2017 PROPOSAL, CONTRACT, BOND AND SPECIFICATIONS FOR ALICIA ASHMAN LIBRARY - ROOF REPLACEMENT CONTRACT NO. 7884		
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CONTRACT NO. 7884		
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MUNIS NO. 17075		
IN		
MADISON, DANE COUNTY, WISCONSIN		
AWARDED BY THE COMMON COUNCIL		
MADISON, WISCONSIN ON		
OLTA ENIGINEEDING DIVIGIONI		
CITY ENGINEERING DIVISION 1600 EMIL STREET		

MADISON, WISCONSIN 53713

https://bidexpress.com/login

ALICIA ASHMAN LIBRARY - ROOF REPLACEMENT CONTRACT NO. 7884

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The following exhibits are also part of these contract documents. See Special Provisions Section 104.2 – Intent and Coordination of Contract documents for more information. Exhibit A – Plans	

This Proposal, and Agreement have been prepared by:

CITY ENGINEERING DIVISION CITY OF MADISON MADISON, DANE COUNTY, WISCONSIN

Robert F. Phillips, P.E., City Engineer

RFP: ds

Exhibit B - Bid Submittal Checklist

SECTION A: ADVERTISEMENT FOR BIDS AND INSTRUCTIONS TO BIDDERS

REQUEST FOR BID FOR PUBLIC WORKS CONSTRUCTION CITY OF MADISON, WISCONSIN

A BEST VALUE CONTRACTING MUNICIPALITY

PROJECT NAME:	ALICIA ASHMAN LIBRARY - ROOF REPLACEMENT
CONTRACT NO.:	7884
BID BOND	5%
PRE-BID WALK THROUGH (8:00 A.M.)	JANUARY 25, 2017
PREQUALIFICATION APPLICATION DUE (1:00 P.M)	FEBRUARY 3, 2017
BID SUBMISSION (1:00 P.M.)	FEBRUARY 10, 2017
BID OPEN (1:30 P.M.)	FEBRUARY 10, 2017
PUBLISHED IN WSJ	JANUARY 20, 27 & FEBRUARY 3, 2017

PRE-BID WALK THROUGH: A Pre-Bid Walk through is scheduled for Wednesday, January 25, 2017 as follows:

1. Contractors shall meet at the Alicia Ashman project site from 8:00AM to 9:00 AM to have access to this site and review the roof area for the roof replacement.

City Construction Manager will be on hand for technical questions as needed.

<u>Questions and clarifications:</u> Any questions or requests for clarifications regarding plans and specifications shall be submitted directly to the City Project Manager. See the contract contact information at the end of Section D-Special Provisions. All questions shall be sent via email, reference Alicia Ashman Library – Roof Replacement documents in the subject line.

The deadline for receiving questions and clarifications shall be 12:00PM (noon) on Wednesday, February 1, 2017.

If needed the City of Madison shall publish any addendums no later than 4:00PM on Friday, February 3, 2017 to respond to any questions or clarifications.

PREQUALIFICATION APPLICATION: Forms are available at the same location or on our website, www.cityofmadison.com/business/pw/forms.cfm. If not currently prequalified in the categories listed in Section A, an amendment to your Prequalification will need to be submitted prior to the same due date. Postmark is not applicable.

<u>BIDS TO BE SUBMITTED</u> by hand to 1600 EMIL ST., MADISON, WI 53713 or online at www.bidexpress.com.

THE BID OPENING is at 1600 EMIL ST., MADISON, WI 53713.

STANDARD SPECIFICATIONS

The City of Madison's Standard Specifications for Public Works Construction - 2016 Edition, as supplemented and amended from time to time, forms a part of these contract documents as if attached hereto.

These standard specifications are available on the City of Madison Public Works website, www.citvofmadison.com/Business/PW/specs.cfm.

The Contractor shall review these Specifications prior to preparation of proposals for the work to be done under this contract, with specific attention to Article 102, "BIDDING REQUIREMENTS AND CONDITIONS" and Article 103, "AWARD AND EXECUTION OF THE CONTRACT." For the convenience of the bidder, below are highlights of three subsections of the specifications.

SECTION 102.1: PRE-QUALIFICATION OF BIDDERS

In accordance with Wisconsin State Statutes 66.0901 (2) and (3), all bidders must submit to the Board of Public Works proof of responsibility on forms furnished by the City. The City requires that all bidders be qualified on a biennial basis.

Bidders must present satisfactory evidence that they have been regularly engaged in the type of work specified herein and they are fully prepared with necessary capital, materials, machinery and supervisory personnel to conduct the work to be contracted for to the satisfaction of the City. All bidders must be prequalified by the Board of Public Works for the type of construction on which they are bidding prior to the opening of the bid.

In accordance with Section 39.02(9)(a)I. of the General Ordinances, all bidders shall submit in writing to the Affirmative Action Division Manager of the City of Madison, a Certificate of Compliance or an Affirmative Action Plan at the same time or prior to the submission of the proof of responsibility forms.

The bidder shall be disqualified if the bidder fails to or refuses to, prior to opening of the bid, submit a Certificate of compliance, Affirmative Action Plan or Affirmative Action Data Update, as applicable, as defined by Section 39.02 of the General Ordinances (entitled Affirmative Action) and as required by Section 102.11 of the Standard Specifications.

SECTION 102.4 PROPOSAL

No bid will be accepted that does not contain an adequate or reasonable price for each and every item named in the Schedule of Unit Prices.

A lump sum bid for the work in accordance with the plans and specifications is required. The lump sum bid must be the same as the total amounts bid for the various items and it shall be inserted in the space provided.

All papers bound with or attached to the proposal form are considered a part thereof and must not be detached or altered when the proposal is submitted. The plans, specifications and other documents designated in the proposal form will be considered a part of the proposal whether attached or not.

A proposal submitted by an individual shall be signed by the bidder or by a duly authorized agent. A proposal submitted by a partnership shall be signed by a member/partner or by a duly authorized agent thereof. A proposal submitted by a corporation shall be signed by an authorized officer or duly authorized registered agent of such corporation, and the proposal shall show the name of the State under the laws of which such corporation was chartered. The required signatures shall in all cases appear in the space provided thereof on the proposal.

Each proposal shall be placed, together with the proposal guaranty, in a sealed envelope, so marked as to indicate name of project, the contract number or option to which it applies, and the name and address of the Contractor or submitted electronically through Bid Express (www.bidexpress.com). Proposals will be accepted at the location, the time and the date designated in the advertisement. Proposals received after the time and date designated will be returned to the bidder unopened.

SECTION 102.5: BID DEPOSIT (PROPOSAL GUARANTY)

All bids, sealed or electronic, must be accompanied with a Bid Bond equal to at least 5% of the bid or a Certificate of Annual/Biennial Bid Bond or certified check, payable to the City Treasurer. Bid deposit of the

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successful bidders shall be returned within forty-eight (48) hours following execution of the contract and bond as required.

MINOR DISCREPENCIES

Bidder is responsible for submitting all forms necessary for the City to determine compliance with State and City bidding requirements. Nothwithstanding any language to the contrary contained herein, the City may exercise its discretion to allow bidders to correct or supplement submissions after bid opening, if the minor discrepancy, bid irregularity or omission is insignificant and not one related to price, quality, quantity, time of completion or performance of the contract.

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Bidders for this Contract(s) must be Pre-Qualified for at least one of the following type(s) of construction denoted by an \boxtimes

Build	<u>ding</u>	g Demolition			
101		Asbestos Removal	110		Building Demolition
120		House Mover			
Ctro	~ +	Litility and Sita Construction			
		<u>Utility and Site Construction</u>	005		Detaining Malle December Madelan Hair
201	_	Asphalt Paving			Retaining Walls, Precast Modular Units
205		Blasting			Retaining Walls, Reinforced Concrete
210		Boring/Pipe Jacking	275	Ш	Sanitary, Storm Sewer and Water Main
215		Concrete Paving			Construction
220		Con. Sidewalk/Curb & Gutter/Misc. Flat Work	276		Sawcutting
221		Concrete Bases and Other Concrete Work	280		Sewer Lateral Drain Cleaning/Internal TV Insp.
222		Concrete Removal	285		Sewer Lining
225		Dredging	290		Sewer Pipe Bursting
230	_	Fencing			Soil Borings
235		Fiber Optic Cable/Conduit Installation			Soil Nailing
240		Grading and Earthwork	305		
241		Horizontal Saw Cutting of Sidewalk			Street Construction
242	Ħ	Infrared Seamless Patching			Street Lighting
245		Landscaping, Maintenance			Tennis Court Resurfacing
246					
		Ecological Restoration			Traffic Signals
250		Landscaping, Site and Street			Traffic Signing & Marking
251		Parking Ramp Maintenance	332	브	Tree pruning/removal
252		Pavement Marking			Tree, pesticide treatment of
255		Pavement Sealcoating and Crack Sealing			Trucking
260		Petroleum Above/Below Ground Storage	340		Utility Transmission Lines including Natural Gas
		Tank Removal/Installation			Electrical & Communications
262		Playground Installer	399		Other
		<u>Construction</u>			
501		Bridge Construction and/or Repair			
.					
Build		g Construction			
401		Floor Covering (including carpet, ceramic tile installation,	437		Metals
		rubber, VCT	440		Painting and Wallcovering
402		Building Automation Systems	445		Plumbing
403		Concrete	450		Pump Repair
404	П	Doors and Windows			Pump Systems
405		Electrical - Power, Lighting & Communications			Roofing and Moisture Protection
410		Elevator - Lifts	464	Ħ	Tower Crane Operator
412	_	Fire Suppression			Solar Photovoltaic/Hot Water Systems
413		Furnishings - Furniture and Window Treatments			Soil/Groundwater Remediation
415					Warning Sirens
		General Building Construction, Equal or Less than \$250,000			
420		General Building Construction, \$250,000 to \$1,500,000			Water Supply Elevated Tanks
425		General Building Construction, Over \$1,500,000			Water Supply Wells
428		Glass and/or Glazing	480	Ш	Wood, Plastics & Composites - Structural &
429	=	Hazardous Material Removal			Architectural
430		Heating, Ventilating and Air Conditioning (HVAC)	499		Other
433		Insulation - Thermal			
435		Masonry/Tuck pointing			
		, , ,			
Stat	e o	f Wisconsin Certifications			
1	П	Class 5 Blaster - Blasting Operations and Activities 2500 feet	and cl	ose	r to inhabited buildings for quarries, open pits and
	_	road cuts.			3 · · · · · · · · · · · · · · · · · · ·
2	П	Class 6 Blaster - Blasting Operations and Activities 2500 feet	and cl	റടേ	r to inhabited buildings for trenches, site
_	ш	excavations, basements, underwater demolition, underground			
3	\Box	Class 7 Blaster - Blasting Operations and Activities for structure			
3	ш				er than 15 lit fleight, bridges, towers, and any or
		the objects or purposes listed as "Class 5 Blaster or Class 6 B			(Augusta and a and Ougusta Ougustic and County)
4	님	Petroleum Above/Below Ground Storage Tank Removal and I			
5	Ш	Hazardous Material Removal (Contractor to be certified for as			
		of Health Services, Asbestos and Lead Section (A&LS).) See	the fol	low	ring link for application:
		www.dhs.wisconsin.gov/Asbestos/Cert. State of Wisconsin Pe	rform	anc	e of Asbestos Abatement Certificate must be
		attached.			
6		Certification number as a Certified Arborist or Certified Tree W	orker/	as	administered by the International Society of
		Arboriculture			•
7		Pesticide application (Certification for Commercial Applicator F	or Hi	re w	vith the certification in the category of turf and
		landscape (3.0) and possess a current license issued by the D			,
8	П	State of Wisconsin Master Plumbers License.		,	

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SECTION B: PROPOSAL

Please refer to the Bid Express Website at https://bidexpress.com look up contract number and go to Section B: Proposal Page

You can access all City of Madison bid solicitations for FREE at www.bidexpress.com

Click on the "Register for Free" button and follow the instructions to register your company and yourself. You will be asked for a payment subscription preference, since you may wish to bid online someday. Simply choose the method to pay on a 'per bid' basis. This requires no payment until / unless you actually bid online. You can also choose the monthly subscription plan at this time. You will, however, be asked to provide payment information. Remember, you can change your preference at anytime. You will then be able to complete your free registration and have full access to the site. Your free access does not require completion of the 'Digital ID' process, so you will have instant access for viewing and downloading. To be prepared in case you ever do wish to bid online, you may wish to establish your digital ID also, since you cannot bid without a Digital ID.

If you have any problems with the free registration process, you can call the bidexpress help team, toll free at 1-888-352-2439 (option 1, option1).

SECTION C: SMALL BUSINESS ENTERPRISE

Instructions to Bidders City of Madison SBE Program Information

SBE NOT APPLICABLE

SECTION D: SPECIAL PROVISIONS

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It is the intent of these Special Provisions to set forth the final contractual intent as to the matter involved and shall prevail over the Standard Specifications and plans whenever in conflict therewith. In order that comparisons between the Special Provisions can be readily made, the numbering system for the Special Provisions is equivalent to that of the Specifications.

Whenever in these Specifications the term "Standard Specifications" appears, it shall be taken to refer to the City of Madison Standard Specifications for Public Works Construction and Supplements thereto.

SECTION 102.12: BEST VALUE CONTRACTING

This Contract shall be considered a Best Value Contract if the Contractor's bid is equal to or greater than \$59,000 for a single trade contract; or equal to or greater than \$288,000 for a multi-trade contract pursuant to MGO 33.07(7).

ARTICLE 103 AWARD AND EXECUTION OF THE CONTRACT

The Contractor shall execute signing of the contract completely prior to <u>March 9, 2017</u>. No exceptions or extensions to the above date will be permitted.

ARTICLE 104: SCOPE OF WORK

This contract is for the removal and disposal of the existing roofing materials and the installation of new roofing materials to obtain a 30 year warranty or the complete system with an average insulation value of R-30.

The scope of work includes the furnishing of all labor, materials, equipment, tools, and other services necessary to complete the work in accordance with the intent of this contract. The Contractor shall use properly functioning equipment capable of performing the tasks required. The Contractor shall furnish workers who perform quality work and who are experienced and knowledgeable in the work proposed.

In addition the Contractor shall include all costs of permits, disposal, equipment rental, and any other costs whatsoever which may be required for the removal of all hazardous materials in accordance with the intent of this contract.

SECTION 104.1 LANDS FOR WORK

All lands for work shall be located at 733 N. High Point Rd. The exterior project limits shall be any sufficient space as required for the safe and efficient removal of roofing materials as identified within this contract document. In no case shall the contractor be allowed to cross over any of the property lines, encroach on public sidewalks or obstruct the driveway and parking area.

SECTION 104.2 INTENT AND COORDINATION OF CONTRACT DOCUMENTS

The contract documents are complimentary of each other and consist of all of the following:

- The City Standard Specification, 2016 Edition
- These Special Provisions
- All Addendums to the bidding documents
- Any supplemental instructions, details, or specifications issued during the course of the contract.
- Exhibit A Overall Roof Plans

SECTION 105.6: CONTRACTORS RESPONSIBILITY FOR WORK

The Contractor shall not take advantage of any discrepancy in the plans or specifications. This shall include but not be limited to apparent errors, omissions, and interpretations involving codes, regulations, and standards.

Any Contractor who identifies such a discrepancy during the bidding process shall notify the Architect of the discrepancy prior to the "Questions, Clarifications & Requests for Alternates Deadline" as indicated in Section A of the bid documents.

Any Contractor who identifies such a discrepancy during the abatement process shall immediately notify the City Project manager in writing and request clarification on how to proceed.

If a conflict exists within the Specifications or exists within the Drawings, the Contractor shall furnish the item, system, or workmanship, which is of the highest quality, largest, largest quantity or most closely fits the City's intent.

SECTION 105.12: COOPERATION BY CONTRACTOR

The Contractor shall be responsible for coordinating the following events as needed:

- Pre-Installation Meetings
- Progress Meetings
- Other related construction milestones as needed

Whenever possible these events shall be planned and coordinated during the Bi-weekly Construction Progress meetings but in no case shall an event be scheduled with less than three (3) working days notice.

The contractor shall be responsible for coordinating these events with the following personnel:

- · City Construction Manager and other City Staff
- Sub-contractors as needed, this shall include any follow-on sub-contractor who may not be in the work flow but has a vested interest in access and installation.

Any corrections, relocations, or retesting required because the contractor did not properly coordinate the event with the required attendees shall be at the expense of the contractor.

SECTION 107.2 PROTECTION AND RESTORATION OF PROPERTY

The Contractor shall follow these general guidelines while performing work associated with this contract:

 <u>External Demolition</u> The Contractor shall be responsible for providing and installing materials of sufficient quality and strength to provide temporary security/weather tightness/animal resistance until such time as the permanent roofing materials have been installed and the building is water tight.

The Contractor shall be responsible for protecting all mature trees including limbs and braches during the removal of any external materials. This shall include the use of any equipment required to assist in proper removal of materials.

SECTION 107.4(i) INSURANCE FOR THE CONSTRUCTION OF BUILDINGS

The City will effect and maintain, Builder's Risk Insurance on a replacement cost basis in an amount equal to the estimated project cost. Coverage includes the building as well as materials stored on the site to be incorporated in the building, including form work in place, form lumber on site, temporary structures, equipment and supplies incidental to the construction of the building. The City's Builders Risk coverage is written on a per building basis and contains a \$25,000 per occurrence deductible. If a loss under the City's Builders Risk policy is caused by the negligence of the Contractor or its Subcontractor(s), the Contractor will be responsible for paying the City's \$25,000 deductible. The City Engineer has the authority to withhold such deductible from payments due to Contractor. In addition, City Engineer, in his/her sole authority, will determine whether the Contractor was negligent in causing

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the loss and therefore is responsible for the City's deductible.

The insured loss, if any, is to be adjusted with and payable to the City.

SECTION 109.7 TIME OF COMPLETION

Work shall begin only after the contract is completely executed and the start work letter is received.

The contract shall be **COMPLETED NO LATER THAN OCTOBER 27, 2017**. This shall include all minor punch list items, final Inspections and all final copies of contract deliverables being submitted to the appropriate agency.

POINTS OF CONTACT

The Construction Manager for City Engineering, Facility Management for this contract is:

Dave Schaller PH: (608) 243-5891

Email: dschaller@cityofmadison.com 210 Martin Luther King Jr Blvd

Room 115

Madison, WI 53703

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SECTION 07 01 50.19 - PREPARATION FOR RE-ROOFING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Removal of existing roofing system in preparation for a new roof membrane system.

1.2 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate with affected mechanical and electrical work associated with roof penetrations.
- B. Pre-installation Meeting: Convene one week before starting work of this section.
- C. Schedule work to coincide with commencement of installation of new roofing system.

1.3 FIELD CONDITIONS

A. Maintain continuous temporary protection prior to and during installation of new roofing system.

PART 3 EXECUTION

3.1 MATERIAL REMOVAL

- A. Remove all of the existing roof system down to the roof deck including all existing composition base flashings.
 - At penetrations, remove all existing flashings, including lead, asphalt, mastic, etc.
 - 2. At walls, curbs, and other vertical and sloped surfaces, metal counterflashings; remove mineral surfaced and coated flashings; remove excessive asphalt to provide a smooth, sound surface for new flashings.
- B. Remove insulation and fasteners, cant strips, blocking, and roof drains and accessories.
- C. Repair and patch existing steel deck surface to provide smooth working surface for new roof system.
- D. Dispose of all materials properly.

3.2 PROTECTION

- A. Provide temporary protective sheeting over uncovered deck surfaces.
- B. Turn sheeting up and over parapets and curbing. Retain sheeting in position with weights.
- C. Provide for surface drainage from sheeting to existing drainage facilities.

END OF SECTION

SECTION 07 53 23 - ETHYLENE-PROPYLENE-DIENE-MONOMER (EPDM) ROOFING PART

1.1 SUMMARY

A. Drawings and General Provisions of Contract, including General and Supplementary Conditions and Standard Specifications for Public Works Construction sections apply to work of this section.

B. Section Includes:

- 1. Adhered EPDM membrane roofing system.
 - a. Roofing manufacturer's requirements for the specified warranty.
 - b. Removal of entire existing roof membrane and flashings.
 - c. Removal of all existing insulation down to the deck.
 - d. Preparation of roofing substrates.
 - e. Wood nailers for roofing attachment per manufacturer's requirements.
 - f. Insulation.
 - g. Elastomeric membrane roofing.
 - h. Metal roof edging and copings.
 - i. Flashings.
 - j. Walkway pads
 - k. Other roofing-related items specified or indicated on the drawings or otherwise necessary to provide a complete weatherproof roofing system.
- C. Contractor shall be responsible for coordination with all trades to ensure that all equipment, equipment stands, supports and penetrations are identified, properly installed and flashed per the requirements of this Section.

1.2 PERFORMANCE REQUIREMENTS

A. Long Term Thermal Resistance, as defined by ASTM C1289-13e-1.

1.3 SUBMITTALS

- A. Provide membrane manufacturer's printed data sufficient to show that all components of roofing system, including insulation and fasteners, comply with the specified requirements and with the membrane manufacturer's requirements and recommendations for the system type specified; include data for each product used in conjunction with roofingmembrane.
- B. Shop Drawings: Roof membrane manufacturer's standard details customized for this project for all relevant conditions, including curb details, flashings, base tie-ins, roof edges, terminations, expansion joints, penetrations, and drains.

- C. For tapered insulation, provide project-specific layout and dimensions for each board and provide the overall R-Value/U-value actually achieved for each roof section.
- D. Installer Qualifications: Letter from manufacturer attesting that the roofing installer meets the specified qualifications.
- E. Pre-Installation Notice: Copy to show that manufacturer's required Pre Installation Notice (PIN) has been accepted and approved by the manufacturer.
- F. Copy of Warranty.
- G. Samples: For each product included in the roofing system.
- H. Maintenance data.
- I. LEED Submittals:
 - 1. N/A

1.4 QUALITY ASSURANCE

- A. The Prime Roofing Contractor shall be recognized by the manufacturer of the roof membrane system as an "approved" or "authorized" applicator. Within the past five (5) years, the contractor shall be able to document the successful completion of a minimum of three (3) projects of similar size and scope of the work specified in this section. Warranty shall be provided by the Prime Roofing Contractor under this contractor sname.
- B. Submittal: Copies as specified of manufacturer's current written documentation stating the Roofing Contractor is an "approved applicator" in good standing, for the work specified herein.
- C. Source Limitations: Obtain components including for membrane roofing system from same manufacturer as membrane roofing.
- D. Exterior Fire-Test Exposure: ASTM E 108, Class A; for application and roof slopes indicated, as determined by testing identical membrane roofing materials by a qualified testing agency. Materials shall be identified with appropriate markings of applicable testingagency.
- E. Pre-installation Roofing Conference: Conduct conference at Project site. Contractor shall discuss the proper installation of materials and requirements to achieve the warranty.
 - 1. Require attendance with all parties directly influencing the quality of roofing work or affected by the performance of roofing work.
 - 2. Above Conference shall occur a minimum of two weeks prior to startdate.
 - Post Roofing Conference: At final walk thru, provide inspection reports and documentation assuring the contractor has completed all items on the punch list.

1.5 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.

1.6 WARRANTY

- A. Provide written thirty (30) year guarantee warranting all roofing and flashing required under contract, to be watertight and free from defects in materials or workmanship for period of time, as stipulated in guarantee form.
- B. Roofing manufacturer shall perform a minimum of two roof system inspections during the term of this guarantee with final inspection performed within last 6-months of term. Submit written inspection reports to Owner prior to issuance of warranty.
- C. It is recommended that the roofing manufacturer take digital photos of the finished work for their files and future reference.
- D. Elastic Sheet Manufacturer's Warranty: Provide the elastic sheet manufacturer's NDL ("No-Dollar-Limit")/"Total System" warranty covering defects in workmanship, membrane and all associated roof system components supplied by the manufacturer for a period of thirty (30) years from the date of installation.
- E. Include the following information on all guarantee and warranty submittals: City of Madison, Alicia Ashman Library, roof areas, and total sq. ft. of all roof areas.
- F. Contractor shall include and provide all product(s), labor and installation methods necessary and as specified herein, including manufacturer requirements not found specified herein, as required by the approved manufacturer to obtain the specified warranty requested herein.
- G. New membrane, insulation, shop fabricated and/or manufacturer fabricated metal flashing, pre- molded and/or factory supplied associated roof system products, their fasteners and/or all products used for adhesive and/or adherence purposes and sealants shall be covered by the manufacturer NDL ("No-Dollar-Limit")/"Total System" warranty specified herein.
- H. Prefabricated metal flashing materials as specified in section 07 62 00 and herein or as required for a complete watertight system shall be covered in the manufacturer total system warranty specified.

PART 2 - PRODUCTS

2.1 MEMBRANE MATERIALS

A. EPDM Membrane Roofing: 90 mil RubberGard EPDM (Ethylene Propylene Diene Monomer) membrane manufactured and supplied by Carlisle SynTec Systems, or Firestone Building Products.

- B. Roofing and Flashing Membrane: RubberGard, cured synthetic single-ply membrane composed of ethylene propylene diene terpolymer (EPDM) with the following properties:
 - 1. Thickness: 0.090 inch (2.2 mm) for 30 Year Platinum Warranty.
 - 2. Nominal Thickness Tolerance: Plus/minus 10 percent.
 - 3. Sheet Width: Provide the widest available sheets to minimize field seaming.
 - 4. Acceptable Product: RubberGard EPDM Membrane by Firestone or Carlisle Syntec Corp 90 mil EPDM.
- C. Membrane Fasteners: Type and size as required by roof membrane manufacturer for roofing system and warranty to be provided; use only fasteners furnished by roof membrane manufacturer.
 - 1. Firestone HD Fastener.
 - 2. Carlisle HP-X Fastener.
- D. Flashing Membrane: Self-curing, non-reinforced membrane composed of nonvulcanized EPDM rubber, complying with ASTM D 4811 Type II, and with the following properties:
 - 1. Thickness: 0.055 inch.
 - 2. Acceptable Product: RubberGard EPDM FormFlash by Firestone.
 - 3. Self-Adhesive Flashing Membrane: Semi-cured 45 mil EPDM membrane laminated to 35 mil (0.9 mm) EPDM tape adhesive; QuickSeam Flashing by Firestone.
- E. Pre-Molded Pipe Flashings: EPDM, molded for quick adaptation to different sized pipes; Firestone EPDM Pipe Flashing.
- F. Self-Adhesive Lap Splice Tape: 35 mil EPDM-based, formulated for compatibility with EPDM membrane and high-solids primer; QuickSeam Splice Tape by Firestone or Carlisle equal.
- G. Splice Adhesive: Synthetic polymer-based, formulated for compatibility with EPDM membrane and metal surfaces; SA-1065 Splice Adhesive by Firestone Carlisle equal.
- H. Bonding Adhesive: Neoprene-based, formulated for compatibility with EPDM membrane and wide variety of substrate materials, including masonry, wood, and insulation facings; Bonding Adhesive BA-2004 by Firestone Carlisle equal.
- I. Adhesive Primer: Synthetic rubber based primer formulated for compatibility with EPDM membrane and tape adhesive, with VOC content less than 2.1 lb/gal (250 g/L); QuickPrime Plus LVOC by Firestone Carlisle equal.
- J. Seam Edge Treatment: EPDM rubber-based sealant, formulated for sealing exposed edges of membrane at seams; Lap Sealant HS by Firestone Carlisle equal.
- K. Pourable Sealer: Two-part polyurethane, two-color for reliable mixing; Pourable Sealer by Firestone Carlisle equal.
- L. Water Block Seal: Butyl rubber sealant for use between two surfaces, not exposed; Water Block Seal by Firestone Carlisle equal.
- M. Metal Plates and Strips Used for Fastening Membrane and Insulation: Steel with Galvalume coating; corrosion-resistance meeting FM 4470 criteria.

N. Termination Bars: Aluminum bars with integral caulk ledge; 1.3 inches wide by 0.10 inch thick; Firestone Termination Bar by Firestone Carlisle equal.

2.2 INSULATION

- 1. Polyisocyanurate: ASTM C1289, Type II, Class 1, Grade 2; 20 psi rigid board insulation with felt or fibrous mat facing on both sides. For adhered boards, maximum size = 48" x 96". Insulation to be attached using adhesive or asphalt may be no larger than 48 inches by 48 inches, nominal. Insulation to be attached using adhesive or asphalt may be no larger than 48 inches by 48 inches, nominal. Maximum Board Thickness: 3 inches; use as many layers as necessary; stagger joints in adjacent layers.
- 2. Ozone Depletion Potential: Zero; made without CFC or HCFC blowing agents.
- 3. Recycled Content: 19 percent post-consumer and 15 percent post-industrial, average.
- 4. Acceptable Product:
 - a. Firestone ISO 95+ GL
 - b. Carlisle HP ISO.
- B. Average R-Value: Provide insulation in thicknesses shown on the Drawings. The Average R-Value to be achieved by the roof system shall be no less than R-50.
- C. Insulation Fasteners: Type and size as required by roof membrane manufacturer for roofing system and warranty to be provided; use only fasteners furnished by roof membrane manufacturer.
- D. Adhesive for Insulation Attachment: Type as required by roof membrane manufacturer for roofing system and warranty to be provided; use only adhesives furnished by roof membrane manufacturer.
 - 1. Firestone ISO Stick or Twin Pack
 - 2. Carlisle Fast 100

2.3 AUXILIARY MEMBRANE ROOFING MATERIALS

- A. Gypsum-Based Cover Board: Non-combustible, water resistant gypsum core with embedded glass mat facers, complying with ASTM C1177.
 - 1. Acceptable Product: Georgia-Pacific DensDeck Prime Roof Guard.
- B. Wood Nailers: PS 20 dimension lumber, Structural Grade No. 2 or better Southern Pine, Douglas Fir; or PS 1, APA Exterior Grade plywood; pressure preservative treated.
 - 1. Width: 3-1/2 inches, nominal minimum or as wide as the nailing flange of the roof accessory to be attached to it.
 - 2. Thickness: Same as thickness of roof insulation.

C. Fasteners:

- 1. For Fastening Perimeter Securement Strip: Polymer coated screw and plate as recommended and supplied by the membrane manufacturer.
- 2. For Fastening Termination Bar to Concrete or Masonry: Zinc alloy expansion shield with hardened steel pin.

- D. Flexible Walkways: Factory-formed, nonporous, heavy-duty, solid-rubber, slip-resisting, surface-textured walkway pads, approximately 3/16 inch thick, and acceptable to membrane roofing system manufacturer.
- E. Other products, not specifically described, but required for a complete and proper installation of the work in this section shall be selected by the Contractor subject to the approval of the Architect/Engineer.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine the areas and conditions under which work in this section will be installed. Bring to the Architect's attention any conditions detrimental to the proper and timely completion of the work. Do not proceed until unsatisfactory conditions have been corrected.
- B. Commencement of work by Contractor shall constitute acknowledgement by Contractor that this specification can be satisfactorily executed, under the project conditions and with all necessary prerequisites for warranty acceptance by roofing membrane manufacturer. No modification of the Contract Sum will be made for failure to adequately examine the Contract Documents or the project conditions.
- C. Comply with the published recommendations and instructions of the roofing membrane manufacturer, at: Firestone, http://manual.fsbp.com or for Carlisle at: http://www.carlislesyntec.com.
- D. Approved tapered insulation drawing layouts shall be reviewed by the Contractor installing the work in this section prior to start of such work, and before ordering the materials, to assure that the tapered insulation layout will correspond with the exact location of roof drains and primary through-wall and/or roof edge drain scupper locations. Tapered insulation systems that are not installed such that they drain directly and positively to the roof drain shall be removed and installed correctly by the roofing Contractor at no additional cost to the project.

3.2 SUBSTRATE PREPARATION

- A. Plan work and take whatever action is necessary to prevent dirt and debris from entering the building during construction.
- B. All vertical surfaces to receive new flashing materials shall be thoroughly cleaned of existing adhesives, sealants, bituminous materials, etc.
- C. All vertical substrates to receive adhered membrane materials shall be sheathed with Gypsum- Based Cover Board.
- D. Verify that wood blocking, curbs and nailers are securely anchored and that roof openings and penetrations are in place and set and braced. Verify that roof drains are properly clamped into position.

- E. Pressure Treated Plywood and Lumber: These products shall not be specified or provided for use in roofing projects as a substrate material intended to receive mechanical fasteners used to secure metal roof panels, panel clips, metal coping, roof penetration curbs cap and Counterflashing, all other metal flashing, roofing insulation and membrane installations that are a part of the roof system.
- F. The manufacture shall approve of all mechanical fasteners used to secure all roof system components.
- G. Verify that the substrate is clean, dry and free from sharp projections and depressions and that all surfaces and site conditions are ready to receive newmaterials.

3.3 INSULATION INSTALLATION

- A. Coordinate installing membrane roofing system components so insulation is not exposed to precipitation or left exposed at the end of the workday.
- B. Comply with membrane roofing system and insulation manufacturer's written instructions for installing roof insulation.
- C. Install tapered insulation under area of roofing to conform to slopes indicated.
- D. Install insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 2.7 inches or greater, install two or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches in each direction.
- E. Mechanically Fastened Insulation: Install each layer of insulation and secure to deck using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to deck type.
 - 1. Fasten insulation to resist uplift pressure at corners, perimeter, and field of roof.
- F. Mechanically Fastened and Adhered Insulation: Install first layer of insulation to deck using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to deck type.
 - Fasten first layer of insulation to resist uplift pressure at corners, perimeter, and field of roof.
 - 2. Set each subsequent layer of insulation in insulation adhesive, firmly pressing and maintaining insulation in place.
- G. Contractor option: mechanically attach a base layer (first layer) and adhere all subsequent layers with specificed adhesives.

3.4 ADHERED MEMBRANE ROOFING INSTALLATION

A. Adhere membrane roofing over area to receive roofing according to membrane roofing system manufacturer's written instructions. Unroll membrane roofing and allow to relax before installing.

- B. Accurately align membrane roofing and maintain uniformside and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- C. In addition to adhering, mechanically fasten membrane roofing securely at terminations, penetrations, and perimeters.
- D. Adhesive Seam Installation: Clean both faces of splice areas, apply splicing cement, and firmly roll side and end laps of overlapping membrane roofing according to manufacturer's written instructions to ensure a watertight seam installation. Apply lap sealant and seal exposed edges of membrane roofing terminations.
- E. Use largest membrane panels practical to minimize field seams; where necessary, lap all seams in direction of flow.
- F. Unroll membrane over the insulation and position without stretching. Allow to relax approximately 30 minutes prior to seaming.
- G. Restrain membrane at the roof perimeter, at higher walls and around all curbed and other penetrations base flashing using mechanically fastened continuous perimeter securement strip/metal termination bar, per manufacturer's instructions.
- H. Prior to seaming, thoroughly clean membrane of excess dirt, dust, talc, etc. Scrub sheets with warm soapy water and rinse with clean water to insure clean surfaces.
- I. When using primers and adhesives, mix all materials by stirring proper lengths of time as recommended by the manufacturer. Consult manufacturer's literature for application techniques regarding use of rollers or brushes.
- J. All field seams shall be minimum 3". Seams may be made using either adhesives or tapes. After seaming, roll seams with a 2" wide steel roller, using positive pressure. ROLL PERPENDICULAR TO SEAM ONLY. All field seams to be stripped in using approved QuickSeam 5" Flashing per 30 year Platinum details, or Carlisle equivalent.
- K. Repair tears, voids, and lapped seams in roofing that does not comply with requirements.

3.5 BASE FLASHING INSTALLATION

- A. Install sheet flashings and preformed flashing accessories and adhere to substrates according to membrane roofing system manufacturer's written instructions.
- B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate and allow to partially dry. Do not apply to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.
- D. Clean splice areas, apply splicing cement, and firmly roll side and end laps of overlapping sheets to ensure a watertight seam installation. Apply lap sealant and seal exposed edges of sheet flashing terminations.
- E. Terminate and seal top of sheet flashings.

3.6 ACCESSORIES INSTALLATION

- A. Metal Accessories: Install metal edgings, gravel stops, and copings in locations indicated on the drawings, with horizontal leg of edge member over membrane and flashing over metal onto membrane.
 - 1. Follow roofing manufacturer's instructions.
 - 2. Remove protective plastic surface film immediately before installation.
 - 3. Install water block sealant under the membrane anchorageleg.
 - 4. Flash with manufacturer's recommended flashing sheet unless otherwise indicated.
 - 5. Where single application of flashing will not completely cover the metal flange, install additional piece of flashing to cover the metal edge.
 - 6. If the roof edge includes a gravel stop and sealant is not applied between the laps in the metal edging, install an additional piece of self-adhesive flashing membrane over the metal lap to the top of the gravel stop; apply seam edge treatment at the intersections of the two flashing sections.

B. PENETRATIONS

- 1. Flashing at Penetrations: Flash all penetrations passing through the membrane; make flashing seals directly to the penetration.
- 2. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.
- 3. Pipes, Round Supports, and Similar Items: Flash with specified pre-molded pipe flashings wherever practical; otherwise use specified self-curing elastomeric flashing.
- 4. Pipe Clusters and Unusual Shaped Penetrations: Provide penetration pocket at least 2 inches deep, with at least 1 inch clearance from penetration, sloped to shed water.
- 5. Structural Steel Tubing: If corner radii are greater than 1/4 inch and longest side of tube does not exceed 12 inches, flash as for pipes; otherwise, provide a standard curb with flashing.
- 6. Flexible and Moving Penetrations: Provide weathertight gooseneck set in sealant and secured to deck, flashed as recommended by manufacturer.

3.7 WALKWAY INSTALLATION

A. Flexible Walkways: Install walkway products in locations indicated on plans. Adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

3.8 FIELD QUALITY CONTROL

- A. Inspect adjacent roof systems, their drain strainers and the grounds below the work area and remove debris associated with this project.
- B. Repair or replace defaced or disfigured finishes caused by work of this Section. In areas where finished surfaces are soiled by asphalt or any other source of soiling caused by work of this Section, consult manufacturer of surfaces and manufacture of product causing the stain for cleaning advice, product recommendation and conform to their instructions.

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- C. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing on completion and at a time that Construction Manager can be present during inspection.
- D. Ensure that work is re-inspected in the presence of the Construction Manager (and manufacturer's representative if necessary to preserve warranty) and documented.
- E. Repair or remove and replace components of membrane roofing system where inspections indicate that they do not comply with specified requirements.

END OF SECTION

SECTION 07 62 00 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SUMMARY

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- B. Section Includes:
 - 1. Formed roof drainage sheet metal fabrications.
 - 2. Formed low-slope roof sheet metal fabrications.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Show installation layouts of sheet metal flashing and trim, including plans, elevations, expansion-joint locations, and keyed details. Distinguish between shop- and field-assembled work.
 - 1. Include details for forming, joining, supporting, and securing sheet metal flashing and trim, including pattern of seams, termination points, fixed points, expansion joints, expansion-joint covers, edge conditions, special conditions, and connections to adjoining work.
- C. Samples: For each exposed product and for each finish specified.
- D. Maintenance data.
- E. Warranty: Sample of special warranty.
- F. LEED Submittals
 - 1. Refer to Division 01 LEED Requirements: Submittal requirements.
 - 2. Product Data for Credit MR 4: For products having recycled content, documentation indicating percentages by weight of postconsumer and preconsumer recycled content.
 - 3. Product Certificates for Credit MR 5: For products and materials required to comply with requirements for regional materials indicating location and distance from Project of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include statement indicating cost for each regional material and the fraction by weight that is considered regional.

1.3 QUALITY ASSURANCE

A. Sheet Metal Flashing and Trim Standard: Comply with SMACNA's "Architectural Sheet Metal Manual" unless more stringent requirements are specified or shown on Drawings.

B. Pre-installation Conference: Conduct conference at Projectsite.

1.4 WARRANTY

A. <u>Manufacturer's Warranty:</u> Provide the sheet metal manufacturer's standard twenty (20) year warranty (from date of Substantial Completion) stating at a minimum that the metal finish will not chalk in excess of an eight (8) rating, or fade in excess of a five (5) rating, when tested in accordance with ASTM D2244 and ASTM D4214.

PART 2 - PRODUCTS

2.1 SHEET METALS

A. General: Protect mechanical and other finishes on exposed surfaces from damage by applying a strippable, temporary protective film before shipping.

2.2 FINISHES

- A. High Performance Organic Finish: AAMA 2604; multiple coats, thermally cured fluoropolymer system.
- B. High-Performance Organic Finish (70% Two-Coat Fluoropolymer):
 - AA-C12C40R1x (Chemical Finish: cleaned with inhibited chemicals; Chemical Finish: conversion coatings; Organic Coating: manufacturer's standard 2-coat, thermocured system consisting of specially formulated inhibitive primer, fluoropolymer color coat, with color coat containing not less than 70 percent polyvinylidene fluoride resin by weight).
 - 2. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with AAMA 2604 and with coating and resin manufacturers' written instructions.
 - 3. Color:
 - a. Dark Black

2.3 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and recommended by manufacturer of primary sheet metal unless otherwise indicated.
- B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal.
 - 1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.
 - a. Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating.

- b. Blind Fasteners: High-strength stainless-steel rivets suitable for metal being fastened.
- c. Spikes and Ferrules: Same material as gutter; with spike with ferrule matching internal gutter width.
- 2. Fasteners for steel Sheet: Series 300 stainless steel.
- C. Epoxy Seam Sealer: Two-part, noncorrosive, seam-cementing compound, recommended by manufacturer for exterior nonmoving joints, including riveted joints.
- D. Bituminous Coating: Cold-applied asphalt emulsion complying with ASTM D1187.

2.4 REGLETS

- A. Reglets: Units of type, material, and profile indicated, formed to provide secure interlocking of separate reglet and counterflashing pieces, and compatible with flashing indicated interlocking counterflashing on exterior face, of same metal as reglet.
 - 1. Aluminum-zinc alloy-coated steel sheet 0.036 inch/20 gage nominal (uncoated thickness).
 - 2. Finish: Dark Black.

2.5 FABRICATION, GENERAL

- A. General: Custom fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, geometry, metal thickness, and other characteristics of item indicated. Fabricate items at the shop to greatest extent possible.
 - 1. Obtain field measurements for accurate fit before shop fabrication.
 - 2. Form sheet metal flashing and trim without excessive oil canning, buckling, and tool marks and true to line and levels indicated, with exposed edges folded back to form hems.
 - 3. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces exposed to view.
- B. Sealed Joints: Form nonexpansion but movable joints in metal to accommodate elastomeric sealant.
- C. Expansion Provisions: Where lapped expansion provisions cannot be used, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with butyl sealant concealed within joints.
- D. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.
- E. Seams: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer.

2.6 LOW-SLOPE ROOF SHEET METAL FABRICATIONS

- A. Copings, Scuppers & Roof-Edge Flashing: Aluminum-zinc alloy-coated steel sheet 0.029 inch/22 gage nominal (uncoated thickness).
- B. Sloped Roof Drip Edge and Fascia Covers: Aluminum-zinc alloy-coated steel sheet 0.029 inch/22 gage nominal (uncoated thickness).
- C. Base Flashing: Aluminum-zinc alloy-coated steel sheet 0.029 inch/22 gage nominal (uncoated thickness).
- D. Counterflashing: Aluminum-zinc alloy-coated steel sheet 0.029 inch/22 gage nominal (uncoated thickness).
- E. Flashing Receivers/Cleats: Aluminum-zinc alloy-coated steel sheet 0.029 inch/22 gage nominal (uncoated thickness).

PART 3 - EXECUTION

3.1 Fabrication

- A. Fabricate new sections as detailed. Form sections true to shape, accurate in size, square and free from distortion or defects. Do not "punch" metal at brakepoints.
- B. Form all pieces in lengths of 8'-0" or 10'-0" where practical. Sections less than 3' long are unacceptable unless that section comprises the entire run.
- C. Unless detailed otherwise, hem exposed edges on underside 1/2"; fabricate vertical faces with bottom edge formed outward 3/4" at 45 degrees and hemmed to formdrip.
- D. Copings, Scuppers & Roof-Edge Flashing: Fabricate joint plates of same thickness as copings. Furnish with continuous cleats to support edge of external leg and drill elongated holes for fasteners on interior leg.
- E. Outside corners shall be prefabricated such that the outside face of section is broken at corner; seam at corner is unacceptable. Miter and seam top of outside and inside corners using rivets and specified polyurethane or manufacturer recommended and approved sealant. Corner pieces shall be a minimum of 18" in length, in both directions from the corner.
- F. Copings and roof edge flashings on curved walls and canopies shall be continuously shop welded in minimum lengths of 6'-0" such that the appearance and profile matches that of straight wall segments.

3.2 Workmanship

A. Make all work weather and watertight throughout; provide allowances for material expansion and contraction.

- B. Contractors workers shall carry a container or apron to deposit all metal cut offs, droppings or other debris created by the work. Waste shall not be dropped to the roof and ground.
- C. Sections shall be uniform, accurately fitted so as to line up straight and true and rigidly secured in place, without kinks or buckles. Joints at corners and angles shall be smooth, tight and neatly mitered and seamed.
- D. Unless detailed otherwise, lap all vertical joints between adjacent sections a minimum of 2".
- E. Where metal is hooked to a continuous cleat, crimp metal to cleat along entire length.

3.3 Installation

A. Roof-Edge Flashing (Gravel Stop):

- 1. Install reinforced EPDM strip prior to the waterdam portion of the edge assembly.
- 2. Secure waterdam over outside edge as detailed and secure with specified fasteners @ 6" O.C. through horizontal and vertical faces.
- 3. Fully adhere field sheet over waterdam in accordance with Section 07 5323.
- 4. Install concealed splice plates, snap-on fascia cover and associated hardware in accordance with the manufacturer's detailed instructions.

B. Coping:

- 1. Securely fasten new continuous cleat @ 12" O.C.
- 2. Install flexible flashing over parapet, or as detailed; seam joints between pieces.
- Secure coping with specified fasteners through the center of the section only. As an alternative, sections may be secured with specified fasteners through slotted holes @ 24"
 - O.C. Fasteners shall be located on the inside sloped or vertical face as detailed; fasteners on the outside face or top surface are unacceptable and will be cause for rejection of the work.
- 4. Install with 1/2" gap between adjacent sections.
- 5. Joints between adjacent sections less than 6" in width shall be concealed with 6" exposed coverplates formed accurately to fit the profile of the installed section. Coverplates shall be hooked over the cleat, sealed with two (2) beads of sealant on both sides of the joint under the coverplate and secured through coverplate in the gap between sections.
- 6. Joints between adjacent sections wider than 6" shall be made with drive cleats or standing seams; coverplates are unacceptable.
- 7. Where coping abuts a higher wall, turn metal up a minimum of 8" above the surface of the membrane and counterflash.

C. Counterflashing Receiver:

- 1. Install new receiver as detailed or where required.
- 2. Notch and lap joints 3" between sections.
- Apply sealant at the joint between the receiver and the masonry wall where receiver is not part of a thru-wall flashing; DO NOT APPLY SEALANT between masonry and thruwall flashings.

D. Counterflashing:

- 1. Fasten counterflashing to receiver with stainless steel sheet metal screws @ 24" O.C.
- 2. Notch and lap joints 3" between sections; bayonet joints are unacceptable. Do not fasten joints between sections.

3. Counterflashing shall be creased longitudinally just enough to provide a spring action that will hold bottom edge firmly against flashing.

E. Additional Counterflashing:

 Provide additional metal counterflashing per DSF detail at all existing mechanical, electrical, plumbing, skylight and roof hatch curbs where none exist.

F. Miscellaneous Flashings:

- 1. Install appropriate flashings at all exhausts, vents and penetrations not specifically called out but required.
- 2. Remount and secure all rooftop equipment. Use threadedfasteners.

3.4 CLEANING AND PROTECTION

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder and sealants.
- C. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions.

END OF SECTION

SECTION E: BIDDERS ACKNOWLEDGEMENT

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Bidder must state a Unit Price and Total Bid for each item. The Total Bid for each item must be the product of quantity, by Unit Price. The Grand Total must be the sum of the Total Bids for the various items. In case of multiplication errors or addition errors, the Grand Total with corrected multiplication and/or addition shall determine the Grand Total bid for each contract. The Unit Price and Total Bid must be entered numerically in the spaces provided. All words and numbers shall be written in ink.

1.	The undersigned having familiarized himself/herself with the Contract documents, including Advertisement for Bids, Instructions to Bidders, Form of Proposal, City of Madison Standard Specifications for Public Works Construction - 2016 Edition thereto, Form of Agreement, Form of Bond, and Addenda issued and attached to the plans and specifications on file in the office of the City Engineer, hereby proposes to provide and furnish all the labor, materials, tools, and expendable equipment necessary to perform and complete in a workmanlike manner the specified construction on this project for the City of Madison; all in accordance with the plans and specifications as prepared by the City Engineer, including Addenda to the Contract Nos through issued thereto, at the prices for said work as contained in this proposal. (Electronic bids submittals shall acknowledge addendum under Section E and shall not		
2.	acknowledge here) If awarded the Contract, we will initiate action within seven (7) days after notification or in accordance with the date specified in the contract to begin work and will proceed with diligence to bring the project to full completion within the number of work days allowed in the Contract or by		
3.	the calendar date stated in the Contract. The undersigned Bidder or Contractor certifies that he/she is not a party to any contract, combination in form of trust or otherwise, or conspiracy in restraint of trade or commerce or any other violation of the anti-trust laws of the State of Wisconsin or of the United States, with respect to this bid or contract or otherwise.		
4.	I hereby certify that I have met the Bid Bond Requirements as specified in Section 102.5. (IF BID BOND IS USED, IT SHALL BE SUBMITTED ON THE FORMS PROVIDED BY THE CITY. FAILURE TO DO SO MAY RESULT IN REJECTION OF THE BID).		
5. I hereby certify that all statements herein are made on behalf (name of corporation, partnership, or person submitting a corporation organized and existing under the laws of the State of			
	a partnership consisting of; an individual trading as		
	a partnership consisting of; an individual trading as; of the City of State of; that I have examined and carefully prepared this Proposal,		
	of; that I have examined and carefully prepared this Proposal, from the plans and specifications and have checked the same in detail before submitting this Proposal; that I have fully authority to make such statements and submit this Proposal in (its, their) behalf; and that the said statements are true and correct.		
SIGNAT	URE		
TITLE, IF	FANY		
Sworn	and subscribed to before me this		
	day of, 20		
	/ Public or other officer authorized to administer oaths) mmission Expires		

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Bidders shall not add any conditions or qualifying statements to this Proposal.

SECTION F: BEST VALUE CONTRACTING

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Best Value Contracting

The C	Contractor shall indicate the non-apprenticeable trades used on this contract.
active	son General Ordinance (M.G.O.), 33.07(7), does provide for some exemptions from the apprentice requirement. Apprenticeable trades are those trades considered apprenticeable State of Wisconsin. Please check applicable box if you are seeking an exemption.
	Contractor has a total skilled workforce of four or less individuals in all apprenticeable trades combined.
	No available trade training program; The Contractor has been rejected by the only available trade training program, or there is no trade training program within 90 miles.
	Contractor is not using an apprentice due to having a journey worker on layoff status provided the journey worker was employed by the contractor in the past six months.
	First-time Contractor on City of Madison Public Works contract requests a onetime exemption but intends to comply on all future contracts and is taking steps typical of a "good faith" effort.
	Contractor has been in business less than one year.
	Contractor doesn't have enough journeyman trade workers to qualify for a trade training program in that respective trade.
	An exemption is granted in accordance with a time period of a "Documented Depression' as defined by the State of Wisconsin.
on th 33.07 appre agend	Contractor shall indicate on the following section which apprenticeable trades are to be used is contract. Compliance with active apprenticeship, to the extent required by M.G.O. (7), shall be satisfied by documentation from an applicable trade training body; are inticeship contract with the Wisconsin Department of Workforce Development or a similar by in another state; or the U.S Department of Labor. This documentation is required prior to contractor beginning work on the project site.
	The Contractor has reviewed the list and shall not use any apprenticeable trades on this project.

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LIST	APPRENTICABLE TRADES (check all that apply to your work to be performed on this contract)
	BRICKLAYER
	CARPENTER
	CEMENT MASON / CONCRETE FINISHER
	CEMENT MASON (HEAVY HIGHWAY)
	CONSTRUCTION CRAFT LABORER
	DATA COMMUNICATION INSTALLER
	ELECTRICIAN
	ENVIRONMENTAL SYSTEMS TECHNICIAN / HVAC SERVICE TECH/HVAC INSTALL / SERVICE
	GLAZIER
	HEAVY EQUIPMENT OPERATOR / OPERATING ENGINEER
	INSULATION WORKER (HEAT & FROST)
	IRON WORKER
	IRON WORKER (ASSEMBLER, METAL BLDGS)
	PAINTER & DECORATOR
	PLASTERER
	PLUMBER
	RESIDENTIAL ELECTRICIAN
	ROOFER & WATER PROOFER
	SHEET METAL WORKER
	SPRINKLER FITTER
	STEAMFITTER
	STEAMFITTER (REFRIGERATION)
	STEAMFITTER (SERVICE)
	TAPER & FINISHER
	TELECOMMUNICATIONS (VOICE, DATA & VIDEO) INSTALLER-TECHNICIAN
	TILE SETTER

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SECTION G: BID BOND

KNOW ALL MEN BY THESE PRESENT, THAT Principal and Surety, as identified below, are held and firmly bound unto the City of Madison, (hereinafter referred to as the "Obligee"), in the sum of five per cent (5%) of the amount of the total bid or bids of the Principal herein accepted by the Obligee, for the payment of which the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

The conditions of this obligation are such that, whereas the Principal has submitted, to the City of Madison a certain bid, including the related alternate, and substitute bids attached hereto and hereby made a part hereof, to enter into a contract in writing for the construction of:

ALICIA ASHMAN LIBRARY - ROOF REPLACEMENT CONTRACT NO. 7884

- 1. If said bid is rejected by the Obligee, then this obligation shall be void.
- 2. If said bid is accepted by the Obligee and the Principal shall execute and deliver a contract in the form specified by the Obligee (properly completed in accordance with said bid) and shall furnish a bond for his/her faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said bid, then this obligation shall be void.

If said bid is accepted by the Obligee and the Principal shall fail to execute and deliver the contract and the performance and payment bond noted in 2. above executed by this Surety, or other Surety approved by the City of Madison, all within the time specified or any extension thereof, the Principal and Surety agree jointly and severally to forfeit to the Obligee as liquidated damages the sum mentioned above, it being understood that the liability of the Surety for any and all claims hereunder shall in no event exceed the sum of this obligation as stated, and it is further understood that the Principal and Surety reserve the right to recover from the Obligee that portion of the forfeited sum which exceed the actual liquidated damages incurred by the Obligee.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by an extension of the time within which the Obligee may accept such bid, and said Surety does hereby waive notice of any such extension.

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IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, on the day and year set forth below.

Seal	PRINCIPAL		
	Name of Principal		-
	Ву		Date
	Name and Title		-
Seal	SURETY		
	Name of Surety		-
	Ву		Date
	Name and Title		-
Nationa authorit	l Provider No.	for the year, and the payment and performance	above company in Wisconsin under and appointed as attorney in fact with bond referred to above, which power
Date		Agent Signature	
		Address	
		City, State and Zip Code	
		Telephone Number	

NOTE TO SURETY & PRINCIPAL

The bid submitted which this bond guarantees shall be rejected if the following instrument is not attached to this bond:

Power of Attorney showing that the agent of Surety is currently authorized to execute bonds on behalf of the Surety, and in the amounts referenced above.

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Certificate of Biennial Bid Bond

TIME PERIOD - VALID (FROM/TO)
NAME OF SURETY
NAME OF CONTRACTOR
CERTIFICATE HOLDER
City of Madison, Wisconsin
This is to certify that a biennial bid bond issued by the above-named Surety is currently on file with the City of Madison.
This certificate is issued as a matter of information and conveys no rights upon the certificate holder and does not amend, extend or alter the coverage of the biennial bid bond.
Cancellation: Should the above policy be cancelled before the expiration date, the issuing Surety will give thirty (30) days written notice to the certificate holder indicated above.
Signature of Authorized Contractor Representative
Date
Date

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SECTION H: AGREEMENT

Sevent	AGREEMENT made this day of he note that the control of	•	
	REAS, the Common Council of the said City of Madi , and by virtue of authority ve actor the work of performing certain construction.		
NOW, follows	, THEREFORE, the Contractor and the City, for ts:	the consideration hereinafter named, agree	as
1.	Scope of Work. The Contractor shall, perform the following listed complete work or improvement in Standard Specifications, Supplemental Specifications.	n full compliance with the Plans, Specification	ns,

of the work or improvements:

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all items of work covered or stipulated in the proposal; perform all altered or extra work; and shall furnish, unless otherwise provided in the contract, all materials, implements, machinery, equipment, tools, supplies, transportation, and labor necessary to the prosecution and completion

2. **Completion Date/Contract Time.** Construction work must begin within seven (7) calendar days after the date appearing on mailed written notice to do so shall have been sent to the Contractor and shall be carried on at a rate so as to secure full completion <u>SEE SPECIAL PROVISIONS</u>, the rate of progress and the time of completion being essential conditions of this Agreement.

3. **Contract Price.** The City shall pay to the Contractor at the times, in the manner and on the conditions set forth in said specifications, the sum of _______(\$_____) Dollars being the amount bid by such Contractor and which was awarded to him/her as provided by law.

4. **Affirmative Action.** In the performance of the services under this Agreement the Contractor agrees not to discriminate against any employee or applicant because of race, religion, marital status, age, color, sex, disability, national origin or ancestry, income level or source of income, arrest record or conviction record, less than honorable discharge, physical appearance, sexual orientation, gender identity, political beliefs, or student status. The Contractor further agrees not to discriminate against any subcontractor or person who offers to subcontract on this contract because of race, religion, color, age, disability, sex, sexual orientation, gender identity or national origin.

The Contractor agrees that within thirty (30) days after the effective date of this agreement, the Contractor will provide to the City Affirmative Action Division certain workforce utilization statistics, using a form to be furnished by the City.

If the contract is still in effect, or if the City enters into a new agreement with the Contractor, within one year after the date on which the form was required to be provided, the Contractor will provide updated workforce information using a second form, also to be furnished by the City. The second form will be submitted to the City Affirmative Action Division no later than one year after the date on which the first form was required to be provided.

The Contractor further agrees that, for at least twelve (12) months after the effective date of this contract, it will notify the City Affirmative Action Division of each of its job openings at facilities in Dane County for which applicants not already employees of the Contractor are to be considered. The notice will include a job description, classification, qualifications and application procedures

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and deadlines. The Contractor agrees to interview and consider candidates referred by the Affirmative Action Division if the candidate meets the minimum qualification standards established by the Contractor, and if the referral is timely. A referral is timely if it is received by the Contractor on or before the date started in the notice.

Articles of Agreement Article I

The Contractor shall take affirmative action in accordance with the provisions of this contract to insure that applicants are employed, and that employees are treated during employment without regard to race, religion, color, age, marital status, disability, sex, sexual orientation, gender identity or national original and that the employer shall provide harassment free work environment for the realization of the potential of each employee. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation and selection for training including apprenticeship insofar as it is within the control of the Contractor. The Contractor agrees to post in conspicuous places available to employees and applicants notices to be provided by the City setting out the provisions of the nondiscrimination clauses in this contract.

Article II

The Contractor shall in all solicitations or advertisements for employees placed by or on behalf of the Contractors state that all qualified or qualifiable applicants will be employed without regard to race, religion, color, age, marital status, disability, sex, sexual orientation, gender identity or national origin.

Article III

The Contractor shall send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding a notice to be provided by the City advising the labor union or worker's representative of the Contractor's equal employment opportunity and affirmative action commitments. Such notices shall be posted in conspicuous places available to employees and applicants for employment.

Article V

The Contractor agrees that it will comply with all provisions of the Affirmative Action Ordinance of the City of Madison, including the contract compliance requirements. The Contractor agrees to submit the model affirmative action plan for public works contractors in a form approved by the Affirmative Action Division Manager.

Article VI

The Contractor will maintain records as required by Section 39.02(9)(f) of the Madison General Ordinances and will provide the City Affirmative Action Division with access to such records and to persons who have relevant and necessary information, as provided in Section 39.02(9)(f). The City agrees to keep all such records confidential, except to the extent that public inspection is required by law.

Article VII

In the event of the Contractor's or subcontractor's failure to comply with the Equal Employment Opportunity and Affirmative Action Provisions of this contract or Section 39.03 and 39.02 of the Madison General Ordinances, it is agreed that the City at its option may do any or all of the following:

1. Cancel, terminate or suspend this Contract in whole or in part.

- 2. Declare the Contractor ineligible for further City contracts until the Affirmative Action requirements are met.
- 3. Recover on behalf of the City from the prime Contractor 0.5 percent of the contract award price for each week that such party fails or refuses to comply, in the nature of liquidated damages, but not to exceed a total of five percent (5%) of the contract price, or five thousand dollars (\$5,000), whichever is less. Under public works contracts, if a subcontractor is in noncompliance, the City may recover liquidated damages from the prime Contractor in the manner described above. The preceding sentence shall not be construed to prohibit a prime Contractor from recovering the amount of such damage from the non-complying subcontractor.

Article VIII

The Contractor shall include the above provisions of this contract in every subcontract so that such provisions will be binding upon each subcontractor. The Contractor shall take such action with respect to any subcontractor as necessary to enforce such provisions, including sanctions provided for noncompliance.

Article IX

The Contractor shall allow the maximum feasible opportunity to small business enterprises to compete for any subcontracts entered into pursuant to this contract. (In federally funded contracts the terms "DBE, MBE and WBE" shall be substituted for the term "small business" in this Article.)

- 5. Substance Abuse Prevention Program Required. Prior to commencing work on the Contract, the Contractor, and any Subcontractor, shall have in place a written program for the prevention of substance abuse among its employees as required under Wis. Stat. Sec. 103.503.
- 6. Contractor Hiring Practices.

Ban the Box - Arrest and Criminal Background Checks. (Sec. 39.08, MGO)

This provision applies to all prime contractors on contracts entered into on or after January 1, 2016, and all subcontractors who are required to meet prequalification requirements under MGO 33.07(7)(I), MGO as of the first time they seek or renew pre-qualification status on or after January 1, 2016. The City will monitor compliance of subcontractors through the pre-qualification process.

a. Definitions. For purposes of this section, "Arrest and Conviction Record" includes, but is not limited to, information indicating that a person has been questioned, apprehended, taken into custody or detention, held for investigation, arrested, charged with, indicted or tried for any felony, misdemeanor or other offense pursuant to any law enforcement or military authority.

"Conviction record" includes, but is not limited to, information indicating that a person has been convicted of a felony, misdemeanor or other offense, placed on probation, fined, imprisoned or paroled pursuant to any law enforcement or military authority.

"Background Check" means the process of checking an applicant's arrest and conviction record, through any means.

- **b. Requirements.** For the duration of this Contract, the Contractor shall:
 - 1. Remove from all job application forms any questions, check boxes, or other inquiries regarding an applicant's arrest and conviction record, as defined herein.

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- 2. Refrain from asking an applicant in any manner about their arrest or conviction record until after conditional offer of employment is made to the applicant in question.
- 3. Refrain from conducting a formal or informal background check or making any other inquiry using any privately or publicly available means of obtaining the arrest or conviction record of an applicant until after a conditional offer of employment is made to the applicant in question.
- 4. Make information about this ordinance available to applicants and existing employees, and post notices in prominent locations at the workplace with information about the ordinance and complaint procedure using language provided by the City.
- 5. Comply with all other provisions of Sec. 39.08, MGO.
- **c. Exemptions:** This section shall not apply when:
 - 1. Hiring for a position where certain convictions or violations are a bar to employment in that position under applicable law, or
 - 2. Hiring a position for which information about criminal or arrest record, or a background check is required by law to be performed at a time or in a manner that would otherwise be prohibited by this ordinance, including a licensed trade or profession where the licensing authority explicitly authorizes or requires the inquiry in question.

To be exempt, Contractor has the burden of demonstrating that there is an applicable law or regulation that requires the hiring practice in question, if so, the contractor is exempt from all of the requirements of this ordinance for the position(s) in question.

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IN WITNESS WHEREOF, the Contractor has hereunto set his/her hand and seal and the City has caused these presents to be sealed with its corporate seal and to be subscribed by its Mayor and City Clerk the day and year first above written.

Countersigned:				
S		Company Name		
Witness	Date	President		Date
Witness	Date	Secretary		Date
CITY OF MADISON, WISCONSIN				
Provisions have been made to pay that will accrue under this contract.	ne liability	Approved as to form:		
Finance Director		City Attorney		
Signed this day of			, 20	
Witness		Mayor		Date
Witness		City Clerk		Date

SECTION I: PAYMENT AND PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that we				
s principal, and				
Company ofas surety, are held and firmly bound unto the City of Madison, Wisconsin, in the sum of(\$) Dollars, lawful money of the United States, for the payment of which sum to the City of Madison, we hereby bind ourselves and our respective executors and administrators firmly by these presents.				
The condition of this Bond is such that if the above bounden shall on his/her part fully and faithfully perform all of the terms of the Contract entered into between him/herself and the City of Madison for the construction of:				
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in Madison, Wisconsin, and shall pay all claims for prosecution of said work, and save the City harmless from the prosecution of said work, and shall save harmle (under Chapter 102, Wisconsin Statutes) of employees to be void, otherwise of full force, virtue and effect.	om all claims for damages because of negligence as the said City from all claims for compensation			
Signed and sealed thisday of				
Countersigned:	Company Name (Principal)			
Witness	President Seal			
Secretary				
Approved as to form:	Surety Seal Salary Employee Commission			
City Attorney	ByAttorney-in-Fact			
This certifies that I have been duly licensed as an agent for the above company in Wisconsin under National Producer Number for the year, and appointed as attorney-in-fact with authority to execute this payment and performance bond which power of attorney has not been revoked.				
Date	Agent Signature			

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