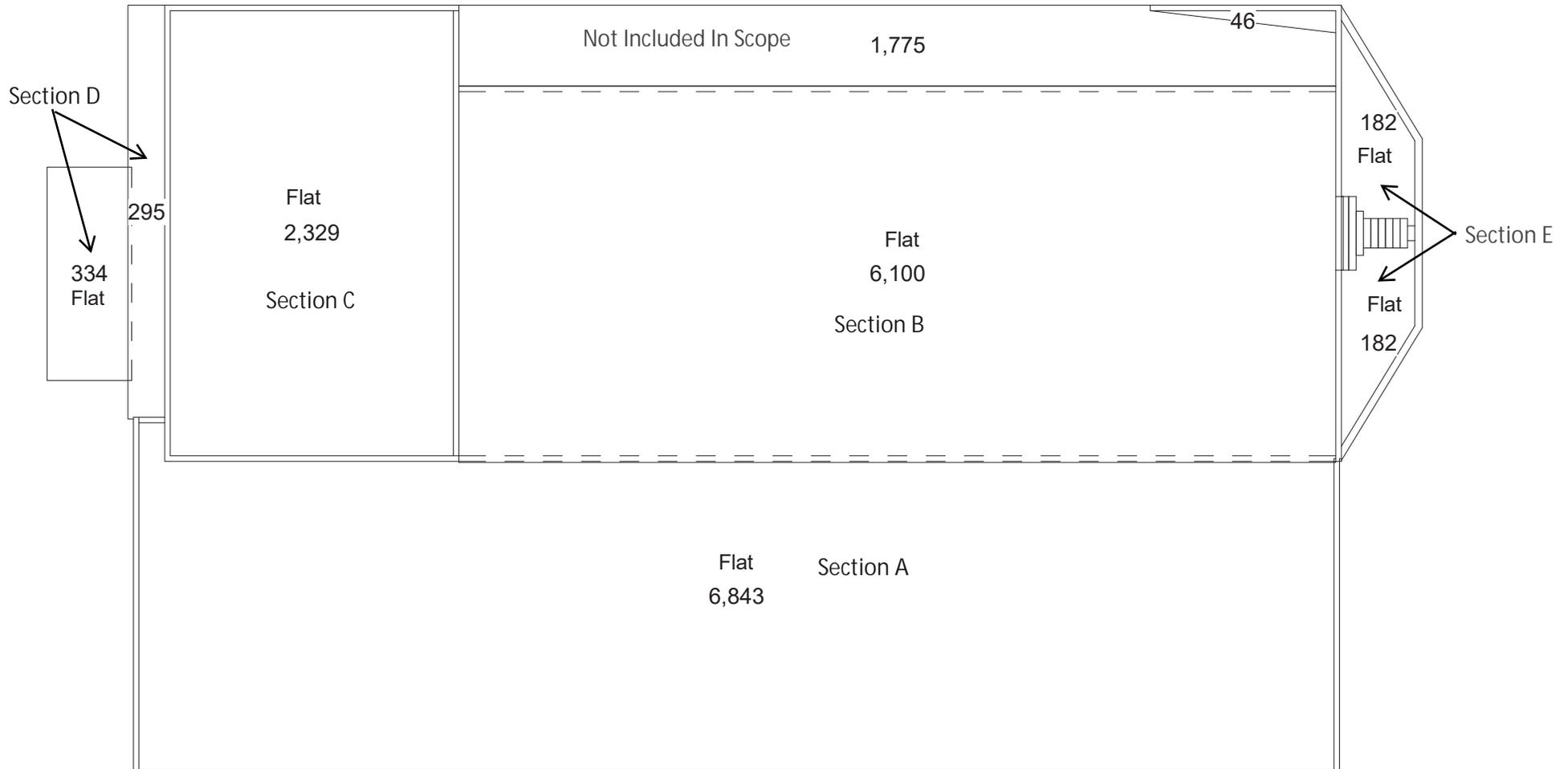


Area by Section

Roof Report

112 2nd Ave NE Decatur, AL 35601



Roof Areas (Square Feet)

Shingled Roof

Flat Roof

ROOF COATING RESTORATION SYSTEM
OVER EPDM MEMBRANES
Roof Sections A,B, D, & E

Part 1. General Conditions

1.1 Description

A. Scope of Work

Provide all materials, labor and equipment required for the installation of the roof coating system over the existing weathered EPDM single ply membrane including all ancillary products.

B. Related Work

1. Perform Adhesion Tests
2. Replace Wet Insulation
3. Repair All Flashing Defects
4. Surface Preparation
5. Install roof coating system

1.2 Performance Requirements

- A. Conform to applicable code for fire resistance ratings of roof system.
- B. Underwriters Laboratories, Inc. - UL 790: Class A Fire Hazard Classification.
- C. Factory Mutual (FM) – FM Standard 4470 approval
- D. All silicone products must be domestically produced. Products produced outside of the US will not be accepted.
- E. Coating manufacturer must produce its own product. Private labeled silicone coating products will not be accepted.

1.3 Submittals

- A. Product Data: Product data on silicone coating, physical and chemical properties, preparation of substrate required, product limitations, and cautionary requirements.
- B. Safety Data Sheets (SDS)
- C. Shop Drawings: Roof plan and details showing extent of roofing, intersections with adjacent surfaces, and details of expansion joints, counterflashing, and other items for a complete roofing system.
- D. Manufacturer's Installation Instructions: Indicate installation requirements and procedures.
- E. Certificates:
 1. Product certificates signed by the manufacturer certifying material is in compliance with the specified performance characteristics and criteria, and physical requirements.
- F. Sample copy of manufacturer warranty

- G. Final Inspection Report: Copy of roofing system manufacturer's inspection report of completed roofing installation.
- H. Manufacturer Maintenance Requirements: Manufacturer shall submit the number of minimum annual maintenance site visits required by its warranty, on official documents or letterhead signed by authorized manufacturer employee.
- I. Manufacturer Authorization Letter: When a third-party consultant or contractor is used, manufacturer shall submit authorization on Manufacturer's letterhead signed by authorized manufacturer employee, that, "Consultant is approved to provide warranty compliance services and make technical decisions on behalf of Manufacturer".
 - 1. Consultant shall provide evidence that its employee performing all work in this Section is a Registered Roof Consultant (RRC) designation from the Roof Consultant Institute, current standing.
- J. Consultant Acknowledgment Letter: When a third-party consultant is used, Consultant shall submit letter acknowledging it has read specification and its contract will comply with all required site visits and reports.

1.4 Job Site Inspections

- A. Provide twice-per-week roofing installation inspections: Inspections must include; photographic documentation of work in-progress and written statements of compliance with specification, code and warranty.
- B. Reports to be provided to Building Owner and Contractor within 5 working days of inspection.
- C. Confirm after project completion that the manufacturer/consultant has observed no application procedures in conflict with the specifications other than those that may have been previously reported and corrected.
- D. Provide Punch List Inspection with written list of items needing correction for warranty compliance.
- E. Provide Follow Up Inspection(s) until Punch List is completed.

1.5 Manufacturer Warranty Visits (by Manufacturer/Consultant):

- A. Manufacturer/Consultant shall provide one visit every two years for life of warranty.
- B. Manufacturer/Consultant shall visit roof system to inspect that roof system remains under warranty.
- C. Manufacturer/Consultant shall provide report with photos indicating compliance or non-compliance with warranty and issue direction to roof maintenance contractor to correct deficiencies.

1.6 Required Maintenance Program (by Contractor/Manufacturer or Consultant)

- A. Contractor shall include manufacturer's minimum number of annual maintenance visits required into its Base Bid, and if no minimum number is provided in writing shall be assumed to be two (2) visits per year for 10 years (10 visits total).
- B. Program shall maintain warranty compliance per manufacturer requirements including but not limited to routine inspections, maintaining maintenance logs, cleaning debris from roof and reporting in writing any deficiencies observed to manufacturer.

1.7 Quality Assurance

- A. Manufacturer:
 - 1. Company specializing in the manufacturing of the system specified in this Section.
 - 2. A minimum of 1,000,000 square feet of a similar system installed.
- B. Installer:

1. Installer must be a Certified Licensed Applicator (CLA) by the Manufacturer providing the warranty, and capable of receiving the specified warranty.
2. CLA to ensure all personnel are properly trained and have a full understanding of all OSHA safety requirements.

1.8 Delivery, Storage, and Handling

- A. Deliver and store liquid materials and other products in their original unopened containers or packaging until ready for installation.
- B. Materials shall be clearly labeled with the manufacturer's name, product identification, safety information, and lot numbers.
- C. Store materials indoors whenever possible.
- D. Products stored outside must be kept above 40 degrees F.
- E. Comply with the manufacturer's instructions for handling and safety procedures.
- F. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.9 Environmental Requirements

- A. Maintain logs of environmental conditions (temperature, humidity, and wind speed) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside of manufacturer's limits.
- B. 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.
- C. Do not install silicone coating under the following conditions:
 1. When ambient temperature is below 40° F.
 2. At temperatures less than 5° F above dew point.

1.10 Warranty

- A. Manufacturer to provide a 10 material and labor warranty.
- B. Installer to provide a two (2) year labor warranty to the membrane manufacturer with a copy directly to Owner.

Part 2. Products

2.1 Acceptable Products

- A. Insulation Board
 1. Match existing material
- B. Butyl Fleece Tape
 1. The Garland Company: UniBond™ ST
- C. Cleaners:
 1. General Purpose EPDM Rinseable Cleaner
- D. Silicone Caulk Sealant
 1. The Garland Company: All-Sil™ Silicone Sealant
- E. Flashing Grade Sealant
 1. Viking Products Group: Cool-Sil FG Silicone Flashing Grade Sealant

F. Reinforcing Fabric

Viking Products Group: Guardian Polyester Soft

G. Silicone Coating

1. Viking Products Group: Cool-Sil HS Silicone Coating

2.2 Silicone Coating Materials

A. Silicone base and top coat to be Cool-Sil HS Silicone Coating by Viking Products Group and complying with the following minimum properties:

1. Tensile Strength: ASTM D412,247.
2. Elongation: ASTM D412, 237 percent minimum at break at 75° F.
3. Water Vapor Permeance: ASTM D-96, 10.7 at 20 mils.
4. Fire resistance: ASTM E108, UL 790 Class A.
5. Color: Owner to select standard topcoat color.
6. Solids Content: 92% ±3%
7. VOC Content: < 50 grams/liter
8. Initial Solar Reflectivity:.89
9. Initial Thermal Emissivity:.90
10. SRI Value: 113

Part 3. Execution

3.1 Examination

- A. Verify roof slope prior to beginning installation. There is to be no single area of standing water on the roof 24 hours after a rain, greater than 100 sq. ft. and more than ½” deep.
- B. Identify all seam failures, flashings failures and inadequate sheet metal details.
- C. Inspect all roof drains to ensure proper performance.
- D. Inspect all roof system fasteners for back out.

3.2 Cleaning and Surface Preparation

A. Preventative Maintenance

1. All defects such as deteriorated roof decks must be repaired; saturated insulation board must be replaced, etc.
2. The existing membrane is either fully adhered or that the membranes mechanical fasteners are secured and functional.
3. Application of roofing materials over a brittle roof membrane is not recommended.
4. Repair existing roof membrane as necessary to provide a sound substrate for the liquid membrane. All surface defects (cracks, blisters, tears, seams, etc...) must be repaired with similar cured material.

B. Membrane Cleaning:

1. Apply EPDM Rinseable Cleaner at a rate of 400 sq ft per gallon, let material stand for 15 minutes and then rinse off.
2. Thoroughly powerwash roof surface and all other areas to receive new coating with a minimum of 2,000 psi water pressure. Be sure not to damage existing membrane during this process.

3. After the surface has dried, perform an adhesion test. If the coating does not properly adhere to the surface, repeat steps 1 and 2 above
 4. Any areas of grease contamination are to be cleaned with an industrial strength detergent.
- C. Existing Wet Insulation Areas:
1. Roof areas containing moisture below the roof surface shall be replaced.
 - a. Wet Insulation Replacement
 - 1) Cut membrane on three sides and roll back membrane to expose wet insulation.
 - 2) Remove and replace insulation with identical insulation materials. Fasten new insulation at a rate of 1 fastener per 2 square feet.
 - 3) Membrane cuts are to be fastened with barbed membrane seam fasteners staggered 6" o.c.
 - 4) Install 4" UniBond ST Butyl Fleece Tape centered over membrane cut.
 - 5) Install 20 mils of Cool-Sil HS coating approximately 16" wide centered over newly installed fleece tape.
 - 6) Install 12" wide Guardian Polyester Soft fabric into the wet coating. Smooth out fabric and ensure there are no wrinkles or fishmouths.
 - 7) Install another coat of Cool-Sil HS at a rate of approximately 20 mils over new fabric.
- D. Drip Edge Detail: Cut and trim off delaminated membrane. Strip in the entire edge utilizing 4" UniBond ST butyl fleece tape and install 25 mils of Cool-Sil HS silicone coating over tape.
- E. Flashings Details: Ensure all existing flashings provide a watertight condition. Repair all seams utilizing 4" UniBond ST butyl fleece tape and install 25 mils of Cool-Sil HS silicone coating over tape.
- F. Membrane Seams: Repair all seams utilizing 4" UniBond ST butyl fleece tape and install 25 mils of Cool-Sil HS silicone coating over tape.
- G. Reglet Joint: Cut out existing caulk above any surface-mounted counterflashing and reseal with a polyurethane sealant.
- H. Fastener Back Out: Identify and replace all fasteners that are loose or backed out. Repair membrane cuts utilizing UniBond ST butyl fleece tape and install 25 mils of Cool-Sil HS silicone coating over tape.

3.3 Silicone Coating Installation

- A. Ensure surface is completely dry.
- B. Ensure subsequent coats of primer or silicone coating is completely cured.
- C. Ensure adhesion tests have been completed and results are satisfactory with the manufacturer's requirements.
- D. Install silicone coating in one pass over entire roof surface to achieve a final thickness of 30 to 35 mils. On vertical surfaces such as the walls multiple thin passes will be required in order to achieve the mil thickness required.
- E. While spraying the silicone coating, special effort should be made to have pass lines overlap on membrane seams as to provide additional coating thickness on the seams.
- F. It is strongly recommended that the coating should be applied with a roller at all edges and penetrations to prevent overspray and provide a clean straight edge.
- G. NOTES:

1. Over some asphalt based or EPDM based products, a slight bleed-through or “yellowing” may occur through the silicone coating. This is only a cosmetic issue and will not affect the performance of the system
2. Any subsequent membrane repairs after the coating installation should be done only with silicone products. If repairs are needed, they should be completed with a three course coating and fabric.

3.4 Miscellaneous Roof Improvements

- A. Paint gas lines with an exterior grade yellow paint.
- B. Install slip sheets under all wood blocking.
- C. Rework all pitch pans by removing the top layer of sealant and refilling with pourable sealant. Install a new metal rain collar above the pitch pan.

3.5 Field Quality Control

- A. Final Roof Inspection: Arrange for roofing system manufacturer’s technical personnel to inspect roofing installation upon completion and submit report to Owner. There shall be no items on the roof that could inhibit the inspection process, such as, solar panels, decking systems, etc.
 1. Notify Owner 48 hours in advance of date and time of inspection.
 - a. Repair or remove and replace components of roofing system where inspection results indicate that they do not comply with specified requirements.

3.6 Cleaning

- A. Remove overspray from adjacent surfaces using cleaning agents and procedures recommended by manufacturer of affected construction.
- B. In areas where finished surfaces are soiled by work of this section, consult manufacturer of surfaces for cleaning advice and conform to their instructions.
- C. Repair or replace defaced or disfigured finishes caused by work of this section.

3.7 Protection of Finished Work

- A. Ensure roof surface is free of traffic for minimum of 12 hours after silicone coating application or until coating is completely cured.
- B. Ensure any subsequent work does not cause damage to finished roof system. If necessary, install protection over finished roof area.

END OF SECTION

Flex TPO Adhered Spec

Roof Section C

PART 1 GENERAL

1.01 DESCRIPTION

- A. The City of Decatur Princess Theatre is located at 112 2nd Avenue in Decatur, AL.
- B. The project consists of installing Viking Products Group FlexMembrane (TPO) Adhered Roofing System as outlined below:

Apply the FlexMembrane Adhered Roofing System in conjunction with new coverboard overtop of the existing roof system.

1.02 EXTENT OF WORK

- A. Provide all labor, material, tools, equipment, and supervision necessary to complete the installation of the FlexMembrane .060" thick white reinforced TPO (Thermoplastic Polyolefin) membrane Adhered Roofing System including flashings, insulation, and edge metal 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. Any contractor who intends to submit a bid using a roofing system other than the approved manufacturer must submit for pre-qualification in writing seven (7) days prior to the bid date. Any contractor who fails to submit all information as requested will be subject to rejection. Bids stating "as per plans and specs" will be unacceptable.

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. A sample of the manufacturer's Membrane System Warranty.

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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 membrane thickness over the reinforcing scrim (top ply membrane thickness) is nominal .015" (15 mil).
- B. Upon completion of the installed work, submit copies of the manufacturer's final inspection to the specifier prior to the issuance of the manufacturer's warranty.

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 FlexMembrane in the original undisturbed plastic wrap in a cool, shaded area. FlexMembrane that has been exposed to the elements for approximately 7 days must be prepared with Viking Products Group Weathered Membrane Cleaner prior to hot air welding.
 2. Store curable materials (adhesives and sealants) between 60F and 80F in dry areas protected from water and direct sunlight. If exposed to lower temperature, restore to 60F 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 applicator'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.

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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 PRECONSTRUCTION CONFERENCE

- A. 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 to coordinate an appropriate time.
- B. 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, 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.
- B. 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.
- C. 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, by either 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 material 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. Applicators 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

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- A. The FlexMembrane roofing system must achieve a UL Class A and/or FM 1-90 rating.
- 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 applicator 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 including operation of hot air welding equipment and power supply. Provide at least one thoroughly trained and an 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. Perform work in accordance with all federal, state and local codes. It is the intent of this specification to install a quality roofing system that meets or exceeds all current NRCA and SMACNA guidelines.

1.14 JOB CONDITIONS, CAUTIONS AND WARNINGS

Refer to Viking Products Group FlexMembrane Adhered Roofing System specification, Part II - Application, 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 Viking Products Group Authorized Roofing Applicator 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.

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- 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 weather tight 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

- A. Provide manufacturer's 10 year Membrane System Warranty covering both labor and material. The maximum wind speed coverage shall be peak gusts of 55 mph measured at 10 meters above ground level.
- 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. Basis of Design: Materials, manufacturer's product designations, and/or manufacturer's names specified herein shall be regarded as the minimum standard or quality required for work of this Section. Comply with all manufacturer and contractor/fabricator quality and performance criteria.

2.02 ACCEPTABLE MANUFACTURERS

- A. Acceptable Manufacturer: Viking Products Group, which is located at 3812 E. 91st St. Cleveland, OH 44105; 800-350-2142
- B. Any item or materials submitted as a substitution to the manufacturer specified must comply in all respects as to the quality and performance of the brand name specified. The Architect/Owner shall be the sole judge as to whether or not an item submitted as a substitute is truly equal. Should the Contractor choose to submit a substitute product, he shall assume all monetary or other risk involved, should the Architect/Owner find the substitution unacceptable.

2.03 MEMBRANE

Furnish FlexMembrane .060" thick white reinforced TPO (Thermoplastic Polyolefin) membrane as needed to complete the roofing system. Membrane thickness over the reinforcing scrim (top-ply thickness) shall be nominal .015" thick (15 mil).

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2.04 INSULATION

- A. Cover Board: ½" DensDeck Prime
 - a. Cover Board Manufacturer: Georgia Pacific

2.05 ADHESIVES AND CLEANERS

All products shall be furnished by Viking Products Group and specifically formulated for the intended purpose.

- A. Bonding Adhesive: FlexMembrane Bonding Adhesive
- B. Edge Sealant: Cut Edge Sealant
- C. Sealer: Water Cut-Off Mastic and PT 304 Sealant
- D. Pocket Sealant: TPO Molded Pocket Sealant
- E. Cleaner: Viking Products Group Weathered Membrane Cleaner

2.06 METAL EDGING AND MEMBRANE TERMINATIONS

- A. Install new metal gutters, downspouts, and coping.
- B. **FlexMembrane Coated Metal:** 4'x 10' coated metal sheets made from .040 kynar coated aluminum with a minimum .035" thick non-reinforced white FlexMembrane laminate. FlexMembrane can be welded directly to the FlexMembrane Coated Metal in accordance with the manufacturer's detail.
- C. **Anchor Rite Termination Bar:** A 1 inch wide and .098 inch thick extruded aluminum bar pre-punched 6 inches on center; incorporates a sealant ledge to support Lap Sealant and provide increased stability for membrane terminations.

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, job site 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. Tear off down to the deck the existing roof system and properly dispose of materials.
- B. Nail down a type 2 base sheet and then adhere with insulation adhesive ¼" per foot tapered insulation over the substrate with boards butted tightly together with no joints or gaps greater than 1/4 inch. Stagger joints horizontally and vertically if multiple layers are provided.
- C. Secure approved coverboard to the polyiso insulation by adhering it with insulation adhesive according to the wind uplift pattern provided by the manufacturer.
- D. Use a 0 – ½" tapered wood fiberboard (12") at the gutter to prevent ponding water along the perimeter.

3.03 MEMBRANE PLACEMENT AND ATTACHMENT

- A. Position FlexMembrane over the acceptable substrate. Fold membrane sheet back **lengthwise** (onto itself) so half the underside of the membrane is exposed.
- B. Apply FlexMembrane Bonding Adhesive in accordance with the manufacturer's published instructions, to the exposed underside of the membrane and the corresponding substrate area. Do not apply Bonding Adhesive along the splice edge of the membrane to be hot air welded over the adjoining sheet. Allow the adhesive to dry until it is tacky but will not string or stick to a dry finger touch.
 - 1. Roll the coated membrane into the coated substrate while avoiding wrinkles. Brush down the bonded section of the membrane sheet immediately after rolling the membrane into the adhesive with a soft bristle push broom to achieve maximum contact.
 - 2. Fold back the unbonded half of the sheet lengthwise and repeat the bonding procedures.
- C. Position adjoining sheets to allow a minimum overlap of 2 inches.
- D. Hot air weld the FlexMembrane sheets using the Automatic Hot Air Welding Machine or Hot Air Hand Welder in accordance with the manufacturer's hot air welding procedures.
- E. Pull the membrane back along the welded splice so the entire underside of the membrane is exposed once the Hot Air Weld has been completed.
- F. Apply FlexMembrane Bonding Adhesive to the exposed underside of the membrane sheet and the substrate.
- G. Allow adhesive to dry until tacky and roll the membrane into the substrate and brush down the bonded section with a bristle broom following the procedure noted above.
- H. Continue to install adjoining membrane sheets in the same manner, overlapping edges a minimum of 2 inches and complete the bonding procedures as stated previously.

3.04 MEMBRANE SPLICING/HOT AIR WELDING PROCEDURES

- A. Hot air weld the FlexMembrane using an Automatic Hot Air 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 to ensure a continuous hot air welded seam. (Note: When using .060" thick membrane, all splice intersections shall be overlaid with FlexMembrane non-reinforced flashing)
- 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. Cut Edge Sealant is not required on vertical splices.

3.05 FLASHING

- A. Flashing of parapets, curbs, expansion joints and other parts of the roof must be performed using FlexMembrane reinforced membrane. FlexMembrane non-reinforced membrane can be used for flashing pipe penetrations, Sealant Pockets, and scuppers, as well as inside and outside corners, when the use of pre-molded 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.

3.07 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 applicator 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