive traffic on completed roof sections. Care should be exercised to provide protection for the interior of the building and to ensure water does not flow beneath any completed sections of the membrane system.
- B. Do not disrupt activities in occupied spaces.

#### **1.06 USE OF THE PREMISES**

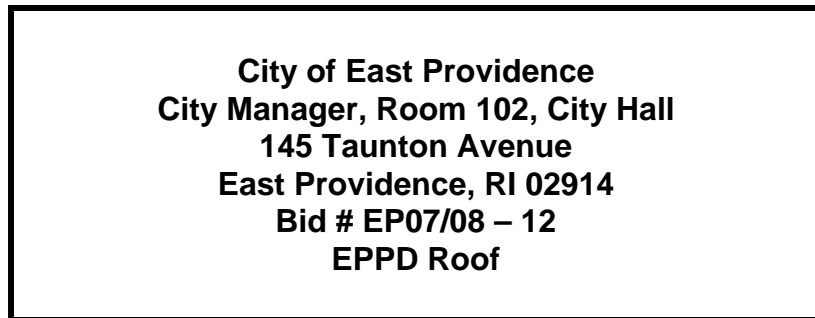
- A. Before beginning work, the roofing contractor must secure approval from the building owner's representative for the following:
  1. Areas permitted for personnel parking.
  2. Access to the site.
  3. Areas permitted for storage of materials and debris.
  4. Areas permitted for the location of cranes, hoists and chutes for loading and unloading materials to and from the roof.
- B. Interior stairs or elevators may not be used for removing debris or delivering materials, except as authorized by the building superintendent.

#### **1.07 EXISTING CONDITIONS**

If discrepancies are discovered between the existing conditions and those noted on the drawings, immediately notify the owner's representative by phone and solicit the manufacturer's approval prior to commencing with the work. Necessary steps shall be taken to make the building watertight until the discrepancies are resolved.

## 1.08 PRE-CONSTRUCTION CONFERENCE

- A. A pre-bid meeting will be held at the job site at the East Providence Police Headquarters, 750 Waterman Avenue, East Providence, RI on Friday April 25, 2008 at 10:00 AM. Contact the owner's representative, Ed Catelli, at 401-639-3130 if there are any questions.
- B. Prior to bid submittal, the roofing contractor should schedule a job site inspection to observe actual conditions and verify all dimensions on the roof. The job site inspection may occur on the day of the pre-bid meeting or prior to such a meeting. Should access to the roof be necessary before or after the pre-bid meeting, the contractor must contact the owner's representative, Ed Catelli, at 1-401-639-3130 to coordinate an appropriate time.
- C. Sealed Bids must be forwarded to the following address no later than 3:00 PM on Thursday, May 8, 2008: Affix the following label to the outer sealed envelope:



- D. Any conditions which are not shown on the shop drawings should be indicated on a copy of the shop drawing and included with bid submittal if necessary to clarify any conditions not shown.

## 1.09 TEMPORARY FACILITIES AND CONTROLS

- A. Temporary Utilities:
  - 1. Water, power for construction purposes and lighting are not available at the site and will not be made available to the roofing contractor.
  - 2. Provide all hoses, valves and connections for water from source designated by the owner when made available.
  - 3. When available, electrical power should be extended as required from the source. Provide all trailers, connections and fused disconnects.
- B. Temporary Sanitary Facilities

Sanitary facilities will not be available at the job site. The roofing contractor shall be responsible for the provision and maintenance of portable toilets or their equal.
- C. Building Site:
  - 1. The roofing contractor shall use reasonable care and responsibility to protect the building and site against damages. The contractor shall be responsible for the correction of any damage incurred as a result of the performance of the contract.
  - 2. The roofing contractor shall remove all debris from the job site in a timely and legally acceptable manner so as to not detract from the aesthetics or the functions of the building.
- D. Security:

Obey the owner's requirements for personnel identification, inspection and other security measures.

## 1.10 JOB SITE PROTECTION

- A. The roofing contractor shall adequately protect building, paved areas, service drives, lawn, shrubs, trees, etc. from damage while performing the required work. Provide canvas, boards and sheet metal (properly secured) as necessary for protection and remove protection material at completion. The contractor shall repair or be responsible for costs to repair all property damaged during the roofing application.
- B. During the roofing contractor's performance of the work, the building owner will continue to occupy the existing building. The contractor shall take precautions to prevent the spread of dust and debris, particularly where such material may sift into the building. The roofing contractor shall provide labor and materials to construct, maintain and remove necessary temporary enclosures to prevent dust or debris in the construction area(s) from entering the remainder of the building.
- C. Do not overload any portion of the building, either by use of or placement of equipment, storage of debris, or storage of materials.
- D. Protect against fire and flame spread. Maintain proper and adequate fire extinguishers.
- E. Take precautions to prevent drains from clogging during the roofing application. Remove debris at the completion of each day's work and clean drains, if required. At completion, test drains to ensure the system is free running and drains are watertight. Remove strainers and plug drains in areas **where work is in progress**. Install flags or other telltales on plugs. Remove plugs each night and screen drain.
- F. Store moisture susceptible materials above ground and protect with waterproof coverings.
- G. Remove all traces of piled bulk materials and return the job site to its original condition upon completion of the work.

## 1.11 SAFETY

The roofing contractor shall be responsible for all means and methods as they relate to safety and shall comply with all applicable local, state and federal requirements that are safety related. **Safety shall be the responsibility of the roofing contractor.** All related personnel shall be instructed daily to be mindful of the full time requirement to maintain a safe environment for the facility's occupants including staff, visitors, customers and the occurrence of the general public on or near the site.

## 1.12 WORKMANSHIP

- A. Contractors installing new roof, flashing and related work shall be factory trained and approved by the manufacturer they are representing.
- B. All work shall be of highest quality and in strict accordance with the manufacturer's published specifications and to the building owner's satisfaction.
- C. There shall be a supervisor on the job site at all times while work is in progress.

## 1.13 QUALITY ASSURANCE

- A. The VersiFlex membrane roofing system must achieve a UL Class A
- B. Unless otherwise noted in this specification, the roofing contractor must strictly comply with the manufacturer's current specifications and details.
- C. The roofing system must be installed by an Contractor authorized and trained by the manufacturer in compliance with shop drawings as approved by the manufacturer.
- D. Provide adequate number of experienced workmen regularly engaged in this type of work who are skilled in the application techniques of the materials specified. Provide at least one thoroughly trained and experienced superintendent on the job at all times roofing work is in progress.

- E. There shall be no deviations made from this specification or the approved shop drawings without the prior written approval of the specifier. Any deviation from the manufacturer's installation procedures must be supported by a written certification on the manufacturer's letterhead and presented for the specifier's consideration.
- F. **Upon completion of the installation, the Contractor shall arrange for an inspection to be made by a non-sales technical representative of the membrane manufacturer in order to determine whether or not corrective work will be required before the warranty will be issued. Notify the building owner seventy-two (72) hours prior to the manufacturer's final inspection.**

#### **1.14 JOB CONDITIONS, CAUTIONS AND WARNINGS**

Refer to Versico's VersiFlex specification for General Job Site Considerations.

- A. Material Safety Data Sheets (MSDS) must be on location at all times during the transportation, storage and application of materials.
- B. When positioning membrane sheets, exercise care to locate all field splices away from low spots and out of drain sumps. All field splices should be shingled to prevent bucking of water.
- C. When loading materials onto the roof, the Versico Authorized Roofing Contractor must comply with the requirements of the building owner to prevent overloading and possible disturbance to the building structure.
- D. Proceed with roofing work only when weather conditions are in compliance with the manufacturer's recommended limitations, and when conditions will permit the work to proceed in accordance with the manufacturer's requirements and recommendations.
- E. Proceed with work so new roofing materials are not subject to construction traffic. When necessary, new roof sections shall be protected and inspected upon completion for possible damage.
- F. Provide protection, such as 3/4 inch thick plywood, for all roof areas exposed to traffic during construction. Plywood must be smooth and free of fasteners and splinters.
- G. The surface on which the insulation or roofing membrane is to be applied shall be clean, smooth, dry, and free of projections or contaminants that would prevent proper application of or be incompatible with the new installation, such as fins, sharp edges, foreign materials, oil and grease.
- H. New roofing shall be complete and weathertight at the end of the work day.
- I. Contaminants such as grease, fats and oils shall not be allowed to come in direct contact with the roofing membrane.

#### **1.15 WARRANTY**

Provide manufacturer's 15 year Total System Warranty covering both labor and material with no dollar limitation. The maximum wind speed coverage shall be peak gusts of 55 measured at 10 meters above ground level. Certification is required with bid submittal indicating the manufacturer has reviewed and agreed to such wind coverage.

- B. Pro-rated System Warranties shall not be accepted.
- C. Evidence of the manufacturer's warranty reserve shall be included as part of the project submittals for the specifier's approval.

## PART 2 PRODUCTS

### 2.01 GENERAL

- A. All components of the specified roofing system shall be products of Versico Incorporated or accepted by Versico as compatible.
- B. All products (including insulation, fasteners, fastening plates and edgings) must be **manufactured and supplied** by the roofing system manufacturer and covered by the warranty.

### 2.02 MEMBRANE

Furnish VersiFlex .060" thick white reinforced PVC (polyvinyl chloride) membrane as needed to complete the roofing system.

### 2.03 INSULATION/UNDERLAYMENT

- A. When applicable, insulation shall be installed in multiple layers. The first and second layer of insulation shall be mechanically fastened to the substrate in accordance with the manufacturer's published specifications.
- B. Insulation shall be Versico ¼ inch Tapered Polyisocyanurate 3 inch min. at drains covered with 5/8 inch Densdeck as supplied by Versico.

### 2.04 ADHESIVES AND CLEANERS

All products shall be furnished by Versico and specifically formulated for the intended purpose.

- A. Bonding Adhesive: VersiFlex PVC
- B. Edge Sealant: Cut Edge Sealant
- C. Sealer: Water Cut-Off Mastic and PT 304 Sealant
- D. Pocket Sealant: One Part Pourable Sealer
- E. Cleaner: PVC Membrane Cleaner

### 2.05 FASTENERS AND PLATES

To be used for mechanical attachment of insulation and to provide additional membrane securement: (delete the fastener and fastening plate types which will not be used)

- A. **HPVX Fasteners:** A heavy duty #15 threaded fastener with a phillips head **used for membrane securement** into steel, wood plank, minimum 15/32 inch thick plywood or minimum 7/16" OSB (oriented strand board) decks.
- B. **HPVX Plates:** A 2-3/8 inch diameter metal barbed fastening plate used with Versico Fasteners for membrane securement. This plate can be used for insulation securement.

### 2.06 METAL EDGING AND MEMBRANE TERMINATIONS

- A. **VersiTrim 2000:** a metal fascia system with a heavy duty .100" thick extruded aluminum anchor bar and .040 inch thick aluminum or 24 gauge steel fascia. Metal fascia color shall be as designated by the Owner's Representative.

### 2.07 OTHER MATERIALS

As required and approved by Versico

## **PART 3 EXECUTION**

### **3.01 GENERAL**

- A. Comply with the manufacturer's published instructions for the installation of the membrane roofing system including proper substrate preparation, jobsite considerations and weather restrictions.
- B. Position sheets to accommodate contours of the roof deck and shingle splices to avoid bucking water.

### **3.02 INSULATION PLACEMENT AND ATTACHMENT**

- A. Install insulation or membrane underlayment over the substrate with boards butted tightly together with no joints or gaps greater than 1/4 inch. Stagger joints both horizontally and vertically if multiple layers are provided.
- B. Secure insulation to the substrate with the required Versico fasteners and plates in accordance with manufacturers specifications.

### **3.03 MEMBRANE PLACEMENT AND ATTACHMENT**

- A. Unroll and position membrane without stretching. Provide and secure both perimeter and field membrane sheets in accordance with the manufacturer's most current specifications and details.
- B. Secure the membrane with the required Versico Fasteners and Plates spaced a maximum of 12 inches on center depending on project conditions (centered over the pre-printed marks approximately 1-1/2 inches from the edge of the membrane sheet).
- C. Install adjoining membrane sheets in the same manner in accordance with the manufacturer's specifications.

### **3.04 MEMBRANE SPLICING/HEAT WELDING PROCEDURES**

- A. Heat weld the VersiFlex membrane using an Automatic Heat Welding Machine or Hot Air Hand Welder in accordance with the manufacturer's specifications. At all splice intersections, roll the seam with a silicone roller prior to membrane seam cooling. (Note: When using .060" thick membrane, all splice intersections shall be overlaid with VersiFlex T Joint Covers.)
- B. Probe all seams once the hot air welds have thoroughly cooled (approximately 30 minutes).
- C. Repair all seam deficiencies the same day they are discovered.
- D. Apply Cut Edge Sealant on all cut edges of reinforced membrane (where the scrim reinforcement is exposed) after seam probing is complete.

### **3.05 FLASHING**

- A. Flashing of parapets, curbs, expansion joints and other parts of the roof must be performed using VersiFlex reinforced membrane. VersiFlex non-reinforced membrane can be used for flashing pipe penetrations, scuppers, as well as inside and outside corners when the use of pre-fabricated accessories is not feasible.
- B. Follow manufacturer's typical flashing procedures for all wall, curb, and penetration flashing including metal edging/coping and roof drain applications.

### **3.06 WALKWAYS**

- A. Install walkways at all traffic concentration points (such as roof hatches, access doors, rooftop ladders, etc.) and all locations as identified on the specifier's drawing.
- B. Heat weld walkway pads to the membrane or install concrete pavers, loose laid over an approved protection sheet in accordance with the manufacturer's specifications.

### **3.07 DAILY SEAL**

- A. On phased roofing, when the completion of flashings and terminations is not achieved by the end of the work day, a daily seal must be performed to temporarily close the membrane to prevent water infiltration.
- B. Complete an acceptable membrane seal in accordance with the manufacturer's requirements.

### **3.08 CLEAN UP**

- A. Perform daily clean-up to collect all wrappings, empty containers, paper, and other debris from the project site. Upon completion, all debris must be disposed of in a legally acceptable manner.
- B. Prior to the manufacturer's inspection for warranty, the Contractor must perform a pre-inspection to review all work and to verify all flashing has been completed as well as the application of all caulking.

**END OF SPECIFICATION**