

Brockton Redevelopment Authority- 19 Main Street Roof Replacement Project

Part I General

1.01 Scope of Work: The general scope of work consists of removal of existing rubber roofing and replacement of a rubber membrane roofing system including but not limited to wood roof sheathing goods, insulation board, aluminum drip edge, and other sheet metal flashings, nails and other fasteners, and plastic cement and other items required for a complete watertight installation. Work area to consist of entire roofing structure of the commercial building. The area is roughly 11,000 square feet. Existing roof to be removed completely and existing wood to be examined for structural integrity.

1.02 System description A. Sheet Membrane Roofing System: Provide a waterproof roof system, capable of withstanding uplift forces as specified. B. Membrane attachment will be fully adhered at all locations. C. Base Flashing: Provide a waterproof, fully adhered base flashing system at all penetrations, plane transitions and terminations where work has affected the existing and remaining membrane assembly.

1.03 Submittals A. Product information: 1. Samples of each primary component to be used in the roof system and the manufacturer's current literature for each component. 2. Sample copy of Manufacturer's warranty. 3. Certification from the Applicator that the system specified meets all identified code and insurance requirements as required by the Specification.

1.04 Regulatory Requirements A. Conform to applicable local and State codes for roof assembly fire hazard requirements.

1.05 Delivery, Storage and Protection A. Deliver materials in manufacturer's unopened, labeled bundles, rolls or containers. B. Store products in weather protected environment, clear of ground and moisture. C. Store materials, except membrane, between 50 degrees F and 80 degrees F. If exposed to lower temperatures, restore to proper temperatures before using.

1.06 Environmental Requirements A. Substrate: Proceed with work only after all substrate work has been completed. B. Do not apply roofing membrane during inclement weather. Installation to occur within temperature range as required by manufacturer. C. Do not apply roofing membrane to damp or frozen deck surface. D. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed during same day. E. Use compatible roof cement. F. Do not allow waste products (petroleum, grease, oil, solvents, vegetable or mineral oil, animal fat) or direct steam venting to come in contact with single ply roofing system. G. Splicing and bonding surfaces shall be dry and clean. H. Roof surface shall be free of ponded water, ice or snow.

1.07 Warranty A. Section 01 77 00 - Contract Closeout for closeout requirements pertaining to warranty information. B. Contractor's Warranty: This Contractor shall furnish a written warranty stating that all Work executed under this Section will be free from defects of material and workmanship for a period of one (1) year from the date of final acceptance by the Owner, except as stated above. This Contractor further states that he will, at his own expense, repair and replace all such defective materials or workmanship and all other Work damaged thereby which is so damaged during the one (1) year warranty period. C. At project closeout, the Contractor shall provide an executed copy of the manufacturer's warranty or guarantee, outlining its terms, conditions, and exclusions from coverage. D. Manufacturers' Warranty: from the roofing manufacturer on the membrane and its installation.

Part II Products

2.01 Membrane Material A. Acceptable Manufacturers: 1. Carlisle Syntec Systems; EPDM membrane "Mule-Hide" Adhered Roofing System; www.carlisesyntec.com. 2. Firestone Building Products; Rubberguard EPDM; <http://firestonebpc.com/roofing/epdm-roofing-systems/> 3. Johns Manville; EPDM membrane; <http://www.jm.com/en/buildingmaterials/commercial-roofing/epdm-roofing-systems>. Provide complete system and all components from one manufacturer. EPDM, reinforced, 60 mil thick, 10 foot wide roll; color: black; conforming to the following criteria: 1. Tensile Strength: ASTM D412 1305 psi, minimum 2. Elongation: ASTM D412 350 3. Tear Strength ASTM D624 175 4. Water Absorption ASTM D471 4% Change in Mass (max.) 5. Moisture Vapor Perms ASTM E96 2.0 6. Exposure ASTM D822 7. Low Temperature Brittleness ASTM D746 -75 D. Seaming Materials: As recommended by the membrane manufacturer for the chosen system. E. Washer Disc: Material membrane with adhesive backing. F. Battens: Installed and specified based on the membrane manufacturer's recommendations for the system and conditions.

2.02 Adhesive Material A. Surface Conditioner: As recommended by the membrane manufacturer. B. Membrane Adhesives: Provide low-VOC adhesive as recommended by membrane manufacturer. C. Insulation Adhesive: As recommended by insulation manufacturer. D. Thinner and Cleaner: As recommended by adhesive manufacturer, compatible with sheet membrane.

2.04 Flashings A. Flexible flashings: Provided by the chosen membrane manufacturer. B. Drip Edge: Minimum .024" aluminum sheet style-D drip edge, brake-formed to provide a minimum 1¼" inch flange with 3/8" drip at lower edge by minimum 6 1/2" roof deck flange. Furnish in 8' or 10' lengths. Do NOT install drip edge in pieces shorter than 24". Pre-Finished Aluminum Sheet: ASTM B209, 5005-H14 alloy shop pre-coated with modified silicone coating; NO MILL FINISH ALUMINUM ALLOWED.

2.05 Accessories A. Roofing Nails: Galvanized hot dipped or non-ferrous type, size as required to suit application. B. Fasteners for blocking and insulation shall be of the type suggested and required by the roof membrane manufacturer in order to fulfill all requirements to obtain all manufacturers' guarantees. C. Sealants, pourable sealer: As recommended by membrane manufacturer. D. Stack Boots: Flexible boot and collar for pipe stacks through membrane. E. Seam Flashing, joint cover, pre-molded corners, roof edge flashings and assemblies as approved and/or provided by the manufacturer.

2.06 Insulation A. Provide tapered 3" polyiso roof board insulation, HCFC free, by Firestone, Carlisle Mule Hide, Atlas Roofing or equal. FM 1-90 wind uplift classification; compressive strength minimum 20 psi.

Part III Execution

3.01 Inspection A. Once existing roof is completely removed, contractor must examine substrate and conditions under which roofing work is to be performed and notify the Owner in writing of unsatisfactory conditions. Do not proceed with roofing work until unsatisfactory conditions have been corrected. B. Preparation of Substrate 1. Clean substrate of any projections and substances detrimental to roof work. Sweep substrate clean before application of insulation board and membrane. 2. Coordinate installation of membrane with flashing and other adjoining work to ensure proper sequencing. Do not install membrane until all vent stacks and other penetrations through roofing have been installed and flashed and are securely fastened against movement. C. Contractor is responsible for the cost of the replacement of plywood membranes that are in unsatisfactory condition.

3.02 Polyiso Board Application A. Mechanically attach protection board to structural roof structure. B. Select, locate and space fasteners to meet performance and warranty requirements. C. Ensure fasteners cannot lift or damage roof membrane.

3.03 Membrane Application and Splicing A. The single-ply direct-adhered membrane roofing system shall be installed directly over the protection board. B. All installation work shall be in strict accordance with the manufacturer's instructions, which will be available on site at all times while the roof work is underway. C. All seams in the membrane are to be in strict accordance with the manufacturers recommendations.

3.04 Edge Strips A. Deck membrane shall be installed over the perimeter edge strip to the outside fascia of the building in accord with manufacturer's instructions. B. Edge strip shall be installed and secured according to an installation detail accepted by the membrane manufacturer. Securement provided by the Contractor shall prevent buckling and prohibit metal gravel stop from pulling free. C. Flashing of the edge strip deck flange must extend 3 inches minimum past the point of securement in all directions. D. Flashing of the edge strip deck flange must provide complete coverage to the flange and provide a minimum 6-inch-wide splice to the adjoining deck membrane. Use the same splice cement for sealing flashing to the membrane and to the edge strip.

3.05 Penetrations A. Flash all penetrations passing through the membrane.

3.06 Flashings and Accessories A. Apply flexible flashings to seal membrane to vertical elements. B. Secure to nailing strips at 4 inches (100 mm) oc. C. Install prefabricated roofing expansion joints to isolate roof into areas in accordance with manufacturer's instructions. D. Fabricate roofing and expansion joints to isolate roof into areas as indicated. E. Coordinate installation of roof drains and related flashings. F. Seal flashings and flanges of items penetrating membrane.

3.07 Field Quality Control A. Correct identified defects or irregularities. B. Provide site attendance of roofing and insulation materials manufacturer's representative during installation of the Work if required for warranty processing or if issues arise in the field.

3.08 Cleaning A. Section 01 77 00 - Contract Closeout: Cleaning installed work. B. In areas where finished surfaces are soiled by Work of this section, consult manufacturer of surfaces for cleaning advice and conform to their documented instructions. C. Repair or replace defaced or disfigured finishes caused by Work of this section.

3.09 Protection of Finished Work A. Protect remaining and adjacent building surfaces against damage from roofing work. B. Where traffic must continue over finished roof membrane, protect surfaces.

The Contractor is responsible for measuring and bidding the exact square footage of roofing project.

All bid must include all material, labor, rubbish removal and permit cost.

Reference Bid Number 019-2018

Property Owner:
Project Address:

The Brockton Redevelopment Authority
19 Main Street
Brockton, MA 02301

Due Date 10/02/2017		
		PRICE
I.	Soft Cost:	
	Building Permit Fees	
	Dumpster Permit Fees	
	Architecture/Engineering	
	Other	
II	Roof Removal:	
	Removal labor cost of rubber and roofing system	
	Dumpster Cost	
	Other	
III.	Framing:	
	Framing of new roofing structure	
	Trusses	
	Sheathing	
	Other	
IV.	Roofing Installation:	
	Waterproofing	
	Insulation	
	Rubber Membrane Installation	
	Drip Edge installation	
	Installation of atrium section	
	Other	
VII	Closeout Items:	
	Final Clean Up	
	Sub-Total:	<u>\$0.00</u>
	Contractor's OVHD & Profit	
	Total Construction Cost:	

I, the undersigned contractor, having thoroughly inspected the building & have familiarized myself with all the requirements of the project.

Contractor Signature

Title