

**ADDENDUM NUMBER ONE**

for

**FOUNDERS PARK PLAYER'S LOUNGE RENOVATION AND MEDIA ROOM ADDITION  
UNIVERSITY PROJECT NO. H27-Z285  
UNIVERSITY OF SOUTH CAROLINA  
COLUMBIA, SOUTH CAROLINA**

**DATE OF ISSUE: October 21, 2016**

TO: ALL BIDDERS OF RECORD

This Addendum is issued pursuant to the Conditions of the Contract and is hereby made part of the Contract Documents. The addendum serves to clarify, revise, and supersede information in the Project Manual, the Drawings, and previously issued Addenda. The Bidder shall acknowledge receipt of this Addendum in the appropriate space on the Bid Form. Failure to do so may subject the Bidder to disqualification. A list of attachments, if any, is part of this document.

**BIDDER SHALL ACKNOWLEDGE RECEIPT OF ADDENDUM IN THE SPACE PROVIDED ON THE BID FORM. FAILURE TO DO SO MAY CONSTITUTE AN INFORMALITY IN THE BID.**

**This addendum consists of 3 pages plus the following attachments:**

October 13, 2016 Pre-Bid sign in sheet.  
Section 075216, Styrene-Butadiene-Styrene (SBS) Modified Bituminous Membrane Roofing.  
Section 10530, Cantilevered Aluminum Entrance Canopy.

**A. GENERAL:**

**Item No.      Description**

1. See the attached list of attendees from October 13, 2016, Pre-Bid meeting.
2. Notice to Bidders: The existing concourse concrete slab on the upper level is 5.5-inches total thickness over 2-inches metal floor deck. Contractor use of construction equipment on the upper level concourse slab other than a small man-lift shall be subject to review/approval by the Structural Engineer of Record for this project. The main lower level concourse is a concrete slab on grade and the Contractor shall assume that it is a minimum of 4-inches thick. The Contractor shall provide plywood protection over the slab as required should they make use of construction equipment in and around this area. Contractor use of construction equipment on the lower level concourse slab other than a small man-lift shall be subject to review/approval by the Structural Engineer of Record for this project.
3. Notice to Bidders: The general contractor shall protect the batting cage turf by putting down 4-mil black plastic sheeting and then covering the area with 3/4-inch plywood before doing any work or running lifts in this area.

**B. CHANGES TO TECHNICAL SPECIFICATIONS AND DRAWINGS:**

**SPECIFICATIONS**

**Item No.      Description**

1. Revision: Reference Section 075423, Thermoplastic Polyolefin (TPO) Roofing. Delete this Section in its

- entirety.
2. Revision: Reference Section 075216, Styrene-Butadiene-Styrene (SBS) Modified Bituminous Membrane Roofing. Add this Section to the Project Manual. A copy of this Section is attached to this Addendum.
  3. Revision: Reference Section 10530, Cantilevered Aluminum Entrance Canopy. Add this Section to the Project Manual. A copy of this Section is attached to this Addendum.
  4. Revision: Reference Section 122413, Roller Window Shades. At paragraph 2.1.B, add the following: "6. Springs Window Fashions, SWF contract."

**DRAWINGS**

**Item No.      Description**

1. Revision: Reference Drawing E0.1, Electrical Notes & Legends. Add the following as prior approvals to the fixture manufacturers listed in the Lighting Fixture Schedule:

**PRIOR APPROVALS**

LIGHTING -

<u>Type</u>	<u>Manufacturer</u>	<u>Model Number</u>
AA/AAE	PRECISION ARCH LTG NULITE MARK LIGHTING	MLR2-HO-K30-LENGTH-CEILINGMOUNTING- LOH-277-DIM (AAE WITH GTD) RF2-09L30-UNV-D-1C (1B) -FRF-WH-XX SL2L LOP LENGTH FLP FL 80CRI 30K 600LMF MIN1 277 (EMG) ZT
BB	INTENSE LIGHTING PRIMA JUNO LIGHTING	MXTG2-RTRD300-SN-SF-L1-30-50/ MXG2DRTR-NC-L1-D10-27-I200 8721H-RD-WH-UV-308-N IC412L 830 F EZ1
CC/CCE	H.E. WILLIAMS COLUMBIA FOCAL POINT	PT-24-L58-830-RA-EQCLIPS-(L38)- DFK-2448W-DIM-277 (CCE WITH GTD) LTR324-30LWG-RFA-EDU-(ELL14) FL UL 24 PS 4000L 30K 1C UNV LD1 G WH (GTD)
DD	PINNACLE ARCH LTG NULITE MARK LIGHTING	EX1-WHE-30HO-2-WA-277-1D-S RW2-4E-06-L30-UNV-D-1C-FRF-XX-2 (INV.) S2LWI 2FT 2N30DC EZB 277 SLV
GGE	H.E. WILLIAMS LITHONIA ECLIPSE	VWMV-L17/840-TL-BLK-SDGL-DIM-277 WSTM LED 2A 40K 277 DBLXD MA-A-FT-LED20W-EBU-4K-BZ-EM
KK	PATHWAY CON-TECH FOCAL POINT	I 4VFLX-2000-3K-E2-D8/4VLED-SCLPF R4NC33012D/C4322M-CLR FLC4D RO 1500L 277 L11 T LC4 RD 1500L

30K DN CD WP

MM/MME	LUMENOPTIX	LUZ-22-32-EA8-35K-DU1 (MME WITH GTD-20A) – (ADD FINIALS)
	BEGHELLI USA	PLX2WT30120-277V (-EM) (ADD FINIALS)
	AXIS LIGHTING	SKSLED 22 B4 3200 80 30 GL FL 277 D 1 MTG (GTD) (ADD LARGER FINIALS)
	PEERLESS	MN9 2X2 G 80CRI 30K 3800LM ZT 277V C041 (GTD) (ADD LARGER FINIALS)
XX	EMERGI-LITE	TA-PE-1-RM
	LIGHTALARMS	SLEDNARM
	LITHONIA	LRP 1 RMR 120/277

**END OF ADDENDUM**

**University of South Carolina**  
**Pre Bid Sign In Sheet**  
 Columbia, South Carolina

**Project Name:** Founders Park Player's Lounge Renovation and Media Room Addition  
**Project Number:** H27-Z285  
**Pre Bid Date & Time:** October 13, 2016, 2:00 PM

SWMBE?	Name	Company Name	Address	Phone #	Email
Yes No	Juaquana Brookins	USC	743 Greene St, Columbia SC	803.777.3596	jbrookin@fmc.sc.edu
Yes <input checked="" type="radio"/> No	DEAN WILSON	HOOD CONSTRUCTION	1050 SHOP ROAD SUITE A COLUMBIA, SC 29201	765-2946 <del>803-233-8662</del>	DEANWILSON@HOODCONSTRUCTION.COM
Yes No	Elliott Ford	NATIONAL RECOVERY AND WRECKING LLC	3325 WASHBURN AVE STE. 205 CHARLOTTE NC	980 207 3617	AndreC@nrwdemo.com elliottf@nrwdemo.com
Yes No	DAW HURT	DANS HEATING & AIR LLC.	376 DOOLY WAY LEXINGTON, SC.	803-520-7575	DANSHEATING_AIR@ MSN.COM
Yes No	Joel Randolph	Randolph and Son Builders	1010 WILSON RD Pineville, NC 28134	704-588- 7116	Joel@randolphbuilders.com
Yes <input checked="" type="radio"/> No	GREG HUGHES	Contract Construction, Inc.	1125 Bickley Road Iramo, SC 29063	803-781-7058	ghughes@contractconstruction.net quotes@contractconstruction.net
Yes <input checked="" type="radio"/> No	Wade Bozeman	Gillam & Associates	1652 Columbia Hwy Aiken, SC 29801	803-643-8170	wade@gillamandassociates.com
<input checked="" type="radio"/> Yes No	LAW POWERS	PYRAMID CONTRACTING	1108-A LYKE LANE IRMO, SC 29063	803-732-2050	DAVE@PYRAMIDCONTRACTING.COM BOBBY@PYRAMIDCONTRACTING.COM
Yes No	Jeff Davis	ATHLETICS	1304 Haywood ST. COLUMBIA, SC 29208	803-777-0459	jeffd@mailbox.sc.edu

\*\*\*\*By signing this sheet you agree to receive information electronically.

**University of South Carolina  
Pre Bid Sign In Sheet  
Columbia, South Carolina**

**Project Name:** Founders Park Player's Lounge Renovation and Media Room Addition  
**Project Number:** H27-Z285  
**Pre Bid Date & Time:** October 13, 2016, 2:00 PM

SWMBE?	Name	Company Name	Address	Phone #	Email
Yes No	Troy Murphy	W.T. Murphy	P.O. Box 4971 West Columbia, SC	803-307-1169	wtmconstruction@att.net
Yes No	JASON PRUSE	HAMMER CONSTRUCTION	785 HAMMOND CREEK LANE COLUMBIA, SC	803-783-7033	JASON@HAMMERLLC.COM
Yes No	EVERETT CASHION	CASHION ELECTRICIANS, INC.	P.O. Box 3818 COLUMBIA, S.C. 29230	803-252-4016	ECASHION@BELLSOUTH.NET
Yes No	Rando Motley	MAR Construction	141 Rider Chase Lexington, SC 29071	803-556-3431	random@marconstruction.com
Yes No	Rob Sprankle	Stuyck Company	1851 Shop Rd Columbia SC 29204	803 376 8964	Alyssa@Stuyckcompany.com
Yes No	Colton Hendrix	MSI Construction	745 Greenwood South Columbia SC 29211	803-796-3324	TKtz@msiconst.com
Yes No	Taneus Taylor	Taylor made catering	879 Dicey Creek W Columbia SC	803-201-5767	Taneusdevelopment@gmail.com
Yes No	Jeremy Webb	Granite City Steel	221 Long Ave Elberton, GA	803 944 7211	jwebb@granitecitysteelga.com
Yes No	Susan Burke	Exterior Building Services	2205 Clements Ferry Rd. Charleston, SC 29405	843-471-7156	jay@extbuildingservices.com

\*\*\*\*By signing this sheet you agree to receive information electronically.

SECTION 075216- STYRENE-BUTADIENE-STYRENE (SBS) MODIFIED BITUMINOUS MEMBRANE ROOFING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
  - 1. SBS-modified bituminous membrane roofing.
  - 2. Roof insulation.
- B. Related Sections include the following:
  - 1. Section 076200 "Sheet Metal Flashing and Trim" for metal roof flashings and counterflashings.

1.3 DEFINITIONS

- A. Roofing Terminology: Refer to ASTM D 1079 and glossary of NRCA's "The NRCA Roofing and Waterproofing Manual" for definition of terms related to roofing work in this Section.

1.4 PERFORMANCE REQUIREMENTS

- A. General: Provide installed roofing membrane and base flashings that remain watertight; do not permit the passage of water; and resist specified uplift pressures, thermally induced movement, and exposure to weather without failure.
- B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by roofing manufacturer based on testing and field experience.
- C. Roofing System Design: Provide membrane roofing system that is identical to systems that have been successfully tested by a qualified testing and inspecting agency to resist uplift pressure calculated according to ASCE/SEI 7 and meeting requirements of design criteria indicated on the drawings and per IBC 2015.
  - 1. Corner Uplift Pressure: As indicated on the Drawings.
  - 2. Perimeter Uplift Pressure: As indicated on the Drawings.
  - 3. Field-of-Roof Uplift Pressure: As indicated on the Drawings.

1.5 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: For roofing system. Include plans, elevations, sections, details, and attachments to other Work.
  - 1. Base flashings, cants, and membrane terminations.
  - 2. Tapered insulation, including slopes.
  - 3. Crickets, saddles, and tapered edge strips, including slopes.
  - 4. Insulation fastening patterns.
- C. Installer Certificates: Signed by roofing system manufacturer certifying that Installer is approved, authorized, or licensed by manufacturer to install roofing system.
- D. Manufacturer Certificates: Signed by roofing manufacturer certifying that roofing system complies with requirements specified in "Performance Requirements" Article.
  - 1. Submit evidence of meeting performance requirements.
- E. Qualification Data: For Installer and manufacturer.
- F. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for components of roofing system.
- G. Maintenance Data: For roofing system to include in maintenance manuals.
- H. Warranties: Special warranties specified in this Section.
- I. Inspection Report: Copy of roofing system manufacturer's inspection report of completed roofing installation.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's warranty.
- B. Source Limitations: Obtain components for roofing system from or approved by roofing system manufacturer.
- C. Preinstallation Conference: Conduct conference at Project site. Comply with requirements in Division 01 Section "Project Management and Coordination." Review methods and procedures related to roofing system including, but not limited to, the following:
  - 1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, and installers whose work interfaces with or affects roofing including installers of roof accessories and roof-mounted equipment.

2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
3. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
4. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
5. Review structural loading limitations of roof deck during and after roofing.
6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
7. Review governing regulations.
8. Review temporary protection requirements for roofing system during and after installation.
9. Review roof observation and repair procedures after roofing installation.

#### 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, and directions for storage.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.
  1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
- D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

#### 1.8 PROJECT CONDITIONS

- A. 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.

#### 1.9 WARRANTY

- A. Special Warranty: Manufacturer's standard form, without monetary limitation, in which manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within specified warranty period. Failure includes roof leaks.
  1. Special warranty includes roofing membrane, base flashings, roofing membrane accessories, roof insulation, fasteners, walkway products and other components of roofing system.



2. Warranty Period: 20 years from date of Substantial Completion.
- B. Special Project Warranty: Submit roofing Installer's warranty, on warranty form at end of this Section, signed by Installer, covering Work of this Section, including all components of roofing system such as roofing membrane, base flashing, roof insulation, fasteners, cover boards, substrate boards, and walkway products, for the following warranty period:
  1. Warranty Period: Two years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  1. SBS-Modified Bituminous Membrane Roofing:
    - a. GAF Materials Corporation.
    - b. Garland Co., Inc. (The).
    - c. Johns Manville International, Inc.
    - d. Soprema.

### 2.2 SBS-MODIFIED ASPHALT-SHEET MATERIALS

- A. Roofing Membrane Sheet: ASTM D 6163, Grade S, Type I or II, glass-fiber-reinforced, SBS-modified asphalt sheet; smooth surfaced; suitable for application method specified.
- B. Roofing Membrane Cap Sheet: ASTM D 6163, Grade G, Type I or II, glass-fiber-reinforced, SBS-modified asphalt sheet; granular surfaced; suitable for application method specified, and as follows:
  1. Granule Color: White.

### 2.3 BASE-SHEET MATERIALS

- A. Base Sheet: ASTM D 2178, Type IV, asphalt-impregnated, glass-fiber felt.

### 2.4 BASE FLASHING SHEET MATERIALS

- A. Backer Sheet: ASTM D 6163, Grade S, Type I or II, glass-fiber-reinforced, SBS-modified asphalt sheet; smooth surfaced; suitable for application method specified.
- B. Flashing Sheet: ASTM D 6163, Grade G, Type I or II, glass-fiber-reinforced, SBS-modified asphalt sheet; granular surfaced; suitable for application method specified, and as follows:
  1. Granule Color: White.

- C. Glass-Fiber Fabric: Woven glass-fiber cloth, treated with asphalt, complying with ASTM D 1668, Type I.

## 2.5 AUXILIARY ROOFING MEMBRANE MATERIALS

- A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with roofing membrane.
1. Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.
  2. Adhesives and sealants that are not on the exterior side of weather barrier shall comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
    - a. Plastic Foam Adhesives: 50 g/L.
    - b. Gypsum Board and Panel Adhesives: 50 g/L.
    - c. Multipurpose Construction Adhesives: 70 g/L.
    - d. Fiberglass Adhesives: 80 g/L.
    - e. Contact Adhesive: 80 g/L.
    - f. Other Adhesives: 250 g/L.
    - g. Nonmembrane Roof Sealants: 300 g/L.
    - h. Sealant Primers for Nonporous Substrates: 250 g/L.
    - i. Sealant Primers for Porous Substrates: 775 g/L.
- B. Asphalt Primer: ASTM D 41.
- C. Roofing Asphalt: ASTM D 312, Type III.
- D. Fasteners: Factory-coated, corrosion-resistant, steel fasteners and metal or plastic plates designed for fastening roofing membrane components to substrate, tested by manufacturer for required pullout strength, and acceptable to roofing system manufacturer.
- E. Metal Flashing Sheet: Metal flashing sheet is specified in Division 07 Section "Sheet Metal Flashing and Trim."
- F. Roofing Granules: Ceramic-coated roofing granules, No. 11 screen size with 100 percent passing **No. 8 (2.36-mm)** sieve and 98 percent of mass retained on **No. 40 (0.425-mm)** sieve, color to match roofing membrane.
- G. Miscellaneous Accessories: Provide miscellaneous accessories recommended by roofing system manufacturer.

## 2.6 ROOF INSULATION

- A. General: Provide preformed roof insulation boards that comply with requirements and referenced standards, selected from manufacturer's standard sizes and of thicknesses indicated.
- B. Polyisocyanurate Board Insulation: ASTM C 1289, Type II, Class 1, Grade 2, felt or glass-fiber mat facer on both major surfaces.

1. Manufacturers:

- a. Atlas Roofing Corporation; Basis of Design: ACFoam-IV or approved equivalent.
- b. Apache Products Company.
- c. GAF Materials Corporation.
- d. Johns Manville International, Inc.
- e. RMAX.

2. Base Thickness: 4 inches minimum; R-value for 4 inches = R22.3 minimum.

3. Tapered Insulation (installed on top of base insulation thickness): Provide factory-tapered insulation boards fabricated to slope of 1/4 inch per 12 inches and 1/2 inch per 12 inches as indicated on Drawings.

- C. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated.

2.7 INSULATION ACCESSORIES

- A. General: Roof insulation accessories recommended by insulation manufacturer for intended use and compatible with membrane roofing.
- B. Fasteners: Factory-coated, corrosion-resistant, steel fasteners and metal or plastic plates designed for fastening roof insulation to substrate, and acceptable to roofing system manufacturer.
- C. Insulation Cant Strips: ASTM C 728, perlite insulation board.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of roofing system:
  1. Verify that roof openings and penetrations are in place and set and braced and that roof drains are securely clamped in place.
  2. Verify that surface plane flatness and fastening of steel roof deck complies with requirements in Division 05 Section "Steel Decking."
  3. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.

- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.

### 3.3 INSULATION INSTALLATION

- A. Comply with roofing system manufacturer's written instructions for installing roof insulation.
- B. 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.
- C. Install tapered insulation under area of roofing to conform to slopes indicated.
- D. Install insulation with long joints of insulation in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding **1/4 inch (6 mm)** with insulation.
  - 1. Cut and fit insulation within **1/4 inch (6 mm)** of nailers, projections, and penetrations.
- E. Install one or more layers of insulation under area of roofing to achieve required thickness. Where overall insulation thickness is **2 inches (50 mm)** or greater, install 2 or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of **6 inches (150 mm)** in each direction.
- F. Trim surface of insulation where necessary at roof drains so completed surface is flush and does not restrict flow of water.
- G. Mechanically Fastened and Adhered Insulation: Install each layer of insulation and secure first layer of insulation to deck using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to deck type.
  - 1. Fasten first layer of insulation to resist uplift pressure at corners, perimeter, and field of roof in accordance with specified uplift requirements.
  - 2. Set each subsequent layer of insulation in a uniform coverage of full-spread insulation adhesive, firmly pressing and maintaining insulation in place.

### 3.4 ROOFING MEMBRANE INSTALLATION, GENERAL

- A. Install roofing membrane system according to roofing system manufacturer's written instructions and applicable recommendations of ARMA/NRCA's "Quality Control Guidelines for the Application of Polymer Modified Bitumen Roofing."
  - 1. Deck Type: I (insulated).
  - 2. Adhering Method: L (cold-applied adhesive).
  - 3. Base Sheet: One.
  - 4. Number of SBS-Modified Asphalt Sheets: Two.

5. Surfacing Type: M (mineral-granule-surfaced top sheet).
- B. Start installation of roofing membrane in presence of roofing system manufacturer's technical personnel.
- C. Cooperate with testing and inspecting agencies engaged or required to perform services for installing roofing system.
- D. 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 forecast.
  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 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.
- E. Substrate-Joint Penetrations: Prevent roofing cement from penetrating substrate joints, entering building, or damaging roofing system components or adjacent building construction.

### 3.5 BASE-SHEET INSTALLATION

- A. Install lapped base sheet course, extending sheet over and terminating beyond cants. Attach base sheet as follows:
  1. Adhere to substrate in a uniform coating of cold-applied adhesive.

### 3.6 SBS-MODIFIED BITUMINOUS MEMBRANE INSTALLATION

- A. Install modified bituminous roofing membrane sheet and cap sheet according to roofing manufacturer's written instructions, starting at low point of roofing system. Extend roofing membrane sheets over and terminate beyond cants, installing as follows:
  1. Adhere to substrate in cold-applied adhesive.
  2. Unroll roofing membrane sheets and allow them to relax for minimum time period required by manufacturer.
- B. Laps: Accurately align roofing membrane sheets, without stretching, and maintain uniform side and end laps. Stagger end laps. Completely bond and seal laps, leaving no voids.
  1. Repair tears and voids in laps and lapped seams not completely sealed.
- C. Install roofing membrane sheets so side and end laps shed water.

### 3.7 FLASHING AND STRIPPING INSTALLATION

- A. Install base flashing over cant strips and other sloping and vertical surfaces, at roof edges, and at penetrations through roof, and secure to substrates according to roofing system manufacturer's written instructions and as follows:
  - 1. Backer Sheet Application: Adhere backer sheet to substrate in cold-applied adhesive.
  - 2. Flashing Sheet Application: Adhere flashing sheet to substrate in cold-applied adhesive at rate required by roofing system manufacturer.
- B. Extend base flashing up walls or parapets a minimum of **8 inches (200 mm)** above roofing membrane and **4 inches (100 mm)** onto field of roofing membrane.
- C. Mechanically fasten top of base flashing securely at terminations and perimeter of roofing.
- D. Install roofing membrane cap-sheet stripping where metal flanges and edgings are set on membrane roofing according to roofing system manufacturer's written instructions.
- E. Roof Drains: Set **30-by-30-inch (760-by-760-mm)** metal flashing in bed of asphalt roofing cement on completed roofing membrane. Cover metal flashing with roofing membrane cap-sheet stripping and extend a minimum of **6 inches (150 mm)** beyond edge of metal flashing onto field of roofing membrane. Clamp roofing membrane, metal flashing, and stripping into roof-drain clamping ring.
  - 1. Install stripping according to roofing system manufacturer's written instructions.

### 3.8 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to perform roof tests and inspections and to prepare test reports.
- B. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion and submit report to Architect within 14 days of inspection.
  - 1. Notify Architect or Owner 48 hours in advance of date and time of inspection.
- C. Repair or remove and replace components of roofing system where test results or inspections indicate that they do not comply with specified requirements.
- D. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

### 3.9 PROTECTING AND CLEANING

- A. Protect roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.

- B. Protect roofing system from damage due to dirt and foreign materials, and prevent accumulation of construction debris from other trades. Keep roofing system clean by removing all construction materials from the roof. Prevent roofing system from being stained by removing all dirt and debris from roof as soon as possible. Repair or reinstall all stained roofing system materials to a condition free of damage and stains.
- C. Correct deficiencies in or remove roofing system that does not comply with requirements, repair substrates, and repair or reinstall roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- D. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

### 3.10 ROOFING INSTALLER'S WARRANTY

- A. WHEREAS <Insert name> of <Insert address>, herein called the "Roofing Installer," has performed roofing and associated work ("work" ) on the following project:
  - 1. Owner: <Insert name of Owner.>
  - 2. Address: <Insert address.>
  - 3. Building Name/Type: <Insert information.>
  - 4. Address: <Insert address.>
  - 5. Area of Work: <Insert information.>
  - 6. Acceptance Date: <Insert date.>
  - 7. Warranty Period: <Insert time.>
  - 8. Expiration Date: <Insert date.>
- B. AND WHEREAS Roofing Installer has contracted (either directly with Owner or indirectly as a subcontractor) to warrant said work against leaks and faulty or defective materials and workmanship for designated Warranty Period,
- C. NOW THEREFORE Roofing Installer hereby warrants, subject to terms and conditions herein set forth, that during Warranty Period he will, at his own cost and expense, make or cause to be made such repairs to or replacements of said work as are necessary to correct faulty and defective work and as are necessary to maintain said work in a watertight condition.
- D. This Warranty is made subject to the following terms and conditions:
  - 1. Specifically excluded from this Warranty are damages to work and other parts of the building, and to building contents, caused by:
    - a. lightning;
    - b. peak gust wind speed exceeding 90 mph (m/sec);
    - c. fire;
    - d. failure of roofing system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition;
    - e. faulty construction of parapet walls, copings, chimneys, skylights, vents, equipment supports, and other edge conditions and penetrations of the work;

- f. vapor condensation on bottom of roofing; and
  - g. activity on roofing by others, including construction contractors, maintenance personnel, other persons, and animals, whether authorized or unauthorized by Owner.
2. When work has been damaged by any of foregoing causes, Warranty shall be null and void until such damage has been repaired by Roofing Installer and until cost and expense thereof have been paid by Owner or by another responsible party so designated.
  3. Roofing Installer is responsible for damage to work covered by this Warranty but is not liable for consequential damages to building or building contents resulting from leaks or faults or defects of work.
  4. During Warranty Period, if Owner allows alteration of work by anyone other than Roofing Installer, including cutting, patching, and maintenance in connection with penetrations, attachment of other work, and positioning of anything on roof, this Warranty shall become null and void on date of said alterations, but only to the extent said alterations affect work covered by this Warranty. If Owner engages Roofing Installer to perform said alterations, Warranty shall not become null and void unless Roofing Installer, before starting said work, shall have notified Owner in writing, showing reasonable cause for claim, that said alterations would likely damage or deteriorate work, thereby reasonably justifying a limitation or termination of this Warranty.
  5. During Warranty Period, if original use of roof is changed and it becomes used for, but was not originally specified for, a promenade, work deck, spray-cooled surface, flooded basin, or other use or service more severe than originally specified, this Warranty shall become null and void on date of said change, but only to the extent said change affects work covered by this Warranty.
  6. Owner shall promptly notify Roofing Installer of observed, known, or suspected leaks, defects, or deterioration and shall afford reasonable opportunity for Roofing Installer to inspect work and to examine evidence of such leaks, defects, or deterioration.
  7. This Warranty is recognized to be the only warranty of Roofing Installer on said work and shall not operate to restrict or cut off Owner from other remedies and resources lawfully available to Owner in cases of roofing failure. Specifically, this Warranty shall not operate to relieve Roofing Installer of responsibility for performance of original work according to requirements of the Contract Documents, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.

E. IN WITNESS THEREOF, this instrument has been duly executed this <Insert day> day of <Insert month>, <Insert year>.

1. Authorized Signature: <Insert signature.>
2. Name: <Insert name.>
3. Title: <Insert title.>

END OF SECTION 075216



SECTION 105300- CANTILEVERED ALUMINUM ENTRANCE CANOPY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
  - 1. Cantilevered aluminum entrance canopy.
- B. Related Sections include the following:
  - 1. Section 076200 "Sheet Metal Flashing and Trim" for metal roof flashings and counterflashings.

1.3 PERFORMANCE REQUIREMENTS

- A. General: Provide installed aluminum canopy and flashings that remain watertight; do not permit the passage of water; and resist specified uplift pressures, thermally induced movement, and exposure to weather without failure.
- B. Material Compatibility: Provide aluminum canopy materials that are compatible with one another under conditions of service and application required, as demonstrated by aluminum canopy manufacturer based on testing and field experience.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: For complete cantilevered aluminum entrance canopy. Include plans, elevations, sections, details, and attachments to other Work.
  - 1. Overall canopy layout dimensions.
  - 2. Cut section details including elevation, bent layout dimensions, and connection details.
  - 3. Flashing details pertaining to aluminum canopy.
- C. Product Data: Submit manufacturer's product information, specification, and installation instructions for aluminum canopy.
- D. Samples: Submit color selection samples of actual coated aluminum material.

- E. Certification: Provide letter of compliance certifying that the proposed canopy design and layout meets or exceeds all applicable loadings, wind load, rain live load, dead load for the job location in accordance with IBC 2015 and ASCE 7-05.
- F. Installer Certificates: Signed by aluminum canopy system manufacturer certifying that Installer is approved, authorized, or licensed by manufacturer to install aluminum canopy system.
- G. Manufacturer Certificates: Signed by aluminum canopy manufacturer certifying that the aluminum canopy system complies with requirements specified in "Performance Requirements" Article.
  - 1. Submit evidence of meeting performance requirements.
- H. Qualification Data: For Installer and manufacturer.
- I. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for components of aluminum canopy system.
- J. Maintenance Data: For aluminum canopy system to include in maintenance manuals.
- K. Warranties: Special warranties specified in this Section.

#### 1.5 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by aluminum canopy system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's warranty.
- B. Source Limitations: Obtain components for aluminum canopy system from or approved by aluminum canopy system manufacturer.
- C. Preinstallation Conference: Conduct conference at Project site. Comply with requirements in Division 01 Section "Project Management and Coordination." Review methods and procedures related to aluminum canopy system including, but not limited to, the following:
  - 1. Meet with Owner, Architect, Aluminum Canopy Installer, and installers whose work interfaces with or affects aluminum canopy.
  - 2. Review methods and procedures related to aluminum canopy installation, including manufacturer's written instructions.
  - 3. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.

#### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver aluminum canopy materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, and directions for storage.

- B. Protect aluminum canopy materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with aluminum canopy manufacturer's written instructions for handling, storing, and protecting during installation.

#### 1.7 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit aluminum canopy system to be installed according to manufacturer's written instructions and warranty requirements.

#### 1.8 WARRANTY

- A. Warranty: Manufacturer's standard form, without monetary limitation, in which manufacturer agrees to repair or replace components of aluminum canopy system that fail in materials or workmanship within specified warranty period. Failure includes leaks.
  - 1. Warranty includes aluminum canopy, flashings, aluminum canopy accessories, fasteners and other components of aluminum canopy system.
  - 2. Warranty Period: One year from date of Substantial Completion.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. Cantilevered Aluminum Entrance Canopy:
    - a. Mapes Architectural Canopies. (Flat Soffit Super Lumideck -Basis of Design).
    - b. Mitchell Metals.
    - c. MASA Architectural Canopies.

#### 2.2 MATERIALS

- A. Decking shall be 3-inch extruded flat soffit 0.078-inch decking.
- B. Fascia shall be standard 8-inch extruded "J" style (minimum 0.125-inch aluminum).
- C. Decking and fascia shall be extruded aluminum, alloy 6063-T6.
- D. Intermediate framing members shall be extruded aluminum, alloy 6063-T6.
- E. Cantilever supported brackets shall be standard finish.

- F. Scupper shall be 0.032-inch aluminum.

### 2.3 FINISHES

- A. Finish type shall be 2-Coat Kynar Finish.
- B. Color: Color to be as selected by Architect from manufacturer's standard color chart.

### 2.4 AUXILIARY ALUMINUM CANOPY MATERIALS

- A. General: Auxiliary materials recommended by aluminum canopy system manufacturer for intended use and compatible with aluminum canopy.
- B. Fasteners: Attachment hardware and fasteners shall be painted to match canopy.
- C. Miscellaneous Accessories: Provide miscellaneous accessories recommended by aluminum canopy system manufacturer.

### 2.5 FABRICATION

- A. All connections shall be mechanically assembled utilizing 3/16-inch fasteners with a minimum shear stress of 350 lb. Prewelded or factory welded connections are not acceptable.
- B. Decking shall be designed with interlocking extruded aluminum members with mechanical fasteners field applied to provide structural integrity for the completed assembly.
- C. Concealed Drainage: Water shall drain from covered surfaces into integral fascia gutter and directed to the side scupper for side drainage.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Confirm that surrounding area is ready for the canopy installation.
- B. Installer shall confirm dimensions and elevations to be as shown on the Drawings and shop drawings.

### 3.2 INSTALLATION

- A. Erection shall be performed by an approved installer and scheduled after all concrete, masonry and roofing in the area is completed.

3.3 PROTECTING AND CLEANING

- A. All canopy surfaces exposed are to be cleaned after installation is complete.
- B. Surplus materials and debris shall be removed from the jobsite after installation is complete.
- C. Contractor shall ensure protection of installed aluminum canopies from other construction so that canopies are without damage at time of substantial completion of project.

END OF SECTION 105300