Department of Building & Grounds
Architectural Services Division

City of Baton Rouge
Parish of East Baton Rouge

P.O. Box 1471
Baton Rouge, Louisiana 70821
225 389-4694 Voice
225 389-4704 Fax

# ADDENDUM #4

**May 20, 2024**

**TO ALL BIDDERS**

**PROJECT: DHDS/BRPD UP1 ROOF REPLACEMENT**
**CITY PARISH PROJECT NO. 21-ASC-CP-1521**

The following revisions shall be incorporated in and take precedence over any conflicting part of the original contract documents.

1. Clarification: Addendum No. 3, BBI Architects, Addendum Number Three (3), Specifications: delete Item #2.

2. Specification Section 07 5226, delete Part 3 in its entirety, substitute the attached Part 3.

The following revisions shall be incorporated in and take precedence over any conflicting part of the original contract documents.

*TOTAL PAGES .....9 (SPECIFICATIONS)*
*TOTAL PAGES .....10 (INCLUDING THIS PAGES)*

***FAILURE TO INDICATE RECEIPT OF THIS ADDENDUM ON BID FORM MAY BE CAUSE FOR THE BID TO BE REJECTED***

Rob Gray, AIA, LEED AP BD+C, Senior Architect
Architectural Services Division
1100 Laurel Street, Rm. 227
Baton Rouge, LA 70802

## PART 3 - EXECUTION

### 3.1 INSPECTION AND PREPARATION

A. Before commencing work, all surfaces shall be smooth, clean, dry and free of any debris that would adversely affect the installation of the membrane.
   1. Repair damaged or defective deck areas prior to commencement of work under this section.

B. Verify that the work of other trades has been properly completed.

C. Do not install materials in conditions of inclement weather.

D. The contractor is responsible for project safety. Refer to NRCA CERTA recommendations and building owner requirements for hot work operations.

E. Where required to seal substrates for fire safety, install specified adhered, self-adhered or fastened backer ply to the substrate. Ensure backer-ply covers and seals all substrates requiring protection from exposure to torch operations

### 3.2 FLOOD TEST

A. Prior to the installation of cap sheet, ***flood test roof.*** This test will be used to determine if additional plies or insulation build-up is needed or if additional drains shall be installed

### 3.3 EQUIPMENT

A. Maintain all equipment and tools in good working order.
   1. Have 2 approved 10 lb. fire extinguishers in each work station at all times.

### 3.4 ASPHALT PRIMER APPLICATION

A. Apply the appropriate roofing manufacture recommended primer to dry, compatible substrates as required to enhance adhesion of new specified roofing materials.

B. Apply primer using brush, roller, or sprayer at the rate published on the product data sheet. Lightly prime for uniform coverage, do not apply heavy or thick coats of primer.

C. Asphalt Primer: Apply primer to dry compatible concrete, masonry, metal, wood and other required substrates before applying asphalt and heat-welded membrane plies. Primer is optional for solvent based solvent-based SBS adhesives and cements. Refer to product data sheets.

D. Examine all substrates, and conduct adhesion peel tests as necessary, to ensure satisfactory adhesion is achieved.

E. Project conditions vary throughout the day. Monitor changing conditions, monitor the drying time of primers, and monitor the adhesion of the membrane plies. Adjust primer and membrane application methods as necessary to achieve the desired results.

## 3.5 INSTALLATION OF BASE SHEET

A. Fasten Base to the deck using fasteners and plates according to the roofing manufacturer's written instructions.
   1. Evenly distribute fasteners as required by the manufacturer.

B. Base sheet shall be installed to meet current IBC Code and the specified wind uplift requirements for this project's location.

## 3.6 INSTALLATION OF INSULATION

A. The insulation shall provide a smooth surface to accept the roofing membrane.

B. Apply only as much insulation to the roof as can be covered in the same day with roofing membrane. When there is threat of precipitation, seal exposed edges of insulation at the close of each day's work. Cut and remove seal upon continuation of the work.

C. Attach the insulation to meet the specified wind uplift resistance and warranty requirements in accordance with the manufacturer's instructions.

D. Insulation system boards that must be cut to fit shall be saw-cut or knife-cut in a straight line, not broken. Chalk lines shall be used to cut insulation components. Uneven or broken edges shall not be accepted. Remove dust and debris that develops during cutting operations.

E. Stagger successive layers of insulation 12 in vertically and laterally to ensure board joints do not coincide with joints from the layers above and below.

F. Trim surface of insulation boards where necessary at roof drains so completed surface is flush and does not restrict flow of water.

G. Install tapered edge strips at perimeter edges of roof that do not terminate at vertical surfaces.

H. Crickets, saddles, and tapered edge strips shall be installed before installing cover boards.

I. The finished insulation system surface shall be tight to, and flush with, adjacent substrates to form a satisfactory substrate to install specified roof membrane and flashings.

J. Insulation Cant Strips: Install and secure preformed 45-degree insulation cant strips at junctures of roofing membrane system with vertical surfaces or angle changes greater than 45 degrees per manufacturer's instruction.

K. Install tapered insulation, saddles and crickets as required to ensure positive slope for complete roof drainage.

L. If any insulation becomes wet or damaged it shall be removed before any additional work can take place.

## 3.7 APPLICATION OF INSULATION - MOPPING ASPHALT

A. Fully adhere insulation layers and cover board using specified mopping asphalt.
   1. Mopping asphalt manufacturer and type shall be preapproved by the roofing manufacturer.
   2. Refer to mopping asphalt supplier's published values for Softening Point, Minimum Flash Point (FP), Finished Blowing Temperature (FBT) and Equiviscous Temperature (EVT).
   3. To avoid risk of fire do not heat asphalt at or above the Flash Point temperature.
   4. The EVT is the temperature at which the mopping asphalt viscosity is 125 centistokes.
   5. Apply mopping asphalt within +/- 25°F (14°C) of the published EVT to obtain the nominal 23 to 25 pounds per square coverage rate.
   6. Refer to the EVT provided by the asphalt supplier. Typically Type IV asphalt application temperature should be within 400 to 475°F (204 to 246°C) at the point of application when installing roofing materials into the hot asphalt.
   7. The contractor shall monitor asphalt application temperature, and *shall record the temperature during application.*

B. Install full coverage of mopping asphalt applied at 25-30 lbs/square as required to meet specified wind uplift approvals and warranty requirements.

C. Immediately install insulation components into hot asphalt, and apply weight to ensure the insulation materials maintain full contact with the asphalt for full adhesion.

## 3.8 INSTALLATION OF COVERBOARD

A. Comply with roofing system manufacturer's written instructions for installing roof cover board.

B. Adhered Cover Board: Adhere cover board to substrate as follows:
   1. Install in a solid mopping of hot roofing asphalt according to roofing system manufacturer's instructions.
   2. Install to resist uplift pressure at corners, perimeter, and field of roof.

C. Coordinate installation of membrane roofing system components so cover board is not exposed to precipitation or left exposed at the end of the workday.

D. Install cover board with long joints in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 1/4 inch with cover board as recommended by manufacturer.
   1. Cut and fit cover board within 1/4 inch of nailers, projections, and penetrations.

E. Cover boards shall be installed to fit tight against adjacent boards. When required by the cover board manufacturer, a uniform gap shall be provided between cover boards using a uniform guide placed between board joints to form a gap between all boards during installation.

F. Trim surface of cover board where necessary at roof drains so completed surface is flush and does not restrict flow of water.
   1. Install tapered edge strips at perimeter edges of roof that do not terminate at vertical surfaces.

## 3.9 INSTALLATION OF ROOF MEMBRANE, GENERAL

A. Install roofing membrane in accordance with roofing system manufacturer's written instructions and requirements in this Section.

B. Coordinate installing roofing system so insulation and other components of the roofing membrane system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is imminent.
   1. Provide tie-offs at end of each day's work to cover exposed roofing membrane sheets and insulation with a course of coated felt set in roofing cement or hot roofing asphalt with joints and edges sealed.
   2. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system.
   3. Remove and discard temporary seals before beginning work on adjoining roofing.

C. Asphalt Heating: Heat roofing asphalt and apply within plus or minus 25 deg F of equiviscous temperature unless otherwise required by roofing system manufacturer. Do not raise roofing asphalt temperature above equiviscous temperature range more than one hour before time of application. Do not exceed roofing asphalt manufacturer's recommended temperature limits during roofing asphalt heating. Do not heat roofing asphalt within 25 deg F of flash point. Discard roofing asphalt maintained at a temperature exceeding finished blowing temperature for more than 4 hours.

D. Substrate-Joint Penetrations: Prevent roofing asphalt from penetrating substrate joints, entering building, or damaging roofing system components or adjacent building construction.

E. Proceed with installation only after unsatisfactory conditions have been corrected.

## 3.10 INSTALLATION OF ASPHALT ADHERED MEMBRANE

A. Follow manufacturer’s material product data sheets and published general requirements for installation instructions.

B. Ensure environmental conditions are satisfactory, and will remain satisfactory, during the application of the mopping asphalt and membrane plies.

C. Unroll the membrane onto the roof surface. Allow modified bitumen membrane plies to relax prior to installing the membrane.

D. Starting at the low point of the roof, lay out the membrane to ensure the plies are installed perpendicular to the roof slope, shingled to prevent back-water laps. Where strapping is preferred, refer to membrane layout guidelines.

E. Cut rolls to working lengths and widths as required to conform to rooftop conditions. Cut membrane plies as necessary to always work to a selvage edge.

F. Ensure all roofing and flashing substrates are prepared and primed as necessary, and all substrates are acceptable to receive the specified asphalt and membrane.

G. Re-roll the membrane in order for the plies to be rolled into the hot asphalt while ensuring the specified side and end-laps are maintained.

H. Mop a uniform application of hot asphalt within +/- 25°F (14°C) of the Equiviscous Temperature (EVT). Apply sufficient asphalt coverage to ensure 1/8 to 1/4 inch bleed-out is present beyond all laps. Prevent excessive asphalt bleed-out on the SBS ply surface.

I. The asphalt temperature shall not fall below the minimum EVT temperature range, or below 400°F (204°C), at the point of membrane contact when unrolling the sheet into the hot asphalt.

J. The contractor shall monitor asphalt application temperature at the point of membrane application and *record the temperature during application.*

K. At 6 inch end-laps, cut a 45 degree dog-ear away from the 3 inch selvage edge for all T-joints.

L. Run membrane tight up against any vertical surfaces such as curbs, parapets and vents.

M. Broom the membrane to the substrate, working forward to the end of the roll as necessary to remove wrinkles and voids to ensure full adhesion. Avoid walking over the membrane during application.

N. Using a weighted roller to seal the membrane for proper adhesion.

O. Seal all laps by running a four-inch weighted roller onto side overlaps

P. Application shall provide a smooth surface, free of air pockets, wrinkles, fishmouths or tears.

Q. Each day, physically inspect all side and end-laps, and ensure the membrane is sealed watertight.

R. Inspect the installation each day to ensure the plies are fully adhered. Repair all voids, wrinkles, open laps and all other deficiencies.

S. Offset cap sheet side and end-laps away from the base ply laps so that cap sheet laps are not located within 18 inches of base ply laps.

T. During installation of cap sheets, immediately broadcast matching granules in cap sheet bleed-out, or otherwise treat bitumen bleed-out using specified cap sheet finish..

## 3.11 INSTALLATION OF FLASHING

A. Refer to SBS manufacturer's membrane application instructions, flashing detail drawings, and follow product data sheets and other published requirements for installation instructions. Refer to manufacturer's membrane flashing detail drawings.

B. Ensure all flashing substrates that require primer are primed, and the primer is fully dry.

C. Unroll the flashing base ply and flashing cap sheet onto the roof surface to their complete length. Once relaxed, cut the membrane to the required working lengths to accommodate the flashing height, cants and the required over-lap onto the horizontal roof surface.

D. Cut the flashing membrane from the end of the roll in order to always install flashings to the side-lap line or selvage edge line.

E. Lay out the flashing base ply and flashing cap sheet to offset all side-laps a minimum of 12 inches so that side-laps are never aligned on top of the ply beneath. Shingle the flashing ply laps to prevent back-water laps.

F. Install non-combustible cant strips at transitions where required.

G. Ensure correct membrane and flashing sequencing to achieve redundant, multi-ply, watertight flashings.

H. Roof Membrane Base Ply: Before installing flashings, install the roof membrane base ply in the horizontal field of the roof, and extend the base ply up to the top of the cant, where present, at roof terminations, transitions and penetrations.

I. Flashing Base Ply:
   1. Install the flashing base ply starting at the top leading edge of the vertical flashing substrate, down over the cant and onto the horizontal surface of the roof a minimum of 3 inches beyond the of base of the cant onto the roof. Cut the base ply at corners to form 3 inch side-laps. Install gussets to seal corner transitions.
   2. Install one or more flashing base ply(s) at all roof terminations, transitions and penetrations.

J. Roof Membrane Cap Sheet:
   1. Install the roof membrane cap sheet in the horizontal field of the roof over the flashing base ply up to the roof termination, transition or penetration, and up to the top of cants where present. Using a chalk line, mark a line on the membrane cap sheet a minimum of 4 inches from the base of the cant onto the roof.
   2. Where granules are present, embed the cap sheet granules using a torch and trowel or granule embedder to prepare the surface to receive the flashing cap sheet.

K. Flashing Cap Sheet:
   1. Install the flashing cap sheet starting at the top leading edge on the vertical substrate, over the cant and onto the roof surface 4 inches from the base of the cant onto the roof.
   2. Install the flashing cap sheet to ensure a minimum two (2) ply flashing system is present at all roof terminations, transitions and penetrations.

L. During the membrane and flashing installation, ensure all plies are completely adhered into place, with no bridging, voids or openings. Ensure bitumen or flashing cement bleed-out is present at all flashing side and end-laps.

M. Use a damp sponge float or damp rag to press-in the heat-welded flashing plies during installation.

N. Where sufficient bitumen bleed-out is not present, and for all self-adhered plies, apply specified gun-grade sealant or mastic to seal the membrane termination along all roof terminations, transitions and penetrations. These include gravel stop edge metal, pipe penetrations, along the top edge of curb and wall flashing, and all other flashing terminations where necessary to seal flashings watertight.

O. Fasten the top leading edge of the flashing 8 in on-centers with appropriate 1 in metal cap nails or other specified fasteners and plates. Seal fastener penetrations watertight using specified sealant or mastic.

P. Manufacturer’s liquid-applied, reinforced flashing systems may be installed where conditions are not favorable to install SBS modified bitumen flashings. Such conditions include irregular shapes penetrating roof surfaces (I-beams), confined areas and low flashing heights.

Manufacturer's liquid-applied, reinforced flashing systems are recommended in lieu of pitch pans and lead pipe flashings.

## 3.12 CURBS

A. Inspect and verify that all curbs are structurally sound and properly secure to deck, are level, a minimum 8-inches above finished roof, primed and ready to receive flashings.

B. Provide premanufactured curb extenders on all curbs of appropriate height to ensure minimum of 8-inches above finished roof.
   1. Secure curbs extenders to the existing curbs as per the manufacture's recommendations to meet designed wind loads.
   2. Prime all metal surfaces to receive roofing products.

C. Base ply membrane is to run horizontally tight up against the vertical curb or cant as required.
   1. When base ply membrane is to act as temporary seal for an extended length of time, carry membrane up vertical surface a minimum of 1-inch.

D. Gusset to be fabricated 4-inch wide by 8-inch long with a 2-inch triangular tip.
   1. Install gusset onto corner using a torch and firming pressing with a hot trowel.
   2. Set gusset with triangular tip on base ply and wrapping the corner a minimum of 2-inches on each side.

E. Install base ply flashing
   1. Pre-cut flashing to the total sum of curb height, thickness plus 1-inch for inside curb securement and 4-inch tie-in along base with width to match that of curb plus 3-inch overlap on each end.
   2. Secure along inside of curb with roofing nails.
   3. Cut back corner base selvage at 45-degree angle from vertical.

F. Install top ply membrane and flashing as specified
   1. Pre-cut flashing to the total sum of curb height plus 6-inches for base tie-in with width to match that of curb plus 3-inch overlap at each end.
   2. Set granules with heated trowel on all surfaces to receive flashing, or remove foil as applicable.
   3. Cut flashing flush with the top of curb and seal edges with heated trowel.
   4. Firmly press flashing into position using a damp sponge.

G. Provide metal counter flashing.

## 3.13 RETROFIT ROOF DRAIN INSERTS

A. Remove existing clamping ring, strainer dome and bolts for the existing roof drain assembly.

B. Clean existing drain leader of bitumen, dirt and debris.

C. Hydro jet clean the existing drain lines to ensure it is free of obstructions and flowing properly.

D. Inspect the existing drain pipe to verify there are no elbows that prevent the drain stem from being inserted into pipe.
   1. If elbow is present shorten drain stem as directed by drain manufacturer's written instructions.

E. Insert drain and stem assembly into the drain pipe until flange is flush with roof membrane

F. Where necessary alternately tighten seal compression ring screws until hand tight Do not over tighten screws

G. Secure drain flange to roof deck (3 fasteners minimum) that are evenly spaced around flange.

H. Install flashing membrane and roof assembly as per roof manufacturers requirements to ensure complete warranty

I. Install clamp ring and strainer being careful not to over tighten.

3.14 WALKWAYS

A. As shown on drawings, install an additional 36-inch wide by 4-foot long sheet of manufacturer's recommended walkway.

B. Layout sheets dry, adjusting spacing to be uniform, cut and trim pieces as required to fit conditions, direction changes and closing.
1. No piece shall be less than 24-inches.
2. Provide a 2-inch gap between sheets for drainage.

C. Align the sheets to be straight and true, using a straight edge or snap lines as required.

D. Prime all affected areas with manufacturer's recommended primer.

E. Follow specifications for torching top ply installation. (No granule embedment necessary).

3.15 WATER CUT-OFF

A. At the end of the day's work and when precipitation is eminent, a water cut-off shall be constructed at all open edges. Construct the cut-off with the same membrane and asphalt as that used for the roofing system. Cut-off must be able to withstand extended periods of wet weather. The water cut-off shall be completely removed prior to resuming the installation of the roofing system.

3.16 INSTALLATION QUALITY CONTROL

A. During the membrane and flashing installation, ensure all plies are completely adhered into place, with no bridging, voids or openings. Ensure bitumen or flashing cement bleed-out is present at all flashing side and end-laps.

B. Use a damp sponge float or damp rag to press-in the heat-welded flashing plies during installation.

C. Where sufficient bitumen bleed-out is not present, and for all self-adhered plies, apply specified gun-grade sealant or mastic to seal the membrane termination along all roof terminations, transitions and penetrations. These include gravel stop edge metal, pipe penetrations, along the top edge of curb and wall flashing, and all other flashing terminations where necessary to seal flashings watertight.

D. Repair or remove and replace components of roofing system where test or inspections indicate that they do not comply with specified requirements.

E. Final Roof Inspection: Arrange for roofing system manufacturer's Registered Roof Inspector to inspect roofing installation upon completion and submit report to Architect

F. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

## 3.17 CLEANING

A. Clean-up and remove daily from the site all wrappings, empty containers, paper, loose particles and other debris from these operations.

B. Remove asphalt markings from finished surfaces.

C. Repair or replace defaced or disfigured finishes caused by work of this section.

## 3.18 PROTECTION

A. Provide traffic ways, erect barriers, fences guards, rails, enclosures, chutes and the like to protect personnel, roofs, structures, vehicles, and utilities.

END OF SECTION 07 5226