

PROFESSIONAL SERVICES AGREEMENT

THIS IS AN AGREEMENT made as of August 2, 2021 between the LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT (**OWNER**) and Garland/DBS Inc. (**PROFESSIONAL**). **OWNER** intends to proceed with Palmer Building Roof Replacement Design Build in Lexington, Kentucky as described in the attached exhibits. The services are to include professional design and installation for the city. The services are hereinafter referred to as the Project.

OWNER and **PROFESSIONAL** in consideration of their mutual covenants herein agree in respect of the performance of Design and Installation of Palmer Building Roof by **PROFESSIONAL** and the payment for those services by **OWNER** as set forth below.

PROFESSIONAL was selected by **OWNER** based on the OMNIA Racine County, Wisconsin Master Agreement PW1925.

PROFESSIONAL shall provide Design and Installation of Palmer Building Roof for **OWNER** in all phases of the Project to which this Agreement applies, serve as **OWNER'S** representative for the Project as set forth below and shall give professional consultation and advice to **OWNER** during the performance of services hereunder.

SECTION 1 - BASIC SERVICES OF PROFESSIONAL

PROFESSIONAL shall perform all services as hereinafter stated which include customary planning and analysis incidental thereto.

The following documents are incorporated by reference herein as if fully stated and are attached hereto as exhibits:

- Exhibit A – Palmer Building Roof Replacement Contract Documents
- Exhibit B – LFUCG General Conditions
- Exhibit C – Performance & Payment Bond
- Exhibit D – Special Conditions
- Exhibit E – OMNIA Racine County Wisconsin Master Agreement PW1925
- Exhibit F – Bri Den Roofing, A Tecta America Co. Form of Proposal
- Exhibit G – Preliminary Schedule

To the extent there is conflict among these provisions, the provisions of this Agreement shall take precedence, followed by the provisions of OMNIA Racine County Wisconsin Master Agreement PW1925.

After written authorization to proceed with the Project, **PROFESSIONAL** shall:

1. Notify the **OWNER** in writing of its authorized representative who shall act as Project Manager and liaison representative between the **PROFESSIONAL** and the **OWNER**.

2. Deliverables shall include but not be limited to:
 - a) Schematic Documents with Cost Estimate
 - b) Design Development Documents with Cost Estimate
 - c) 95% Construction Documents with Cost Estimate
 - d) 100% Construction Documents with Cost Estimate
 - e) Ready To Advertise Documents including Addendum
 - f) PreBid Meeting including Agenda and Meeting Minutes
 - g) Bid Summary
 - h) Permitting Documents
 - i) Construction Administration including Weekly Field Reports
 - j) BiWeekly Progress Meetings including Agenda and Meeting Minutes
 - k) Substantial Completion Deliverables
 - l) O&M Manuals including Submittals, Warranties, and Operation & Maintenance Instructions
 - m) Final Completion Deliverables
 - n) 1 Year Warranty Inspection & Report
3. Security For Faithful Performance
 - a) Simultaneously with the delivery of the executed Contracts, the PROFESSIONAL shall furnish a surety bond or bonds as security for the faithful performance of this Contract and for payment of all persons performing labor on the Project under this Contract and furnishing materials in connection with this Contract, as specified in the General Conditions. The surety on such bond or bonds shall be a duly authorized surety company satisfactory to the OWNER and authorized to do business in the Commonwealth of Kentucky.
 - b) All bonds required by this Contract and laws of this State shall be placed with agents licensed in the State of Kentucky. When the premium is paid for such coverages, the full commission shall be paid to such local agent who shall not divide such commission with any person other than a duly licensed resident local agent.
 - c) Contractor shall use standard Performance and Payment Bond forms such as documents provided with this contract book or AIA form A312-1984 (or later). Refer to Performance & Payment Bond Exhibit "C."

This Agreement together with the Exhibits and schedules identified above constitutes the entire Agreement between **OWNER** and **PROFESSIONAL** and supersedes all prior written or oral understandings. This Agreement and said Exhibits and schedules may only be amended, supplemented, modified, or canceled by a duly executed written instrument.

SECTION 2 - ADDITIONAL SERVICES BY PROFESSIONAL

- 2.1. The **OWNER** may desire to have the **PROFESSIONAL** perform work or render services in connection with this Project other than provided by Exhibit A of this Agreement. Such work shall be considered as "Additional Services", subject to a change order, supplemental to this Agreement, setting forth the character and scope

thereof and the compensation therefore. Work under such change order shall not proceed until the **OWNER** gives written authorization. Should the **OWNER** find it desirable to have previously satisfactorily completed and accepted plans or parts thereof revised, the **PROFESSIONAL** shall make such revisions as directed, in writing, by the **OWNER**. This work shall be considered as "Additional Services" and shall be paid as such.

- 2.2. All "Additional Services" is subject to prior written authorization of **OWNER** and necessary appropriations made by the Urban County Council.

SECTION 3 - OWNER'S RESPONSIBILITIES

OWNER shall:

- 3.1. Provide criteria and information as to **OWNER'S** requirements for the Project, including design objectives and constraints, space, capacity and performance requirements, flexibility and expandability, and any budgetary limitations.
- 3.2. Assist **PROFESSIONAL** by placing at its disposal available information pertinent to the Project.
- 3.3. Examine all studies, reports, sketches, drawings, specifications, proposals and other documents presented by **PROFESSIONAL**, and render in writing decisions pertaining thereto within a reasonable time so as not to delay the services of **PROFESSIONAL**.
- 3.4. Designate in writing a person to act as **OWNER'S** representative with respect to the services to be rendered under this Agreement. Such person shall have complete authority to transmit instructions, receive information, interpret and define **OWNER'S** policies and decisions with respect to materials, equipment, elements and systems pertinent to **PROFESSIONAL'S** services.
- 3.5. Give written notice to **PROFESSIONAL** whenever **OWNER** observes or otherwise becomes aware of any development that affects the scope or timing of **PROFESSIONAL'S** services, or any defect in the work of Contractor(s).
- 3.6. Furnish or direct **PROFESSIONAL** to provide, necessary Additional Services as stipulated in Section Two (2) of this Agreement or other services as required.

SECTION 4 - PERIOD OF SERVICES

- 4.1. Time of Completion and Liquidated Damages
 - a) The number of calendar days within which the Construction Work is to be substantially completed is **120 days** from Notice to Proceed, and Final Completion shall be **14 days** from Substantial Completion. Refer to Preliminary Schedule Exhibit "G."

- b) Bidder must agree to commence construction work on or before a date to be specified in a written "Notice to Proceed" from the OWNER and to fully complete the Project within the time as specified in the Contract. Bidder must agree also to pay **\$250.00** per day thereafter deadline for substantial completion and **\$250.00** per day thereafter deadline for final completion.

4.2. The provisions of this Section Four (4) and the various rates of compensation for **PROFESSIONAL'S** services provided for elsewhere in this Agreement have been agreed to in anticipation of the orderly and continuous progress of the Project through completion.

SECTION 5 - PAYMENTS TO PROFESSIONAL

5.1 Methods of Payment for Services of PROFESSIONAL

5.1.1 For Basic Services.

All Lump Sum Pricing shall include all direct labor and supervision necessary to complete the item in a manner that meets or exceeds the **OWNER'S** satisfaction. It shall also include the labor payroll costs, overhead (such as unemployment taxes, general liability insurance, rent, utilities, phones, supplies, administrative salaries, F.I.C.A. sick and vacations, etc. disposal fees tool allowance, equipment, materials, profit and all other costs used on the job). The negotiated cost of services is established:

Design Services Cost	_____	\$0
Construction Cost	_____	\$154, 214

(Refer to Bri Den Roofing, A Tecta America Co. Form of Proposal – Exhibit “F”)

5.2. Times of Payment.

5.2.1. PROFESSIONAL shall submit a schedule of values subject to approval by the **OWNER** prior to starting work. The approved schedule of values will be the basis for monthly statements for Basic Services and Additional Services rendered. The Statements will be based upon **PROFESSIONAL'S** estimate of the proportion of the total services actually completed at the time of billing and are subject to approval by the **OWNER**. **OWNER** shall pay **PROFESSIONAL'S** monthly statements within thirty (30) days of receipt and approval of Application for Payment.

5.3. Other Provisions Concerning Payments.

5.3.1. In the event the Agreement is terminated by the **OWNER** without fault on the part of the **PROFESSIONAL**, the **PROFESSIONAL** shall be paid for the work performed or services rendered in an amount bearing the same ratio to the total Agreement fee as the amount of work completed or partially completed and delivered to the **OWNER** is to the total amount of work provided for herein, as determined by mutual agreement between the **OWNER** and the **PROFESSIONAL**.

5.3.2. In the event the services of the **PROFESSIONAL** are terminated by the **OWNER** for fault on the part of the **PROFESSIONAL**, the **PROFESSIONAL** shall be paid reasonable value of the work performed or services rendered and delivered, and the amount to be paid shall be determined by the **OWNER**.

5.3.3. In the event the **PROFESSIONAL** shall terminate the Agreement because of gross delays caused by the **OWNER**, the **PROFESSIONAL** shall be paid as set forth in Section 5.3.1. above.

SECTION 6 – ADDITIONAL GENERAL CONSIDERATIONS

6.1. Termination

6.1.1. **PROFESSIONAL** may only terminate this Agreement due to **OWNER'S** material breach of the terms hereof which breach causes **PROFESSIONAL** to be unable to perform its duties and responsibilities under this Agreement, and only upon ten (10) days written notice to **OWNER**, and provided **OWNER** fails to cure such default within the ten (10) day period.

6.1.2. The **OWNER** reserves the right to terminate the Agreement for any reason at any time upon seven (7) days written notice to the **PROFESSIONAL**.

6.2. Ownership and Reuse of Documents.

All documents, including Drawings and Specifications, prepared by the **PROFESSIONAL** pursuant to this Agreement shall be delivered to and become the property of the **OWNER**. The **OWNER** shall have the right to reuse same without restriction or limitation, but without liability or legal exposure to **PROFESSIONAL**.

6.3. Legal Responsibilities and Legal Relations.

6.3.1. The **PROFESSIONAL** shall familiarize itself with and shall at all times comply with all federal, state and local laws, ordinances, and regulations which in any manner affect the services of this Agreement.

6.3.2. In performing the services hereunder, the **PROFESSIONAL** and its **PROFESSIONALS**, employees, agents and representatives shall not be deemed or construed to be employees of **OWNER** in any manner whatsoever. Except as otherwise provided in this Agreement, the **PROFESSIONAL** shall be acting as an independent contractor. The **PROFESSIONAL** shall not hold itself out as, nor claim to be, an officer or employee of **OWNER** by reason hereof and shall not make any claim, demand or application to or for any right or privilege applicable to an officer or employee of **OWNER**. The **PROFESSIONAL** shall be solely responsible for any claims for wages or compensation by **PROFESSIONAL'S** employees, agents and representatives, including **PROFESSIONALS**, and shall save and hold **OWNER** harmless therefrom.

6.3.3. The parties hereto agree that causes of actions between the parties shall be governed by applicable provisions of the Kentucky Revised Statutes, that venue of any legal action shall be a court of appropriate jurisdiction in Fayette County,

Kentucky, and that Kentucky law shall apply with respect to the interpretation of any provision of this Agreement.

6.4. Successors and Assigns.

6.4.1. PROFESSIONAL binds itself and its partners, successors, executors, administrators, assigns and legal representatives to this Agreement in respect to all covenants, agreements and obligations of this Agreement. **PROFESSIONAL** shall not assign any interest, obligation or benefit in this Agreement. **PROFESSIONAL** shall not assign any interest, obligation or benefit in this Agreement or transfer any interest in the same, whether by assignment or novation, without prior written consent of **OWNER**.

6.4.2. The **PROFESSIONAL** shall not subcontract more than fifty percent (50%) of the work, based upon dollar value, to be provided under this Agreement. The **PROFESSIONAL** shall obtain written approval prior to subletting or assigning any services contained in this Agreement, and consent to sublet or assign any part of this Agreement shall not be construed to relieve the **PROFESSIONAL** of any responsibility for compliance with the provisions of this Agreement.

6.4.3. Nothing herein shall be construed to give any rights or benefits hereunder to anyone other than **OWNER** and **PROFESSIONAL**.

6.5. Disputes.

Except as otherwise provided in this Agreement, any dispute concerning the amount of payment due the **PROFESSIONAL** or any dispute concerning any question of fact of any act to be performed under this Agreement, which is not disposed of by agreement between the Lexington-Fayette Urban County Government and the **PROFESSIONAL**, shall be submitted to the Commissioner, Department of General Services, Lexington-Fayette Urban County Government for review. The decision of the Commissioner as to the determination of such dispute shall be final and conclusive unless determined by a court of competent jurisdiction to have been fraudulent, capricious, arbitrary or so grossly erroneous as necessarily to imply bad faith. Pending a final decision of a dispute hereunder, the **PROFESSIONAL** shall proceed diligently with the performance of the Agreement in accordance with the directions of the **OWNER**.

6.6. Accuracy of PROFESSIONAL'S Work.

The **PROFESSIONAL** shall be required to perform this Agreement in accordance with the degree of ordinary and reasonable skill and care usually exercised by the architect/engineer prevailing at the time, place and under similar conditions as the services hereunder are rendered.

The **PROFESSIONAL** shall be responsible for the accuracy of all work, even though Drawings and Specifications have been accepted by the **OWNER**, and shall make any necessary revisions or corrections resulting from errors and/or omissions on the part of the **PROFESSIONAL**, without additional compensation. By submission of reports, calculations

and Drawings and Specifications to the **OWNER**, the **PROFESSIONAL** has made a statement that, to the best of its belief and knowledge, the information is accurate. Failure on the part of **PROFESSIONAL** to provide the expected level of accuracy may be grounds for the **OWNER** to terminate this Agreement.

6.7. Security Clause.

The **PROFESSIONAL** certifies that it shall not at any time release or divulge any information concerning the services covered by this Agreement to any person or any public or private organization except the **OWNER** without prior approval of the **OWNER** unless required by law.

6.8. Access to Records.

The **PROFESSIONAL** shall maintain all books, documents, papers, and accounting records, and make such materials available at their office at all reasonable times during the contract period and for three (3) years from the date of final payment under the contract for inspection by the **OWNER**, and copies thereof shall be furnished if requested. Failure to maintain such records for three (3) years after the date of final payment may be grounds for the **OWNER** to disqualify the **PROFESSIONAL** from consideration for future **PROFESSIONAL** service agreements.

6.9. Required Risk Management Provisions.

The Risk Management Provisions of this agreement are incorporated herein by reference as if fully stated. Refer to the Special Conditions Exhibit "D" for Risk Management Provisions. Copies of the required Certificates of Insurance shall be provided to **OWNER** as required therein.

SECTION 7 - EQUAL EMPLOYMENT OPPORTUNITY

During the performance of this service agreement, the **PROFESSIONAL** agrees as follows:

- 7.1. The **PROFESSIONAL** will not discriminate against any employee or application for employment because of race, color, religion, national origin, sex, age or handicap. The **PROFESSIONAL** will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, national origin, sex, age or handicap. 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 apprenticeships. The **PROFESSIONAL** agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this non-discrimination clause.

- 7.2 The **PROFESSIONAL** will, in all solicitations or advertisements for employees placed by or on behalf of the **PROFESSIONAL**, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, national origin, sex, age (between forty and seventy), or handicap.

SECTION 8 - SPECIAL PROVISIONS

- 8.1. This Agreement is subject to the following provisions.
- 8.1.2. Pursuant to subparagraph 3.4 of this Agreement, **OWNER'S** representative is authorized to monitor and review the performance of work of the **PROFESSIONAL**. Documents, data, reports and all matters associated with carrying out this Agreement shall be addressed to the **OWNER'S** representative or their designee. Questions by the **PROFESSIONAL** regarding interpretations of the terms, provisions and requirements under this Agreement shall be addressed to the **OWNER'S** representative or their designee. The **PROFESSIONAL** shall look only to the **OWNER'S** representative or their designee for direction in its performance under this Agreement; no other direction shall be binding upon **OWNER**. **OWNER** shall respond to written requests by **PROFESSIONAL** within thirty (30) days.
- 8.2. **NO THIRD PARTY RIGHTS.** This agreement does not create a contractual relationship with or right of action in favor of a third party against either **OWNER** or **PROFESSIONAL**.
- 8.3. **UNENFORCEABLE TERMS/SURVIVABILITY.** If any term or provision of this Agreement shall be found to be illegal or unenforceable, this Agreement shall remain in full force and such term or provision shall be deemed stricken. The provisions of Section 6 of this Agreement shall survive its termination.
- 8.4. **NON-WAIVER.** The failure of either party to enforce any right reserved to it in this Agreement shall not be a waiver of any such right to which the party is entitled.

IN WITNESS WHEREOF, the parties hereto have made and executed this Agreement as of the day and year first above written.

OWNER (LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT):

Signature: _____
MAYOR

Date: _____

ATTEST:

CLERK OF URBAN COUNTY COUNCIL

PROFESSIONAL (Garland/DBS Inc.):

Signature:  _____

Printed Name: Frank A. Percaciante

Position: Controller

Date: 08/06/2021

COMMONWEALTH OF KENTUCKY
COUNTY OF (_____)

The foregoing instrument was subscribed, sworn to and acknowledged before me by _____ as _____ for
and on behalf of _____, on this the _____ day of _____, 20____.

My commission expires: _____

NOTARY PUBLIC, STATE AT LARGE, KY

The Garland Company, Inc.

Roof Asset Management Program



R A M P.



LFUCG-Palmer Building Final Bid Package & Addendum

Prepared By
DBS/Garland Design Team

Prepared For
Potential Bidders & LFUCG Team

July 26, 2021

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LFUCG-Palmer Building
Re-roof project
Bid Proposal

Bids to Sent to: dbsbids@garlandind.com

Project Breakdown

- Base Bid 1: 30 Year Modified Bitumen Roof
 - Additional Items included
 - New Canopy
 - Foamed in place insulation

Important Dates & Times

- Last Questions regarding the project: **Friday July 16th 4:00 PM**
- Addendum Issue date: **Tuesday July 20th**
- Bid Due Date: **Friday July 23rd 4:00 PM**

Additional Important Details

If you have any questions, please do not hesitate to contact me. Thank you.



Garland/DBS, Inc.
3800 East 91st Street
Cleveland, OH 44105



Return this Worksheet To: dbsbids@garlandind.com or (216) 883-2055 (Fax)

Submission of this form acknowledges receipt and acceptance of:

1. All standard Garland details and specifications.
2. Prevailing Wage Rates; if applicable
3. Project specific specifications, drawings, and details.
4. Subcontractor is **only** responsible to insure the value of the non-Garland Materials & Labor.
PLEASE NOTE: The Garland Materials will be purchased directly by the Customer
5. All on-site tradesmen must have a background check and valid I-9 certificates on file. These documents for review upon request.
6. Default payment terms are 2% at 10 days, Net 45 Days
7. DBS will purchase Garland Material based on the material quantities provided herein. Additional Garland Materials or other manufacturer's materials necessary to complete the project will be the Subcontractor's obligation. Please provide breakdown to assist tracking of Non Garland material
8. Workmanship Warranties will **not** extend beyond five (5) years.

Submit with this Project Cost proposal:

1. Garland Material List with all quantities, unit sizes, & coverage rates (Subcontractors are responsible to obtain material lists, data sheets, and product costs from Garland Rep)
2. Any qualifications/exclusion to Subcontractor's price proposal.

Awarded subcontractor must submit:

1. Site Specific Safety Plan and OSHA 300 log.
2. Equipment list and selected Waste Hauler's License (State or Local).
3. Certificate of Insurance – listing Garland/DBS, Inc. and the project Owner as additional insured's.
4. All licenses and permits.
5. Tax exempt status and sales tax requirements.
6. E-Verify Account Information

CONTRACTOR'S NAME:			
ADDRESS (CITY, STATE, & ZIP CODE):			
TELEPHONE:		CELL:	
CONTACT PERSON:			
CONTACT E-MAIL ADDRESS:			
PROJECT NAME:			
ADDRESS (CITY, STATE, & ZIP CODE):			
DBS PROPOSAL #:			
GARLAND REPRESENTATIVE:			
PROJECT SQUARE FOOTAGE:			



Garland/DBS, Inc.
3800 East 91st Street
Cleveland, OH 44105



Return this Worksheet To: dbsbids@garlandind.com or (216) 883-2055 (Fax)

CONTRACTOR'S NAME:

DBS PROPOSAL #:

SUBCONTRACTOR AFFIRMATION:

Does your proposal comply with Garland's standard published application procedures?

YES NO

Does your proposal comply with Garland's standard published details?

YES NO

Is your proposal based upon DBS's Continuing Services Agreement?

YES NO

Is your proposal based upon DBS Inc's General Conditions & Acknowledgements (Page1)?

YES NO

Is your proposal based upon Prevailing Wages?

YES NO

Are you using any subs or material suppliers? If yes, please list all potential below:

YES NO

	<u>Name of Sub/Supplier</u>	<u>Estimated Value</u>
Subs/Suppliers:	_____	_____
	_____	_____
This is for Reference only. Please include all Sub/Material pricing in the breakdown on page 3.	_____	_____
	_____	_____
	_____	_____
	_____	_____
	_____	_____

*If more sub/suppliers are needed, please include in a separate attachment.

SUBCONTRACTOR CLASSIFICATION (Check All That Apply):

- | | |
|---|--|
| <input type="checkbox"/> Minority Owned Business | <input type="checkbox"/> Veteran-Owned Business (VOB) |
| <input type="checkbox"/> Women-Owned Business (WOB) | <input type="checkbox"/> Service-Disabled VOB |
| <input type="checkbox"/> Small Business | <input type="checkbox"/> HUBZone Business |
| <input type="checkbox"/> Large Business (None of the Above) | <input type="checkbox"/> 8(a) Certified Business |
| <input type="checkbox"/> Alaskan Native Tribal-Owned Business | <input type="checkbox"/> Native American Tribal-Owned Business |



Garland/DBS, Inc.
3800 East 91st Street
Cleveland, OH 44105



Return this Worksheet To: dbsbids@garlandind.com or (216) 883-2055 (Fax)

CONTRACTOR'S NAME:

DBS PROPOSAL #:

BID BREAKDOWN BY KEY COMPONENTS:

NON-GARLAND ROOF MATERIALS:

ROOFING LABOR:

NON-ROOFING LABOR:

NON-ROOFING MATERIALS:

PERMITS:

SALES TAX - NON-GARLAND MTLs:

TOTAL SUBCONTRACTOR BID PRICE:

\$ -

GARLAND MATERIALS BY DBS:

DBS TO FIGURE DOLLAR AMOUNT /
PROVIDE MATERIAL QTY ONLY

SUBCONTRACTOR QUOTE MUST BE GOOD FOR 90 DAYS. IF SUBCONTRACTOR CAN HOLD PRICING FOR LONGER, PLEASE FILL-IN TOTAL NUMBER OF DAYS:

DAYS

PROPOSALS WILL BE EVALUATED ON A COMBINATION OF THE BASE BID PROPOSAL, RESPONSIVENESS TO THE BID DOCUMENTS, AND MARK-UP FOR UNANTICIPATED CHANGE ORDERS, PLEASE PROVIDE YOUR CHANGE ORDER MARK-UPS BELOW:

OVERHEAD

PROFIT

List All Addendums Included:
If applicable



Garland/DBS, Inc.
3800 East 91st Street
Cleveland, OH 44105



Return this Worksheet To: dbsbids@garlandind.com or (216) 883-2055 (Fax)

CONTRACTOR'S NAME:

DBS PROPOSAL #:

PROJECT DETAILS & MEASUREMENTS:

Current Roof System(s):			
Total Roof Square Footage:		# of Roof Areas:	
Roof Height (# of Stories):		# of Roof Drains:	
Roof Deck Type:		Square Footage of Flashings:	
# of Scuppers:		# of Roof Penetrations:	
Current Roof Slope:		# of Roof Levels:	
Anticipated Working Days:		Anticipated Start Date:	

METAL STRETCH-OUT DETAILS: For Reference Only, Contractor Still Responsible for Material Qty

<i>BREAK METAL DESCRIPTION</i>	<i>LINEAR FEET</i>	<i>WIDTH OF PIECE</i>	<i># OF BENDS</i>	<i>TYPE OF BREAK METAL</i>



Garland/DBS, Inc.
3800 East 91st Street
Cleveland, OH 44105



Return this Worksheet To: dbsbids@garlandind.com or (216) 883-2055 (Fax)

CONTRACTOR'S NAME:

DBS PROPOSAL #:

LINE ITEM PRICING FOR ANTICIPATED UNFORESEEN SITE CONDITIONS:

<i>LINE ITEM DESCRIPTION</i>	<i>PRICE PER UNIT</i>	<i>UNIT SIZE</i>
Wood Blocking (Nailer) Replacement		
Additional Insulation Replacement		
Decking Replacement		

CERTIFICATION OF BID INFORMATION:

I certify that I have reviewed and stand behind our Cost Proposal and Garland material quantities. I have incorporated the application procedures, project details and specifications, Continuing Service Agreement, and insurance requirements, in their entirety, into our cost proposal. This Cost Proposal includes all costs necessary to complete this project.

Contractor Name:

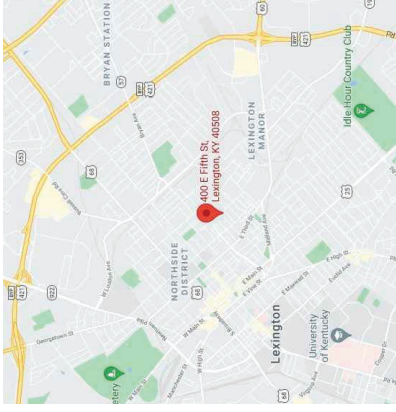
Responsible Party's Name & Title:

Responsible Party's Signature:

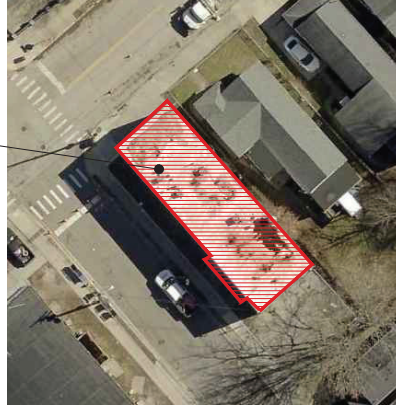
LFUCG PALMER BUILDING ROOF REPLACEMENT 400 EAST 5TH ST, LEXINGTON, KY



LOCATION MAP



KEY PLAN



DRAWING INDEX

- SHT 1 - COVER SHEET
- SHT 2 - GENERAL NOTES
- SHT 3A - DEMO ROOF PLAN
- SHT 3B - NEW ROOF PLAN
- SHT 4 - DETAILS
- SHT 5 - DETAILS
- S-1 - STRUCTURAL PLAN

LFUCG PALMER BUILDING ROOF REPLACEMENT
400 E. 5TH ST. LEXINGTON, KY

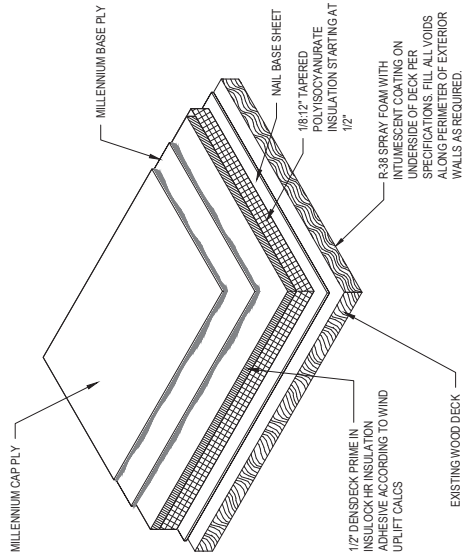
GARLAND REP. ZACH HADDEN PROJECT NO. 30-ES-210063 DATE: 05/24/2021 DWG BY: TD CHK BY: SOM



GARLAND / DBS INC.
3800 EAST 91st STREET - CLEVELAND, OHIO 44105-2197
PHONE (800) 321-9336 / FAX (216) 641-0833



TYPICAL NEW ROOF CROSS SECTION DETAIL



TYPICAL NEW ROOF CROSS SECTION

GENERAL NOTES

- STORE AND HANDLE ROOFING SHEETS IN A DRY, WELL-VENTILATED, WEATHER-TIGHT PLACE. STORE ROLLS OF OTHER MATERIALS ON PAVED SURFACE. SHEET AND ROLL MATERIALS SHOULD BE COVERED WITH A CANVAS TARP ALTHOUGH OTHER BREATHABLE MATERIAL (NOT POLYETHYLENE).
- DO NOT LEAVE UNUSED MATERIALS ON THE ROOF WHEN ROOFING WORKS IS NOT IN PROGRESS UNLESS PROTECTED FROM WEATHER AND OTHER MOISTURE SOURCES.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SECURE ALL MATERIAL AND EQUIPMENT LOCATED ON THE JOB SITE. IF ANY MATERIAL OR EQUIPMENT IS STORED ON THE ROOF, THE CONTRACTOR MUST MAKE SURE THAT THE INTEGRITY OF THE DECK IS NOT COMPROMISED AT ANY TIME.
- DO NOT APPLY ROOFING INSULATION OR MEMBRANE TO DAMP DECK SURFACE.
- FULLY COMPLETE ALL MODIFIED BITUMINOUS MEMBRANE ROOFING FIELD ASSEMBLY WORK EACH DAY. PHASED CONSTRUCTION WILL NOT BE ACCEPTED.

CUSTOMER NOTE:

- ALL OF GARLAND'S SHOP FABRICATED MATERIAL WILL BE MANUFACTURED TO THE DIMENSIONS SHOWN, UNLESS OTHERWISE NOTED.
- IT IS ESSENTIAL THAT ANY NECESSARY CHANGES, NOTATIONS OR REQUESTED INFORMATION BE CLEARLY NOTED ON THE SHOP DRAWINGS.
- NO MATERIAL WILL BE CONSIDERED RELEASED FOR FABRICATION UNTIL ALL PERTINENT INFORMATION (i.e. COLOR, DIMENSIONS, MATERIAL CONFIGURATION) HAS BEEN SUBMITTED FOR REVIEW AND APPROVED BY GARLAND/DBS.

SCOPE OF WORK NOTES

GENERAL NOTES:

- IT IS THE ROOFING CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH ALL DETAILS INVOLVED IN THE ROOFING CONTRACT.
- ALL DRAWINGS ARE GRAPHIC REPRESENTATION OF APPROXIMATE LOCATION OF EXISTING AND NEW MATERIALS. THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK.
- THE ROOFING CONTRACTOR TO PROTECT ALL ADJACENT SURFACES NOT SCHEDULED FOR WORK AND TO REPAIR ANY DAMAGED AREAS AS A RESULT OF CONTRACTOR WORK AT NO ADDITIONAL COST TO THE OWNER.
- THE ROOFING CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN WATER TIGHTNESS AND PROVIDE PROTECTION AT ANY/ALL OPENINGS IN THE ROOF LEFT AT THE END OF EACH CONSTRUCTION DAY.
- CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, CONDITIONS, AND QUANTITIES.

SCOPE OF WORK:

- EXISTING ROOF ASSEMBLY
- PLYWOOD DECK (UNKNOWN THICKNESS)
- CRAFT PAPER NAILED
- NO INSULATION
- 3-4 PLY BUR WITH GRAVEL
- TWO LAYERS OF 1/2" EPS LOOSE LAD
- DURALAST MEMBRANE (WELDED SEAMS - FASTENED WITH TERMINATION BAR AROUND PERIMETER)
- NO SLOPE IN STRUCTURE

SCOPE OF WORK: MAIN ROOF

- REMOVE ALL EXISTING ROOFING MATERIALS (INSULATION AND MEMBRANES)
- REMOVE EXISTING EDGE METAL AND GUTTERS, CAREFULLY REMOVE FASCIA FOR OWNER REVIEW
- CONTRACTOR SHALL INCLUDE 600 FEET FOR WOOD DECK SURFACEMENT. CAREFULLY RECORD REPAIRED DECK ADJUSTMENTS TO DECK REPLACEMENT ALLOWANCE WILL BE MADE USING UNIT COST PROVIDED ON BID FORM.
- REPLACE ALL WOOD JOCKING WITH NEW 2X4 NON-TREATED LUMBER TO ACCOMMODATE FOR SPECIFIED INSULATION THICKNESSES AROUND ALL PERIMETER EDGES. PROVIDE ANY ADDITIONAL BLOCCING AS REQUIRED TO COMPLETE THE PROJECT.
- INSTALL NAIL BASE SHEET
- INSTALL ONE WAY TAPERED POLYISOCYANURATE INSULATION USING MECHANICAL FASTENERS (HIGH SIDE, CHESTNUT STREET, LOW SIDE, HAWKINS AVE)
- FINISHED SLOPE TO BE 18:12 STARTING AT A MINIMUM OF 1/2"
- INSTALL ONE LAYER OF 1/2" BERGDECK PRIME ROOF BOARD (KX1) USING INSULOCK HR INSULATION ADHESIVE SPECIFICATIONS
- INSTALL NEW 1/2" PLS MODIFIED BITUMEN ROOF SYSTEM USING ALL REQUIRED MATERIALS PER PROVIDED SPECIFICATIONS
- INSTALL NEW 900 ALUMINUM SHEET METAL DETAILS INCLUDING: FASCIA METAL TO COVER EXISTING WOOD FASCIA BOARDS, DRIP EDGE, GUTTERS, DOWNSPOUTS, COUNTER FLASHINGS, ETC. NEW DOWNSPOUTS TO BE LOCATED IN LINE WITH THE EXISTING STORM WATER BOOT(S).
- CONTRACTOR TO SALVAGE EXISTING FASCIA FOR OWNER REVIEW.
- POTENTIAL REUSE OF FASCIA WILL BE WORK OF DEDUCT C/O.
- REPLACE ALL WOOD JOCKING WITH NEW 2X4 NON-TREATED LUMBER TO ACCOMMODATE FOR SPECIFIED INSULATION THICKNESSES AROUND ALL PERIMETER EDGES
- INSTALL ONE BAND OF GARLAND'S CUSTOM METAL PANEL FASCIA TO REPLICATE THE EXISTING FASCIA PROFILE ON THE THREE SIDES OF THE BUILDING WHERE GUTTERS ARE NOT TO BE INSTALLED.
- ALL WORK RELATED TO FASCIA TO BE IN PLACE INSULATION BY FOAM CONTRACTOR (CONTRACTED BY DBS, SEPARATELY).

SCOPE OF WORK: CANOPY

- PROVIDE AND INSTALL THE FRAMING PACKAGE PER THE STRUCTURAL FRAMING PLAN PROVIDED. SLOPE TO BE BUILT INTO THE WOOD DECKING AND TO BE 18:12 SLOPE.
- NO INSULATION TO BE PROVIDED FOR THE CANOPY ROOF ASSEMBLY. TAPERED PERUTE EDGE TO BE INSTALLED IN WASTIC AROUND ALL ROOF EDGES WHERE NO GUTTER IS PRESENT.
- INSTALL A MATCHING 2 PLY MODIFIED ROOF SYSTEM TO MATCH THE MAIN ROOF AND ASSOCIATED TRIM DETAILS INCLUDING: FASCIA METAL, METAL EDGE, GUTTERS, DOWNSPOUTS, COUNTER FLASHINGS, ETC.
- SLOPE TO BE PROVIDED IN THE NEW TAPERED STRUCTURE.
- REPLACE ALL WOOD JOCKING WITH NEW 2X4 NON-TREATED LUMBER TO ACCOMMODATE FOR SPECIFIED INSULATION THICKNESSES AROUND ALL PERIMETER EDGES
- INSTALL ONE LAYER OF 1/2" BERGDECK PRIME ROOF BOARD (KX1) USING INSULOCK HR INSULATION ADHESIVE SPECIFICATIONS
- INSTALL NEW 900 ALUMINUM SHEET METAL DETAILS INCLUDING: FASCIA METAL TO COVER EXISTING WOOD FASCIA BOARDS, DRIP EDGE, GUTTERS, DOWNSPOUTS, COUNTER FLASHINGS, ETC. NEW SPLASH PADS TO BE INSTALLED AT NEW DOWNSPOUT LOCATIONS.
- INSTALL ONE BAND OF METECOS LATITUDE WALL PANEL TO REPLACE THE EXISTING FASCIA METAL ON THE THREE SIDES OF THE BUILDING WHERE GUTTERS ARE NOT TO BE INSTALLED.
- POTENTIAL REUSE OF FASCIA WILL BE WORK OF DEDUCT C/O.

DESIGN CRITERIA

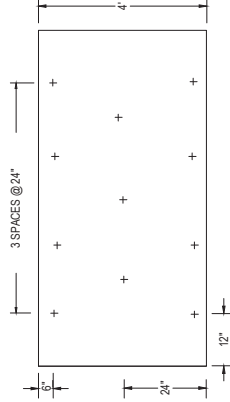
WIND UPLIFT REQUIREMENTS

- WIND SPEED: 120 MPH
 - BUILDING TYPE: ENCLOSED
 - EXPOSURE CATEGORY: B
 - IMPORTANCE CLASS: IV
 - IMPORTANCE FACTOR: 1.00
 - DESIGN ROOF HEIGHT: 30.0'
 - TOPOGRAPHY FACTOR: 1.00
 - ROOF SLOPE: 18 UNITS PER 12
- RESULTING WIND UPLIFT PRESSURES:

- ZONE 1: 15.5 PSF
- ZONE 2: 26.1 PSF
- ZONE 3: 39.3 PSF

FASTENING INSTRUCTIONS

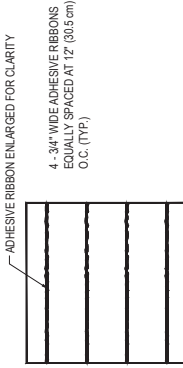
ZONES 1, 2, & 3 INSULATION BOARD FASTENER PATTERN: 11 FASTENERS PER BOARD



ADHESIVE INSTRUCTIONS

INSULATION BOARD ADHESIVE PATTERN

TYPICAL ASCE 7 WIND PRESSURE ZONES 1, 2, & 3 INSULATION BOARD ADHESIVE PATTERN: 12\"/>



SYMBOL LEGEND

	HEAT STACK
	PLUMBING STACK
	ROOF PENETRATION
	AIR INTAKE

WIND PRESSURE ZONE DESIGNATION

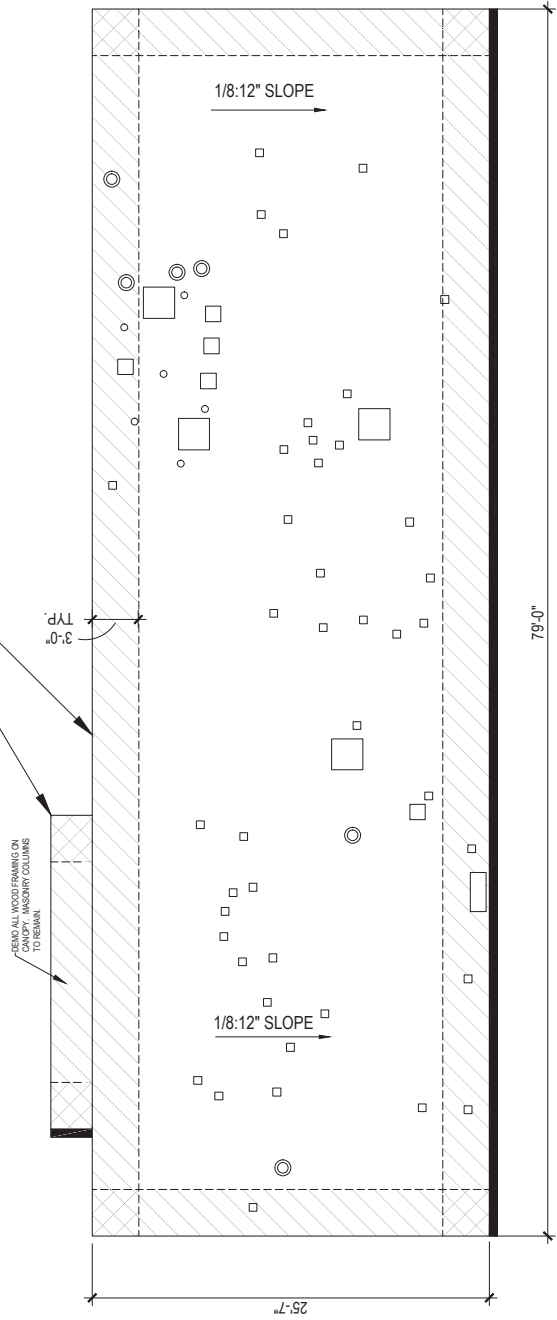
	ZONE 1
	ZONE 2
	ZONE 3

NOTE:
 CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, CONDITIONS, AND QUANTITIES DEMO GAS LINES ASSOCIATED WITH ATTN'S DEMO ELECTRICAL BOX ON SOUTH SIDE OF BUILDING.

NOTE:
 REFER TO THE STRUCTURAL FRAMING PLAN FOR CANOPY AND NEW CURB AREA FRAMING INFORMATION

NOTE:
 ALL PENETRATIONS TO BE REMOVED CONTRACTOR TO CONSERVE POWER WHILE USING THE FACILITY

NOTE:
 THE CONTRACTOR SHALL CAREFULLY REMOVE THE EXISTING DECORATIVE FASCIA FOR OWNER REVIEW FOR POTENTIAL REUSE. SAFELY STORE FASCIA UNTIL REINSTALLATION.



DEMO ROOF PLAN
 ARCH. REF.: SCALE: 1/8" = 1'-0"



GARLAND / DBS INC.
 3800 EAST 91st STREET - CLEVELAND, OHIO 44105-2197
 PHONE (800) 321-9336 / FAX (216) 641-0633



PROJECT NO.: 30-ES-210063	GARLAND REF: ZACH HADDEN
DATE: 05/24/2021	DWG BY: TO
CHK BY: SCM	

LFCG PALMER BUILDING ROOF REPLACMENT
 400 E. 5TH ST. LEXINGTON, KY

SYMBOL LEGEND

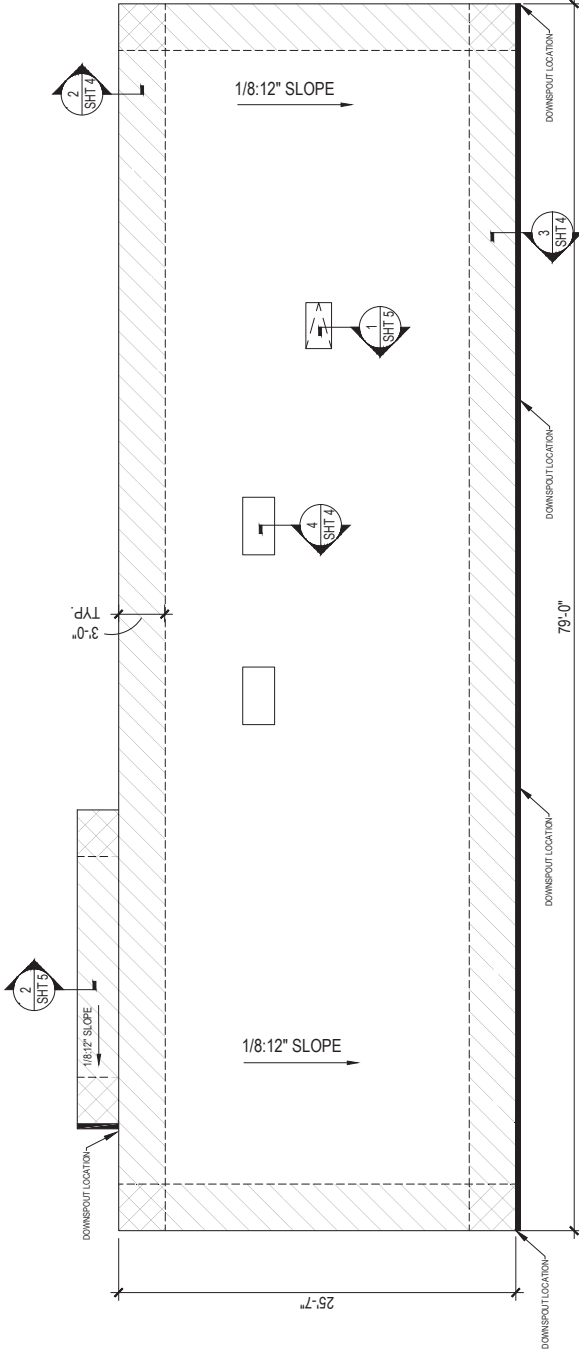
	MECH UNIT CURB
	ROOF HATCH

WIND PRESSURE ZONE DESIGNATION	ZONE TYPE
	ZONE 1
	ZONE 2
	ZONE 3

NOTE:
 CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, CONDITIONS, AND QUANTITIES DEMO GAS LINES ASSOCIATED WITH ATTWS DEMO ELECTRICAL BOX ON SOUTH SIDE OF BUILDING.

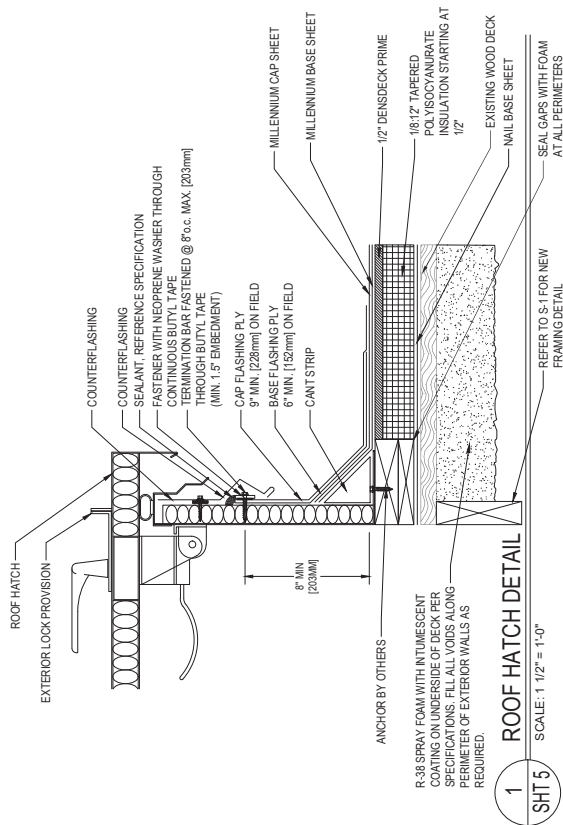
NOTE:
 REFER TO THE STRUCTURAL FRAMING PLAN FOR CANOPY AND NEW CURB AREA FRAMING INFORMATION
 THE FINAL LOCATION OF THE ROOF HATCH AND MECHANICAL CURBS SHALL BE COORDINATED WITH THE OWNER.

NOTE:
 ALL PENETRATIONS TO BE REMOVED
 NEW DOWNSPOUTS SHOULD BE CONNECTED TO EXISTING STORM WATER BOOTS.
 EXCEPTION: CANOPY DOWNSPOUT TO BE DAYLIGHTED. CONTRACTOR TO PROVIDE CONCRETE SPLASH PADS.
 CONTRACTOR TO CONSERVE POWER WHILE USING THE FACILITY



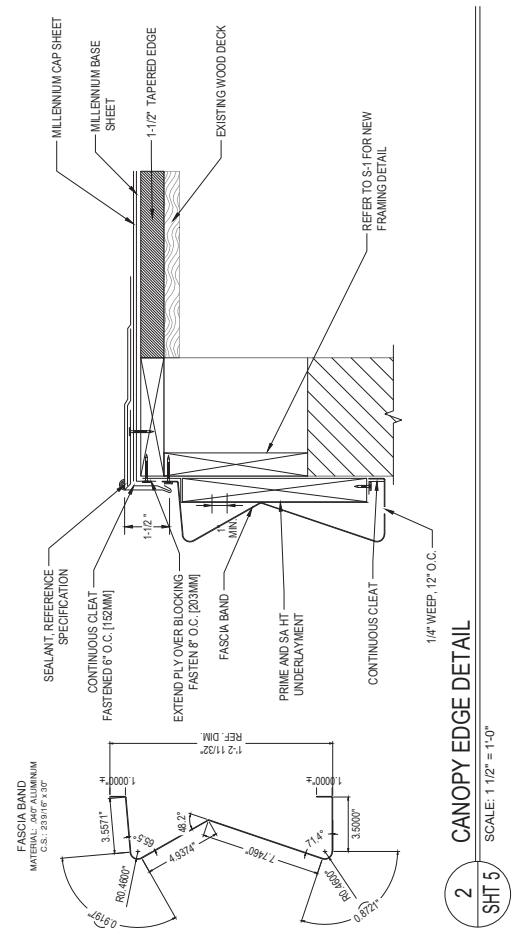
NEW ROOF PLAN
 ARCH. REF.: SCALE: 1/8" = 1'-0"

NOTE:
 REFERENCE SPECIFICATION FOR SURFACING,
 MEMBRANE ADHESIVE TYPE, AND INSULATION COVER
 BOARD TYPE AND ATTACHMENT METHOD.



1 ROOF HATCH DETAIL
 SCALE: 1 1/2" = 1'-0"

NOTE:
 REFERENCE SPECIFICATION FOR SURFACING,
 MEMBRANE ADHESIVE TYPE, AND INSULATION COVER
 BOARD TYPE AND ATTACHMENT METHOD.



2 CANOPY EDGE DETAIL
 SCALE: 1 1/2" = 1'-0"

DATE: 05/24/2021	PROJECT NO.: 30-ES-210063	GARLAND REF: ZACH HADDEN	GARLAND / DBS INC. 3800 EAST 91ST STREET - CLEVELAND, OHIO 44105-2197 PHONE (800) 321-9336 / FAX (216) 641-0633
CHK BY: TO	DWG BY: TO	400 E. 5TH ST. LEXINGTON, KY	



LFUCG– Palmer Building
Re-Roofing Project
Addendum #1 – July 20th 2021

1. Please note receipt of this addendum on the Bid Proposal Form.
2. The bids are due to DBS on Friday July 23rd 4:00 PM.
3. The Roofing Contractor is responsible for obtaining all necessary permits as they relate to this project.
4. Safety – Follow all OSHA regulations.
5. Substantial Completion is December 17, 2021. Final Completion is December 31, 2021. Following award of the contract, the Owner will coordinate substantial completion to account for current material lead times.
6. An allowance of \$___ for replacement of 500 s.f The Contractor shall document the amount deck replaced with photographs. Deviations from the allowance shall be processed as a Change Order based on Unit Cost listed on the Bid Form.
7. The Contractor shall permanently remove all piping below deck that connects to a rooftop item scheduled to be demolished.
8. The Contractor shall patch any interior or exterior surface to like new condition as required at all locations where a roof item, fastener, bracket, etc. is demolished.
9. Insulated Spray foam Contractors will not install their portion of the project until the roof is completely watertight.
10. The Contractor shall carefully remove the existing fascia for owner review for potential reuse. If the existing fascia is usable, a Change Order will be used to modify the contract. If the fascia is not usable, there will be no impact to the project.
11. Spray foam contractors will submit bids directly to DBS on their letter head based on the design documents.
12. Please take note of any additional changes that were made to the design documents attached to this addendum.
13. The Owner is coordinating the Contractor's site access with the neighboring property at 404 East 5th Street.
14. Wood framing of the new canopy structure needs to include two layers of 2x8 treated wood blocking on top of northeast brick column.
15. Provide 2x treated wood blocking and flashing as required for proper installation and fastening of gutter.

SECTION 06100
ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED SECTIONS:

1. Division 7 Section – Roof Deck & Insulation
2. Division 7 Section – Reroof Preparation
3. Division 7 Section – Sheet Metal Flashing and Trim
4. Division 7 Section – Modified Bitumen Roofing
5. Division 7 Section – EPDM Roofing
6. Division 7 Section – Roof Accessories
7. Division 07 Section – Joint Sealants

1.2 SUMMARY:

- A. This portion of the specification sets forth the general requirements, including the quality and type of materials required for the installation of all pressure treated lumber used for wood curbs, nailing strips, miscellaneous blocking material, unexposed fillers, fascia, edging strips, etc

1.3 STORAGE:

- A. All material specified herein shall be stored (after delivery to the site) so that it will be fully protected from damage and weather, and shall be piled to prevent warpage. All lumber shall be fully protected to maintain the original required moisture content as specified in item titled "Moisture Content".

1.4 OTHER REQUIREMENTS:

- A. Dimensions indicated on the drawings are nominal dimensions (except where details show actual sizes) and shall be subject to the standard reductions required for surfacing or tolerances permitted by the grading rules. Unless otherwise indicated on drawings, all material shall be S4S (surfaced four sides).

1.5 PROTECTION:

- A. All finished work shall be adequately protected against damage from any source.

1.6 COORDINATION:

- A. Carpenters shall coordinate their work with that of the other trades so that progress continues without interruption.

PART 2 – PRODUCTS

2.1 WOOD - FRAMING AND CURBS:

- A. GRADING RULES, GRADES, AND SPECIES
 - 1. Lumber: Southern Pine, yellow pine, Douglas fir, spruce, ponderosa pine, larch or Hemlock and shall meet the following minimum grade requirement of construction standard (75% #1 and 25% #2); free from warping and visible decay. Lumber shall be graded according to the standard grading rules of the Southern Pine Inspection Bureau, the West Coast Lumber Inspection Bureau, or the Western Wood Products Association.

- B. MOISTURE CONTENT
 - 1. All lumber shall be air-dried or kiln-dried before treatment, so that the moisture content is not more than 19%. After treatment, it shall be kiln-dried at temperatures not exceeding 160 degrees F. (71 degrees C) so that the moisture content is not more than 19% at time of shipment.

- C. DECAY-RESISTANT TREATMENT:
 - 1. Lumber in contact with roofing or acting as fascias, and all other exterior lumber, shall be pressure-treated with a waterborne preservative in accordance with AWPA Specification P5. Creosote and oil-borne preservatives are not acceptable.
 - 2. Treating processes, material conditions, plant equipment, and other pertinent requirements shall conform to AWPA Specifications C1 and C2 for specific kind of lumber and type of preservative to be used. Retention shall be as required for intended use.
 - 3. All treated lumber shall bear the mark of a code recognized third party agency such as the AWPA.

- D. PLYWOOD:
 - 1. Grade: CDX or Cyme exterior Grade.
 - 2. Thickness: ¾ inch minimum

PART 3 - EXECUTION

3.1 CARPENTRY:

- A. At roof edge to receive metal fascia, around all roof top penetration perimeters, and under any flashing component that is to have a roof flange mechanically fastened to roofing substrate; Mechanically attach wood blocking. Blocking thickness: Equal to common 2x4", 2x12", 1x4".
- B. Fasteners shall be installed in two rows staggered. Spacing in any one row shall not exceed 24 inches. Within eight feet of outside corners, spacing shall not exceed twelve inches in any one row.

- C. Where required, offset blocking layers twelve inches, weave corners.
- D. Lumber shall be accurately cut to the work requirements and shall be well fastened.
- E. Bolted fastenings shall have washers of adequate size under both heads and nuts. Nails shall be of correct size and quantity for proper fastening. Oversized nails that will result in splitting shall not be used. All fasteners shall be galvanized per ASTM A 153.

END OF SECTION

SECTION 07 22 00

ROOF DECK AND INSULATION

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes roof insulation over the properly prepared deck substrate.
- B. Related Sections:
 - 1. Section 07 05 00 – Common Work Procedures for Thermal and Moisture Protection.
 - 2. Section 07 62 00 – Sheet Metal Flashing and Trim.

1.3 REFERENCES

- A. American Society for Testing and materials (ASTM):
 - 1. ASTM A167 Standard Specification for Stainless and Heat-Resisting Chromium Nickel Steel Plate, Sheet and Strip.
 - 2. ASTM A653 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvanized) by the Hot-Dip Process.
 - 3. ASTM B29 Standard Specification for Refined Lead.
 - 4. ASTM B32 Standard Specification for Solder Metal.
 - 5. ASTM C165 Standard Test Method for Measuring Compressive Properties of Thermal Insulation.
 - 6. ASTM C208 Standard Specification for Cellulosic Fiber Insulation Board.
 - 7. ASTM C209 Standard Test Method for Cellulosic Fiber Insulating Board.
 - 8. ASTM C272 Standard Test Method for Water Absorption of Core Materials for Structural Sandwich Constructions.
 - 9. ASTM C1396 Standard Specification for Gypsum Wallboard.
 - 10. ASTM C518 Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.
 - 11. ASTM C578 Standard Specification for Perlite Thermal Insulation Board.
 - 12. ASTM C728 Standard Test Methods for Fire Test of Roof Coverings.
 - 13. ASTM C1289 Standard Specification for Faced Rigid Polyisocyanurate Thermal Insulation.
 - 14. ASTM D5 Standard Test Method for Penetration of Bituminous Materials.
 - 15. ASTM D36 Standard Test Method for Softening Point of Bitumen (Ring and Ball Apparatus).
 - 16. ASTM D312 Standard Specification for Asphalt Used in Roofing.
 - 17. ASTM D412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers-Tension.
 - 18. ASTM D1621 Standard Test Method for Compressive Properties of Rigid Cellular Plastics.
 - 19. ASTM D1622 Standard Test Method for Apparent Density of Rigid Cellular Plastics.

20. ASTM D1863 Standard Specification for Mineral Aggregate Used on Built-Up Roofs.
 21. ASTM D2126 Standard Test Method for Response of Rigid Cellular Plastics to Thermal Humid Aging.
 22. ASTM D2178 Standard Specification for Asphalt Glass Felts used in Roofing and Waterproofing.
 23. ASTM D4601 Standard Specification for Asphalt-Coated Glass Fiber Base Sheet Used in Roofing.
 24. ASTM D5147 Standard Sampling and Testing Modified Bituminous Sheet Material.
- B. Cast Iron Soil Pipe Institute, Washington, D.C. (CISPI)
- C. National Roofing Contractors Association (NRCA):
1. Roofing and Waterproofing Manual.
- D. Underwriters Laboratories, Inc. (UL):
1. Fire Hazard Classifications.
- E. Warnock Hersey (WH):
1. Fire Hazard Classifications.
- F. Sheet Metal and Air Conditioning Contractors National Association (SMACNA)
- G. Southern Pine Inspection Bureau, Pensacola, Florida (SPIB)
- H. Insulation Board, Polyisocyanurate (FS HH-I-1972)
- I. Insulation Board, Thermal (Fiberboard) (FS LLL-1-535B)

1.4 SUBMITTALS

- A. Product Data: Provide manufacturer's specification data sheets for each product in accordance with Division 01 Section Submittal Procedures. 01300.
- B. Provide approval letters from insulation manufacturer for use of their insulation within this particular roofing system type.
- C. Provide a sample of each insulation type.
- D. Shop Drawings
1. Submit manufacturer's shop drawings indicating complete installation details of tapered insulation system, including identification of each insulation block, sequence of installation, layout, drain locations, roof slopes, thicknesses, crickets and saddles.
 2. Shop drawing shall include: Outline of roof, location of drains, complete board layout of tapered insulation components, thickness and the average "R" value for the completed insulation system.
- E. Certification
1. Submit roof manufacturer's certification that insulation fasteners furnished are acceptable to roof manufacturer.
 2. Submit roof manufacturer's certification that insulation furnished is acceptable to roofing manufacturer as a component of roofing system and is eligible for roof manufacturer's system warranty.

1.5 QUALITY ASSURANCE

- A. Fire Classification, ASTM E-108.
- B. Manufacturer's Certificate: Certify that roof system furnished is approved by Factory Mutual, Underwriters Laboratories, Warnock Hersey or approved third party testing facility in accordance with ASTM E108, Class [A or B or C] for external fire and meets local or nationally recognized building codes.
- C. Manufacturer's Certificate: Certify that the roof system is adhered properly to meet or exceed the requirements of FM [1-90].
- D. Pre-installation meeting: Refer to Division 07 roofing specifications for pre-installation meeting requirements.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver products to site with seals and labels intact, in manufacturer's original containers, dry and undamaged.
- B. Store all insulation materials in a manner to protect them from the wind, sun and moisture damage prior to and during installation. Any insulation that has been exposed to any moisture shall be removed from the project site.
- C. Keep materials enclosed in a watertight, ventilated enclosure (i.e. tarpaulins).
- D. Store materials off the ground. Any warped, broken or wet insulation boards shall be removed from the site.

PART 2 – PRODUCTS

2.1 PRODUCTS, GENERAL

- A. Refer to Division 01 Section "Common Product Requirements."
- B. Basis of Design: Materials, manufacturer's product designations, and/or manufacturer's names specified herein shall be regarded as the minimum standard of quality required for work of this Section. Comply with all manufacturer and contractor/fabricator quality and performance criteria specified in Part 1.
- C. Substitutions: Products proposed as equal to the products specified in this Section shall be submitted in accordance with Bidding Requirements and Division 01 provisions.
 - 1. Proposals shall be accompanied by a copy of the manufacturer's standard specification section. That specification section shall be signed and sealed by a professional engineer licensed in the state in which the installation is to take place. Substitution requests containing specifications without licensed engineer certification shall be rejected for non-conformance.
 - 2. Include a list of three (3) projects of similar type and extent, located within a one hundred mile radius from the location of the project. In addition, the three projects must be at least five (5) years old and be available for inspection by the Architect, Owner or Owner's Representative.
 - 3. Equivalency of performance criteria, warranty terms, submittal procedures, and contractual terms will constitute the basis of acceptance.

4. The Owner's decision regarding substitutions will be considered final. Unauthorized substitutions will be rejected.

2.2 INSULATION MATERIALS

- A. Thermal Insulation Properties and Approved Insulation Boards.
 1. Rigid Polyisocyanurate Roof Insulation; ASTM C1289:
 - a. Qualities: Rigid, closed cell polyisocyanurate foam core bonded to heavy duty glass fiber mat facers.
 - b. Thickness: Minimum [0.5 inches].
 - c. Compliances: UL, WH or FM listed under Roofing Systems Federal Specification HH-I-1972, Class 1.
 - d. Acceptable Products:
 - 1) ENRGY-3; Johns Manville
 - 2) Hytherm; Dow
 - 3) EnergyGuard; GAF
 - 4) Approved Equivalent
 2. Tapered Polyisocyanurate Roof Insulation; ASTM C1289:
 - a. Qualities: Factory Tapered, closed cell polyisocyanurate foam core bonded to heavy duty glass fiber mat facers.
 - b. Thickness: Minimum [0.5 inches]
 - c. Tapered Slope: [1/8]
 - d. Compliances: UL, WH or FM listed under Roofing Systems Federal Specification HH-I-1972, Class 1
 - e. Acceptable Products:
 - 1) ENRGY 3; Johns Manville
 - 2) EnergyGuard; GAF
 - 3) Approved Equivalent
 3. Dens-Deck Prime Roof Board
 - a. Qualities: Nonstructural glass mat faced, noncombustible, water-resistant treated gypsum core panel.
 - b. Board Size: Four feet by four feet (4'x4').
 - c. Thickness: One half (1/2) inch.
 - d. R-Value: .56

2.3 RELATED MATERIALS

- A. Fiber Cant and Tapered Edge Strips: Performed rigid insulation units of sizes/shapes indicated, matching insulation board or of perlite or organic fiberboard, as per the approved manufacturer.
 1. Acceptable Manufacturers:
 - a. The Garland Company, Inc.
 - b. Celotex
 - c. Johns Manville
 - d. GAF
 - e. Approved Equivalent
- B. Roof Board Joint Tape: Six (6) inches wide glass fiber mat with adhesive compatible with insulation board facers.
- C. Roof Deck Insulation Adhesive: Insul-Lock HR - Dual-component, high rise foam adhesive as recommended by insulation manufacturer and approved by FM indicated ratings.
 1. Tensile Strength (ASTM D412).....250 psi
 2. Density (ASTM D1875).....8.5 lbs./gal.

3. Viscosity (ASTM D2556).....22,000 to 60,000 cP.
4. 2`Peel Strength (ASTM D903).....17 lb/in.
5. 3`Flexibility (ASTM D816).....Pass @ -70°F

- D. Fasteners: Corrosion resistant screw fastener as recommended by roof membrane manufacturer.
1. Factory Mutual Tested and Approved with three (3) inches coated disc for I-90 rating, length required to penetrate metal deck one inch.

PART 3 – EXECUTION

3.1 EXECUTION, GENERAL

- A. Comply with requirements of Division 01 Section “Common Execution Requirements.”

3.2 INSPECTOR OF SURFACES

- A. Roofing contractor shall be responsible for preparing an adequate substrate to receive insulation.
1. Verify that work which penetrates roof deck has been completed.
 2. Verify that wood nailers are properly and securely installed.
 3. Examine surfaces for defects, rough spots, ridges, depressions, foreign material, moisture, and unevenness.
 4. Do not proceed until defects are corrected.
 5. Do not apply insulation until substrate is sufficiently dry.
 6. Broom clean substrate immediately prior to application.
 7. Use additional insulation to fill depressions and low spots that would otherwise cause ponding water.
 8. Verify that temporary roof has been completed.

3.3 INSTALLATION

- A. Attachment with Mechanical Fasteners
1. Approved insulation board shall be fully attached to the deck with an approved mechanical fastening system. As a minimum, the amount of fasteners shall be in accordance with manufacturer’s recommendation for FM I-90 system. Otherwise, a minimum of one fastener per two square feet shall be installed.
 2. Filler pieces of insulation require at least two fasteners per piece if size of insulation is less than four square feet.
 3. Spacing pattern of fasteners shall be as per manufacturer’s recommendations to meet the FM requirements. Placement of any fastener from edge of insulation board shall be a minimum of three inches, and a maximum of six (6) inches.
 4. Minimum penetration into deck shall be as recommended by the fastener manufacturer. There is a one (1) inch minimum for metal, wood and structural concrete decks where not specified by the manufacturer. For gypsum and cement-wood fiber decks, penetration shall be determined from pull-out test results with a minimum penetration of one and one-half (1 ½) inches.
 5. Gypsum and cementitious wood fiber decks: Where the roof deck is visible from the building interior, the contractor shall ensure no penetration of fasteners through underside of the deck. Any holes or spalling caused by fastener installation shall be repaired by the roofing contractor. Where the

new roof system thickness exceeds an amount so that a minimum of 1 ½ of penetration cannot be achieved with an Olympic TB Fastener, or approved equivalent, then (and only then) toggle bolts may be used to secure installation to the deck.

6. Tape joints of insulation as per manufacturer's requirements.

B. Attachment with Insulation Adhesive Approved by manufacturer.

1. Ensure all surfaces are clean, dry, free of dirt, debris, oils, loose ore embedded gravel, unadhered coatings, deteriorated membrane and other contaminants that may inhibit adhesion.
2. Apply insulation adhesive directly to the substrate using a ribbon pattern with one quarter to one half (1/4-1/2) inch wide beads 12 inches o.c., using either the manual applicator or an automatic applicator, at a rate of one (1) gallon per one hundred (150) square feet per cartridge.
3. Immediately place insulation boards into wet adhesive. Do not slide boards into place. Do not allow the adhesive to skin over before installing insulation boards.
4. Briefly step each board into place to ensure contact with the adhesive. Substrates with irregular surfaces may prevent the insulation board from making positive contact with the adhesive. Relief cuts or temporary weights may be required to ensure proper contact.
5. All boards shall be cut and fitted where the roof deck intersects a vertical surface. The boards shall be cut to fit a minimum of one quarter (1/4) inch away from the vertical surface.
6. Tape joints of insulation as per manufacturer's requirements.

3.4 CLEANING

- A. Remove debris and cartons from roof deck. Leave insulation clean and dry, ready to receive roofing membrane.

3.5 CONSTRUCTION WASTE MANAGEMENT

- A. Remove and properly dispose of waste products generated during installation. Comply with requirements of authorities having jurisdiction.

END OF SECTION

SECTION 07550
MODIFIED BITUMINOUS MEMBRANE ROOFING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Cold Applied 2-Ply Coal Tar Roofing (Millennium) (2.4)(3.4)

1.2 REFERENCES

- A. ASTM D 41 - Standard Specification for Asphalt Primer Used in Roofing, Dampproofing, and Waterproofing.
- B. ASTM D 312 - Standard Specification for Asphalt used in Roofing.
- C. ASTM D 451 - Standard Test Method for Sieve Analysis of Granular Mineral Surfacing for Asphalt Roofing Products.
- D. ASTM D 1970 - Specification for Sheet Materials, Self-Adhering Polymer Modified Bituminous, Used as Steep Roofing Underlayment for Ice Dam Protection.
- E. ASTM D 1079 Standard Terminology Relating to Roofing, Waterproofing and Bituminous Materials.
- F. ASTM D 1863 Standard Specification for Mineral Aggregate Used as a Protective Coating for Roofing.
- G. ASTM D 5147 Standard Test Method for Sampling and Testing Modified Bituminous Sheet Materials.
- H. ASTM D 6163 Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Glass Fiber Reinforcements.
- I. ASTM D 6164 - Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Polyester Reinforcements.
- J. ASCE 7, Minimum Design Loads for Buildings and Other Structures

1.3 DESIGN / PERFORMANCE REQUIREMENTS

- A. Perform work in accordance with all federal, state and local codes.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation instructions.
- C. Shop Drawings: Submit shop drawings including installation details of roofing, flashing, fastening, insulation and vapor barrier, including notation of roof slopes and fastening patterns of insulation and base modified bitumen membrane, prior to job start.
- D. Design Pressure Calculations: Submit design pressure calculations for the roof area in accordance with ASCE 7 and local Building Code requirements. Include a roof system

attachment analysis report, certifying the system's compliance with applicable wind load requirements before Work begins.

- E. Verification Samples: For each modified bituminous membrane ply product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.
- F. Manufacturer's Certificates: Provide to certify products meet or exceed specified requirements.
- G. Test Reports: Submit test reports, prepared by an independent testing agency, for all modified bituminous sheet roofing, indicating compliance with ASTM D 5147. Testing must be performed at 77 deg. F. Tests at 0 deg. F will not be considered.
- H. Closeout Submittals: Provide manufacturer's maintenance instructions that include recommendations for periodic inspection and maintenance of all completed roofing work. Provide product warranty executed by the manufacturer. Assist Owner in preparation and submittal of roof installation acceptance certification as may be necessary in connection with fire and extended coverage insurance on roofing and associated work.

1.5 QUALITY ASSURANCE

- A. Perform Work in accordance with NRCA Roofing and Waterproofing Manual.
- B. Manufacturer Qualifications: Company specializing in manufacturing products specified with documented ISO 9001 certification and minimum of twelve years of documented experience and must not have been in Chapter 11 bankruptcy during the last five years.
- C. Installer Qualifications: Company specializing in performing Work of this section with minimum five years documented experience and a certified Pre-Approved Garland Contractor.
- D. Installer's Field Supervision: Maintain a full-time Supervisor/Foreman on job site during all phases of roofing work while roofing work is in progress.
- E. Product Certification: Provide manufacturer's certification that materials are manufactured in the United States and conform to requirements specified herein, are chemically and physically compatible with each other, and are suitable for inclusion within the total roof system specified herein.
- F. Source Limitations: Obtain all components of roof system from a single manufacturer. Secondary products that are required shall be recommended and approved in writing by the roofing system Manufacturer. Upon request of the Architect or Owner, submit Manufacturer's written approval of secondary components in list form, signed by an authorized agent of the Manufacturer.

1.6 PRE-INSTALLATION MEETINGS

- A. Convene minimum two weeks prior to commencing Work of this section.
- B. Review installation procedures and coordination required with related Work.
- C. Inspect and make notes of job conditions prior to installation:
 - 1. Record minutes of the conference and provide copies to all parties present.
 - 2. Identify all outstanding issues in writing designating the responsible party for follow-up action and the timetable for completion.
 - 3. Installation of roofing system shall not begin until all outstanding issues are resolved to the satisfaction of the Architect.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store products in manufacturer's unopened packaging with labels intact until ready for installation.
- B. Store all roofing materials in a dry place, on pallets or raised platforms, out of direct exposure to the elements until time of application. Store materials at least 4 inches above ground level and covered with "breathable" tarpaulins.
- C. Stored in accordance with the instructions of the manufacturer prior to their application or installation. Store roll goods on end on a clean flat surface except store KEE-Stone FB 60 rolls flat on a clean flat surface. No wet or damaged materials will be used in the application.
- D. Store at room temperature wherever possible, until immediately prior to installing the roll. During winter, store materials in a heated location with a 50 degree F (10 degree C) minimum temperature, removed only as needed for immediate use. Keep materials away from open flame or welding sparks.
- E. Avoid stockpiling of materials on roofs without first obtaining acceptance from the Architect/Engineer.
- F. Adhesive storage shall be between the range of above 50 degree F (10 degree C) and below 80 degree F (27 degree C). Area of storage shall be constructed for flammable storage.

1.8 COORDINATION

- A. Coordinate Work with installing associated metal flashings as work of this section proceeds.

1.9 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Garland Company, Inc. (The); 3800 E. 91st St., Cleveland, OH 44105. ASD. Toll Free: 800-321-9336. Phone: 216-641-7500. Fax: 216-641-0633. Web Site: www.garlandco.com.
- B. Requests for substitutions will be considered in accordance with provisions of Section 01600.
- C. The Products specified are intended and the Standard of Quality for the products required for this project. If other products are proposed the bidder must disclose in the bid the manufacturer and the products that they intend to use on the Project. If no manufacturer and products are listed, the bid may be accepted only with the use of products specified.
 - 1. Bidder will not be allowed to change materials after the bid opening date.
 - 2. If alternate products are included in the bid, the products must be equal to or exceed the products specified. Supporting technical data shall be submitted to the Architect/ Owner for approval prior to acceptance.
 - 3. In making a request for substitution, the Bidder/Roofing Contractor represents that it has:
 - a. Personally investigated the proposed product or method, and determined that it is equal or superior in all respects to that specified.

- b. Will provide the same guarantee for substitution as for the product and method specified.
 - c. Will coordinate installation of accepted substitution in work, making such changes as may be required for work to be completed in all respects.
 - d. Will waive all claims for additional cost related to substitution, which consequently become apparent.
 - e. Cost data is complete and includes all related cost under his/her contract or other contracts, which may be affected by the substitution.
 - f. Will reimburse the Owner for all redesign cost by the Architect for accommodation of the substitution.
- 4. Architect/ Owner reserves the right to be the final authority on the acceptance or rejection of any or all bids, proposed alternate roofing systems or materials that has met ALL specified requirement criteria.
 - 5. Failure to submit substitution package, or any portion thereof requested, will result in immediate disqualification and consideration for that particular contractors request for manufacturer substitution.

2.2 COLD APPLIED 2-PLY COAL TAR ROOFING - MILLENNIUM

- A. Base (Ply) Sheet: One ply bonded to the prepared substrate with Interply Adhesive:
 - 1. Millennium Base:
- B. Modified Cap (Ply) Sheet: One ply bonded to the prepared substrate with interply adhesive.
 - 1. Millennium FR Mineral:
- C. Interply Adhesive: (1 and 2)
 - 1. Black-Knight/Black-Stallion Cold:
- D. Flashing Base Ply: One ply bonded to the prepared substrate with Interply Adhesive:
 - 1. Millennium Base:
- E. Flashing Cap (Ply) Sheet: One ply bonded to the prepared substrate with Interply Adhesive:
 - 1. Millennium FR Mineral:
- F. Flashing Ply Adhesive:
 - 1. Black-Knight/Black-Stallion Mastic:

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. Inspect and approve the deck condition, slopes and fastener backing if applicable, parapet walls, expansion joints, roof drains, stack vents, vent outlets, nailers and surfaces and elements.
- C. Verify that work penetrating the roof deck, or which may otherwise affect the roofing, has been properly completed.
- D. If substrate preparation and other conditions are the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. General: Clean surfaces thoroughly prior to installation.
 - 1. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

2. Fill substrate surface voids that are greater than 1/4 inch wide with an acceptable fill material.
3. Roof surface to receive roofing system shall be smooth, clean, free from loose gravel, dirt and debris, dry and structurally sound.
4. Wherever necessary, all surfaces to receive roofing materials shall be power broom and vacuumed to remove debris and loose matter prior to starting work.
5. Do not apply roofing during inclement weather. Do not apply roofing membrane to damp, frozen, dirty, or dusty surfaces.
6. Fasteners and plates for fastening components mechanically to the substrate shall provide a minimum pull-out capacity of 300 lbs. (136 k) per fastener. Base or ply sheets attached with cap nails require a minimum pullout capacity of 40 lb. per nail.
7. Prime decks where required, in accordance with requirements and recommendations of the primer and deck manufacturer.

3.3 INSTALLATION - GENERAL

- A. Install modified bitumen membranes and flashings in accordance with manufacturer's instructions and with the recommendations provided by the National Roofing Contractors Association's Roofing & Waterproofing Manual, the Asphalt Roofing Manufacturers Association, and applicable codes.
- B. General: Avoid installation of modified bitumen membranes at temperatures lower than 40-45 degrees F. When work at such temperatures unavoidable use the following precautions:
 1. Take extra care during cold weather installation and when ambient temperatures are affected by wind or humidity, to ensure adequate bonding is achieved between the surfaces to be joined. Use extra care at material seam welds and where adhesion of the applied product to the appropriately prepared substrate as the substrate can be affected by such temperature constraints as well.
 2. Unrolling of cold materials, under low ambient conditions must be avoided to prevent the likelihood of unnecessary stress cracking. Rolls must be at least 40 degrees F at the time of application. If the membrane roll becomes stiff or difficult to install, it must be replaced with roll from a heated storage area.
- C. Commence installation of the roofing system at the lowest point of the roof (or roof area), working up the slope toward the highest point. Lap sheets shingle fashion so as to constantly shed water
- D. All slopes greater than 2:12 require back-nailing to prevent slippage of the ply sheets. Use ring or spiral-shank 1 inch cap nails, or screws and plates at a rate of 1 fastener per ply (including the membrane) at each insulation stop. Place insulation stops at 16 ft o.c. for slopes less than 3:12 and 4 feet o.c. for slopes greater than 3:12. On non-insulated systems, nail each ply directly into the deck at the rate specified above. When slope exceeds 2:12, install all plies parallel to the slope (strapping) to facilitate backnailing. Install 4 additional fasteners at the upper edge of the membrane when strapping the plies.

3.4 INSTALLATION COLD APPLIED ROOF SYSTEM

- A. Nailable Base Sheet: Install base sheet nailed to the substrate with the appropriate fastener and fastening pattern determined from your wind uplift calculation.
- B. Base Ply: Cut base ply sheets into 18 foot lengths and allow plies to relax before installing. Install base sheet in Interply Adhesive: applied at the rate required by the manufacturer. Shingle base sheets uniformly to achieve one ply throughout over the prepared substrate. Shingle in proper direction to shed water on each large area of roofing.
 1. Lap ply sheet ends 8 inches. Stagger end laps 12 inches minimum.
 2. Solidly bond to the substrate and adjacent ply with specified cold adhesive at the rate of 2 to 2-1/2 gallons per 100 square feet.

3. Roll must push a puddle of adhesive in front of it with adhesive slightly visible at all side laps. Use care to eliminate air entrapment under the membrane.
 4. Install subsequent rolls of modified across the roof as above with a minimum of 4 inch side laps and 8 inch staggered end laps. Lay modified membrane in the same direction as the underlayers but the laps shall not coincide with the laps of the base layers.
 5. Extend plies 2 inches beyond top edges of cants at wall and projection bases.
 6. Install base flashing ply to all perimeter and projection details.
 7. Allow the one ply of base sheet to cure at least 30 minutes before installing the modified membrane. However, the modified membrane must be installed the same day as the base plies.
- C. Modified Cap Ply(s): Cut cap ply sheets into 18 foot lengths and allow plies to relax before installing. Install in interplay adhesive applied at the rate required by the manufacturer. Shingle sheets uniformly over the prepared substrate to achieve the number of plies specified. Shingle in proper direction to shed water on each large area of roofing.
1. Lap ply sheet ends 8 inches. Stagger end laps 12 inches minimum.
 2. Solidly bond to the base layers with specified cold adhesive at the rate of 2 to 2-1/2 gallons per 100 square feet.
 3. Roll must push a puddle of adhesive in front of it with adhesive slightly visible at all side laps. Care should be taken to eliminate air entrapment under the membrane.
 4. Install subsequent rolls of modified across the roof as above with a minimum of 4 inch side laps and 8 inch staggered end laps. Lay modified membrane in the same direction as the underlayers but the laps shall not coincide with the laps of the base layers.
 5. Allow cold adhesive to set for 5 to 10 minutes before installing the top layer of modified membrane.
 6. Extend membrane 2 inches beyond top edge of all cants in full moppings of the cold adhesive as shown on the Drawings.
- D. Fibrous Cant Strips: Provide non-combustible perlite or glass fiber cant strips at all wall/curb detail treatments where angle changes are greater than 45 degrees. Cant may be set in approved cold adhesives, hot asphalt or mechanically attached with approved plates and fasteners.
- E. Wood Blocking, Nailers and Cant Strips: Provide wood blocking, nailers and cant strips as specified in Section 06114.
1. Provide nailers at all roof perimeters and penetrations for fastening membrane flashings and sheet metal components.
 2. Wood nailers should match the height of any insulation, providing a smooth and even transition between flashing and insulation areas.
 3. Nailer lengths should be spaced with a minimum 1/8 inch gap for expansion and contraction between each length or change of direction.
 4. Nailers and flashings should be fastened in accordance with Factory Mutual "Loss Prevention Data Sheet 1- 49, Perimeter Flashing" and be designed to be capable of resisting a minimum force of 200 lbs/lineal foot in any direction.
- F. Metal Work: Provide metal flashings, counter flashings, parapet coping caps and thru-wall flashings as specified in Section 07620 or Section 07710. Install in accordance with the SMACNA "Architectural Sheet Metal Manual" or the NRCA Roofing Waterproofing manual.
- G. Termination Bar: Provide a metal termination bar or approved top edge securement at the terminus of all flashing sheets at walls and curbs. Fasten the bar a minimum of 8 inches (203 mm) o/c to achieve constant compression. Provide suitable, sealant at the top edge if required.
- H. Flashing Base Ply: Install flashing sheets by the same application method used for the base

ply.

1. Seal curb, wall and parapet flashings with an application of mastic and mesh on a daily basis. Do not permit conditions to exist that will allow moisture to enter behind, around or under the roof or flashing membrane.
2. Prepare all walls, penetrations, expansion joints and where shown on the Drawings to be flashed with required primer at the rate of 100 square feet per gallon. Allow primer to dry tack free.
3. Adhere to the underlying base ply with specified flashing ply adhesive unless otherwise specified. Nail off at a minimum of 8 inches (203 mm) o.c. from the finished roof at all vertical surfaces.
4. Solidly adhere the entire flashing ply to the substrate. Secure the tops of all flashings that are not run up and over curb through termination bar fastened at 6 inches (152 mm) O.C. and sealed at top.
5. Seal all vertical laps of flashing ply with a three-course application of trowel-grade mastic and fiberglass mesh.
6. Coordinate counter flashing, cap flashings, expansion joints and similar work with modified bitumen roofing work as specified.
7. Coordinate roof accessories, miscellaneous sheet metal accessory items, including piping vents and other devices with the roofing system work.
8. Secure the top edge of the flashing sheet using a termination bar only when the wall surface above is waterproofed, or nailed 4 inches on center and covered with an acceptable counter flashing.

I. Flashing Cap Ply:

1. Seal curb, wall and parapet flashings with an application of mastic and mesh on a daily basis. Do not permit conditions to exist that will allow moisture to enter behind, around or under the roof or flashing membrane.
2. Prepare all walls, penetrations, expansion joints and where shown on the Drawings to be flashed with required primer at the rate of 100 square feet per gallon. Allow primer to dry tack free.
3. Adhere to the underlying base flashing ply with specified flashing ply adhesive unless otherwise specified. Nail off at a minimum of 8 inches (203 mm) o.c. from the finished roof at all vertical surfaces.
4. Coordinate counter flashing, cap flashings, expansion joints and similar work with modified bitumen roofing work as specified.
5. Coordinate roof accessories, miscellaneous sheet metal accessory items with the roofing system work.
6. All stripping shall be installed prior to flashing cap sheet installation.
7. Heat and scrape granules when welding or adhering at cut areas and seams to granular surfaces at all flashings.
8. Secure the top edge of the flashing sheet using a termination bar only when the wall surface above is waterproofed, or nailed 4 inches on center and covered with an acceptable counter flashing.

J. Surface Coatings: Apply roof coatings in strict conformance with the manufacturer's recommended procedures.

K. Roof Walkways: Provide walkways in areas indicated on the Drawings.

3.5 CLEANING

- A. Clean-up and remove daily from the site all wrappings, empty containers, paper, loose particles and other debris resulting from these operations.
- B. Remove asphalt markings from finished surfaces.
- C. Repair or replace defaced or disfigured finishes caused by Work of this section.

3.6 PROTECTION

- A. Provide traffic ways, erect barriers, fences, guards, rails, enclosures, chutes and the like to protect personnel, roofs and structures, vehicles and utilities.
- B. Protect exposed surfaces of finished walls with tarps to prevent damage.
- C. Plywood for traffic ways required for material movement over existing roofs shall be not less than 5/8 inch (16 mm) thick.
- D. In addition to the plywood listed above, an underlayment of minimum 1/2 inch (13 mm) recover board is required on new roofing.
- E. Special permission shall be obtained from the Manufacturer before any traffic shall be permitted over new roofing.

3.7 FIELD QUALITY CONTROL

- A. Inspection: Provide manufacturer's field observations at start-up and at intervals of approximately 30 percent, 60 percent and 90 percent completion. Provide a final inspection upon completion of the Work.
 - 1. Warranty shall be issued upon manufacturer's acceptance of the installation.
 - 2. Field observations shall be performed by a Sales Representative employed full-time by the manufacturer and whose primary job description is to assist, inspect and approve membrane installations for the manufacturer.
 - 3. Provide observation reports from the Sales Representative indicating procedures followed, weather conditions and any discrepancies found during inspection.
 - 4. Provide a final report from the Sales Representative, certifying that the roofing system has been satisfactorily installed according to the project specifications, approved details and good general roofing practice.

3.8 SCHEDULES

- A. Base (Ply) Sheet:
 - 1. Millennium Base: 80 mil SBS (Styrene-Butadiene-Styrene) polymer modified coal tar base sheet utilizing polyester and fiberglass reinforcement.
 - a. Tensile Strength, ASTM D 5147
 - 1) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 310 lbf/in XD 310 lbf/in
 - 2) 50mm/min. @ 23 +/- 2 deg. C MD 54.25 kN/m XD 54.25 kN/m
 - b. Tear Strength, ASTM D 5147
 - 1) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 500 lbf XD 500 lbf
 - 2) 50mm/min. @ 23 +/- +2 deg. C MD 2224 N XD 2224 N
 - c. Elongation at Maximum Tensile, ASTM D 5147
 - 1) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 7% XD 8%
 - 2) 50mm/min. @ 23 +/- 2 deg. C MD 7% XD 8%
 - d. Low Temperature Flexibility, ASTM D 5147, Passes -76 deg. F (-60 deg. C)
- B. Thermoplastic/Modified Cap (Ply) Sheet:
 - 1. Millennium FR Mineral: 160 mil SBS (Styrene-Butadiene- Styrene) Mineral Surfaced Coal Tar polymer modified membrane with fire retardant characteristics utilizing polyester and fiberglass reinforcement.
 - a. Tensile Strength, ASTM D 5147
 - 1) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 310 lbf/in XD 310 lbf/in
 - 2) 50mm/min. @ 23 +/- 2 deg. C MD 54.25 kN/m XD 54.25 kN/m
 - b. Tear Strength, ASTM D 5147
 - 1) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 500 lbf XD 500 lbf
 - 2) 50mm/min. @ 23 +/- +2 deg. C MD 2224 N XD 2224 N

- c. Elongation at Maximum Tensile, ASTM D 5147
 - 1) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 3.5% XD 3.5%
 - 2) 50mm/min. @ 23 +/- 2 deg. C MD 3.5% XD 3.5%
 - d. Low Temperature Flexibility, ASTM D 5147, Passes -76 deg. F (-60 deg. C)
- C. Interply Adhesive:
- 1. Black-Knight/Black-Stallion Cold: Rubberized, polymer modified cold process coal tar roofing bitumen
 - a. Non-Volatile Content ASTM D 4479 77%
 - b. Density ASTM D1475 9.4lb./gal.
- D. Flashing Base Ply:
- 1. Millennium Base: 80 mil SBS (Styrene-Butadiene-Styrene) polymer modified coal tar base sheet utilizing polyester and fiberglass reinforcement.
 - a. Tensile Strength, ASTM D 5147
 - 1) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 310 lbf/in XD 310 lbf/in
 - 2) 50mm/min. @ 23 +/- 2 deg. C MD 54.25 kN/m XD 54.25 kN/m
 - b. Tear Strength, ASTM D 5147
 - 1) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 500 lbf XD 500 lbf
 - 2) 50mm/min. @ 23 +/- +2 deg. C MD 2224 N XD 2224 N
 - c. Elongation at Maximum Tensile, ASTM D 5147
 - 1) 2 in/min. @ 73.4 +/- 3.6 deg. F MD 7% XD 8%
 - 2) 50mm/min. @ 23 +/- 2 deg. C MD 7% XD 8%
 - d. Low Temperature Flexibility, ASTM D 5147
 - 1) Passes -76 deg. F (-60 deg. C)
- E. Flashing Ply Adhesive:
- 1. Black-Knight/Black-Stallion Mastic: Rubberized, polymer modified coal tar cold process roofing flashing bitumen.
 - a. Non-Volatile Content ASTM D 4479 87%
 - b. Density ASTM D 1475 9.0lb./gal.
 - c. V.O.C. ASTM D 3960 Less than 200
 - d. Flash Point ASTM D 93 105 deg. F (40 deg. C)

END OF SECTION

SECTION 07 62 00

EDGE METAL, SHEET METAL FLASHING, AND TRIM

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Provide all labor, equipment, and materials to fabricate and install the following.
 - 1. Fascia and edge material
 - 2. Gutters, scuppers and down spouts
 - 3. Counter Flashings
- B. Related Work Specified Elsewhere:
 - 1. Division 06 Section - Rough Carpentry
 - 2. Division 07 Section – Roof Preparation
 - 3. Division 07 Section – Roof Deck & Insulation
 - 4. Division 07 Section - Modified Bituminous Membrane Roofing
 - 5. Division 07 Section – Alternate: EPDM Roofing
 - 6. Division 07 Section - Roof Accessories
 - 7. Division 07 Section – Joint Sealants

1.3 REFERENCES

- A. American Society for Testing and Materials (ASTM)
 - 1. ASTM A653 Standard Specification for Steel Sheet, Zinc-Coated (galvanized) or Zinc-Iron Alloy-Coated (galvannealed) by the Hot-Dip Process.
 - 2. ASTM A792 Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy Coated by the Hot-Dip Process.
 - 3. ASTM B209 Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
 - 4. ASTM B221 Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
 - 5. ASTM D692 Standard Specification for Coarse Aggregate for Bituminous Paving Mixtures.
- B. American National Standards Institute and Single Ply Roofing Institute (ANSI/SPRI)
 - 1. ANSI/SPRI ES-1 Testing and Certification Listing of Shop Fabricated Edge Metal
- C. Warnock Hersey International, Inc., Middleton, WI (WH)
- D. Factory Mutual Research Corporation (FMRC)
 - 1. FM 1-49 Loss Prevention Data Sheet
- E. Underwriters Laboratories (UL)
- F. Sheet Metal and Air Conditioning Contractors National Association (SMACNA)
 - 1. 1993 Edition Architectural Sheet Metal Manual
- G. National Roofing Contractors Association (NRCA)

1. Roofing and Waterproofing Manual
- H. American Society of Civil Engineers (ASCE)
 1. ASCE 7 Minimum Design Loads for Buildings and Other Structures

1.4 SUBMITTALS FOR REVIEW

- A. Product Data:
 1. Provide manufacturer's specification data sheets for each product.
 2. Metal material characteristics and installation recommendations.
 3. Submit color chart prior to material ordering and/or fabrication so that equivalent colors to those specified can be approved.
- B. Samples: Submit two (2) samples, illustrating typical metal edge, coping, gutters, fascia extenders for material and finish.
- C. Shop Drawings
 1. For manufactured and ANSI/SPRI ES-1 compliant shop fabricated gravel stops, fascia, scuppers, and all other sheet metal fabrications.
 2. Indicate material profile, jointing details, fastening methods, flashing, terminations, and installation details.
 3. Indicate type, gauge and finish of metal
- D. Specimen Warranty: Provide an unexecuted copy of the warranty specified for this Project, identifying the terms and conditions required of the Manufacturer and the Owner.

1.5 SUBMITTALS FOR INFORMATION

- A. Design Loads: Any material submitted as equal to the specified material must be accompanied by a report signed and sealed by a professional engineer licensed in the state in which the installation is to take place. This report shall show that the submitted equal meets the wind uplift and perimeter attachment requirements according to ASCE 7 and that the submitted equal edge metal system is compliant with the ANSI/SPRI ES-1 standard. Substitution requests submitted without licensed engineer approval will be rejected for non-conformance.
- B. Factory Mutual Research Corporation's (FMRC) wind uplift resistance classification: The roof perimeter flashing shall conform to the requirements as defined by the FMRC Loss Prevention Data Sheet 1-49.
- C. A letter from the manufacturing company certifying that the materials furnished for this project are the same as represented in tests and supporting data.

1.6 CONTRACT CLOSEOUT SUBMITTALS

- A. Special Project Warranty: Provide specified warranty for the Project, executed by the authorized agent of the Manufacturer.
- B. Roofing Maintenance Instructions. Provide a manual of manufacturer's recommendations for maintenance of installed roofing systems.

1.7 QUALITY ASSURANCE

- A. Engage an experienced roofing contractor specializing in sheet metal flashing work with a minimum of five (5) years experience.

- B. Maintain a full-time supervisor/foreman who is on the job-site at all times during installation. Foreman must have a minimum of five (5) years experience with the installation of similar system to that specified.
- C. Source Limitation: Obtain components from a single manufacturer. Secondary products which cannot be supplied by the specified manufacturer shall be approved in writing by the primary manufacturer prior to bidding.
- D. Upon request fabricator/installer shall submit work experience and evidence of financial responsibility. The Owner's representative reserves the right to inspect fabrication facilities in determining qualifications.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in manufacturer's original, unopened containers or packages with labels intact and legible.
- B. Stack pre-formed and pre-finished material to prevent twisting, bending, or abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
- C. Prevent contact with materials which may cause discoloration or staining.

1.9 PROJECT CONDITIONS

- A. Determine that work of other trades will not hamper or conflict with necessary fabrication and storage requirements for pre-formed metal edge system.

1.10 DESIGN AND PERFORMANCE CRITERIA

- A. Thermal expansion and contraction:
 1. Completed metal edge flashing system, shall be capable of withstanding expansion and contraction of components caused by changes in temperature without buckling, producing excess stress on structure, anchors or fasteners, or reducing performance ability.

1.11 WARRANTIES

- A. Owner shall receive one (1) warranty from manufacturer of roofing materials covering all of the following criteria. Multiple warranties are not acceptable.
 1. Pre-finished metal material shall require a written thirty (30)- year non-prorated warranty covering fade, chalking and film integrity. The material shall not show a color change greater than 5 NBS color units per ASTM D2244 or chalking excess of 8 units per ASTM D659. If either occurs material shall be replaced per warranty, at no cost to the Owner.
 2. Changes: Changes or alterations in the edge metal system without prior written consent from the manufacturer shall render the system unacceptable for a warranty.
 3. Warranty shall commence on date of substantial completion or final payment, whichever is agreed by contract.
 4. The Contractor shall provide the Owner with a notarized written warranty assuring that all sheet metal work including caulking and fasteners to be watertight and secure for a period of two years from the date of final acceptance of the building. Warranty shall include all materials and workmanship required to repair any leaks that develop, and make good any damage to other work or equipment caused by such leaks or the repairs thereof.

5. Installing roofing contractor shall be responsible for the installation of the edge metal system in general accordance with the membrane manufacturer's recommendations.
6. Installing contractor shall certify that the edge metal system has been installed per the manufacturer's printed details and specifications.
7. One manufacturer shall provide a single warranty for all accessory metal for flashings, metal edges and copings, along with the warranty for metal roof areas, membrane roof areas, and any transitions between two different material types.

PART 2 – PRODUCTS

2.1 PRODUCTS, GENERAL

- A. Basis of Design: Materials, manufacturer's product designations, and/or manufacturer's names specified herein shall be regarded as the minimum standard of quality required for work of this Section. Comply with all manufacturer and contractor/fabricator quality and performance criteria specified in Part 1.
- B. Substitutions: Products proposed as equal to the products specified in this Section shall be submitted in accordance with Bidding Requirements and Division 01 provisions.
 1. Proposals shall be accompanied by a copy of the manufacturer's standard specification section.
 2. Include a list of three (3) projects of similar type and extent, located within a one hundred mile radius from the location of the project. In addition, the three projects must be at least five (5) years old and be available for inspection by the Architect, Owner or Owner's Representative.
 3. Equivalency of performance criteria, warranty terms, submittal procedures, and contractual terms will constitute the basis of acceptance.
 4. The Owner's decision regarding substitutions will be considered final. Unauthorized substitutions will be rejected.

2.2 ACCEPTABLE MANUFACTURERS

- A. The design is based upon roofing systems engineered and manufactured by

The Garland Company
3800 East 91st Street
Cleveland, Ohio 44105
Telephone: (800) 762-8225
Website: www.garlandco.com

2.3 MATERIALS

- A. General: Product designations for the materials used in this section shall be based on performance characteristics of the R-Mer metal edge system and/or Flat sheets provided and/or manufactured by The Garland Company, Cleveland, OH, and shall form the basis of the contract documents.
- B. Materials: Minimum gauge of steel or thickness of Aluminum to be specified in accordance with Architectural Sheet Metal Manual, Sheet Metal and Air Conditioning Contractor's National Association, Inc. recommendations.

- C. R-Mer Force Flash-less Snap-On Fascia Cover and Splice Plate
 - 1. Aluminum, ASTM B209, alloy 3105-H14, in thickness of .040" nom. or .050" nom.
- D. R-Mer Force Flash-less Snap-On Fascia Extruded Base Anchor
 - 2. Base Anchor and Anchor Splice Plates: 6005A-T61 extruded aluminum
 - 3. Compression Seal for top of anchor: TPE thermoplastic elastomer.
 - 4. Sealant for Flange: Green-Lock Sealant XL: Single-component high performance 100% solids, interior and exterior polyether joint sealant
- E. Sheet Stock
 - 1. Aluminum, ASTM B209, alloy 3105-H14, in thickness of .040" nom. or .050" nom.
- F. Finishes
 - 1. Exposed surfaces for coated panels:
 - a. Fluorocarbon finish. Epoxy primer baked both sides, .2-.25 mils thickness as approved by finish coat manufacturer. Weathering finish as referred by National Coil Coaters Association (NCCA).

PROPERTY	TEST METHOD	FLUOROCARBON*
Pencil Hardness	ASTM D3363 NCCA II-2	HB-H
Bend	ASTM D-4145 NCCA II-19	O-T
Cross-Hatch Adhesion	ASTM D3359	no loss of adhesion
Gloss (60° angle)	ASTM D523	25+/-5%
Reverse Impact	ASTM D2794	no cracking or loss of adhesion
Nominal Thickness	ASTM D1005	
Primer		0.2 mils
Topcoat		0.7 mils min
Clear Coat (optional, only to be used with 22 gauge steel)		0.3 mils

*Subject to minimum quantity requirements

- b. Color shall be chosen by the Owner.

- 2. Exposed and unexposed surfaces for mill finish flashing, fascia, and coping cap, shall be as shipped from the mil

2.4 RELATED MATERIALS AND ACCESSORIES

- A. Metal Primer: Zinc chromate type.
- B. Plastic Cement: ASTM D 4586
- C. Sealant: Specified in Section 07900 or on drawings.
- D. Underlayment: ASTM D2178, No 15 asphalt saturated roofing felt.
- E. Slip Sheet: Rosin sized building paper.
- F. Fasteners:
 - 1. Corrosion resistant screw fastener as recommended by metal manufacturer. Finish exposed fasteners same as flashing metal.
 - 2. Fastening shall conform to Factory Mutual requirements or as stated on section details, whichever is more stringent.
- G. Gutter and Downspout Anchorage Devices: Material as specified for system

PART 3 – EXECUTION

3. EXECUTION, GENERAL

- A. Refer to Division 07 Section Common Work Results for Thermal and Moisture Protection.

4. PROTECTION

- A. Isolate metal products from dissimilar metals, masonry or concrete with bituminous paint, tape, or slip sheet. Use gasketed fasteners where required to prevent corrosive reactions.

5. GENERAL

- A. Secure fascia to wood nailers at the bottom edge with a continuous cleat.
- B. Fastening of metal to walls and wood blocking shall comply with building code standards.
- C. All accessories or other items essential to the completeness of sheet metal installation, whether specifically indicated or not, shall be provided and of the same material as item to which applied.
- D. Allow sufficient clearances for expansion and contraction of linear metal components. Secure metal using fasteners as required by the system. Exposed face fastening will be rejected.

6. INSPECTION

- A. Verify that curbs are solidly set and nailing strips located.
- B. Perform field measurements prior to fabrication.
- C. Coordinate work with work of other trades.
- D. Verify that substrate is dry, clean and free of foreign matter.

- E. Commencement of installation shall be considered acceptance of existing conditions.
7. MANUFACTURED SHEET METAL SYSTEMS
- A. Furnish and install manufactured fascia and coping cap systems in strict accordance with manufacturer's printed instructions.
 - B. Provide factory-fabricated accessories including, but not limited to, fascia extenders, miters, scuppers, joint covers, etc. refer to Source limitation provision in Part 1.
8. SHOP-FABRICATED SHEET METAL
- A. Metal work shall be shop fabricated to configurations and forms in accordance with recognized sheet metal practices.
 - B. Hem exposed edges.
 - C. Angle bottom edges of exposed vertical surfaces to form drip.
 - D. Lap corners with adjoining pieces fastened and set in sealant.
 - E. Form joints for gravel stop fascia system, coping cap with a 3/8" opening between sections. Back the opening with an internal drainage plate formed to the profile of fascia piece.
 - F. Install sheet metal to comply with referenced ANSI/SPRI, SMACNA and NRCA standards.
9. FLASHING MEMBRANE INSTALLATION
- A. Flash-less Snap-On Fascia Detail with Extruded Aluminum Base Anchor
 1. Position base ply of the Built-Up and/or Modified Roofing membrane over the roof edge covering nailers completely, fastening eight (8) inches on center. Install membrane and cap sheet with proper material and procedure according to manufacturer's recommendations. Cap sheet shall stop at the edge of the roof and shall not turn over the edge of the nailer.
 2. Prior to installing the base anchor, assure a level plane is present. If not, shim the roof edge surface as required.
 3. Extruded base anchor: Apply two 1/4" beads of Green-Lock Sealant XL or equal on the bottom surface of the top flange of the extruded anchor.
 4. Set the extruded anchor on the edge and face fasten through pre-punched slots every 18 inches o.c. for 5.75 inch face fascia, and 18 inches o.c. staggered for any fascia size greater than 5.75 inches. Begin fastening 6 inches from ends.
 5. Install Green-Lock Sealant XL or equal at the ends of the base frame to prevent water from running between base anchor joints.
 6. Install compression seals every 40 inches on center in the slots located at the top of the extruded anchor.
 7. Install fascia cover setting the top flange over the top flange and compression seals of the base anchor. Assure compression seals are in place during this process. Beginning on one end and working towards the opposite end, press downward firmly (do not rotate) until "snap" occurs and cover is engaged along entire length of miter.
 8. Install splice plate at each end of the base anchor and fascia cover prior to the installation of the next adjacent ten foot piece.
 - B. Custom Beveled Fascia Detail

1. Position base plies of the Built-Up and/or Modified Roofing membrane over the roof edge covering nailers completely, fastening eight (8) inches on center. Install membrane and cap sheet with proper material and procedure according to manufacturer's recommendations.
 2. Install miters / end caps first.
 3. Cant Dam: Install Cant Dam with roofing nails twelve (12) inches on center through the top of metal flange and outside face.
 4. BUR or Modified Flashing: Prime Cant Dam at a rate of one hundred (100) square feet per gallon and allow to dry. Strip in Cant Dam with base flashing membrane extending six (6) inches into roof field, followed with a cap sheet extending nine (9) inches into the roof field. Install membrane and cap sheet with proper material and procedure according to manufacturer's recommendations.
 5. Place flashing piece into position for installation of the fascia.
 6. Fascia Cover: Insert splice plate at one end of the fascia and engage fascia with flashing piece. Sealant is to be placed between splice plates on metal edge pieces, one bead, approximately one (1) inch from fascia cover joint. Install flashing screws into pre-punched holes in fascia, compressing the flashing.
- C. Drip Edge Detail
1. Position base plies of the Built-Up and/or Modified Roofing membrane over the roof edge covering nailers completely, fastening eight (8) inches on center. Install membrane and cap sheet with proper material and procedure according to manufacturer's recommendations.
 2. Install continuous cleat on face of nailer and fasten six (6) inches on center.
 3. Install new Drip Edge hooked to continuous cleat. Set metal flange into roofing cement, nail every three (3) inches on center, and prime at a rate of one hundred (100) square feet per gallon.
 4. Drip Edge flange with base flashing membrane extending six (6) inches into roof field, followed with a cap sheet extending nine (9) inches onto roof field. Install membrane and cap sheet with proper material and procedure according to manufacturer's recommendations.
- D. Gravel Stop Detail
1. Position base plies of the Built-Up and/or Modified Roofing membrane over the roof edge covering nailers completely, fastening eight (8) inches on center. Install membrane and cap sheet with proper material and procedure according to manufacturer's recommendations.
 2. Install continuous cleat on face of nailer and fasten six (6) inches on center.
 3. Install new Gravel Stop hooked to continuous cleat. Set metal flange into roofing cement, nail every three (3) inches on center, and prime at a rate of one hundred (100) square feet per gallon.
 4. Strip in Gravel Stop flange with base flashing membrane extending six (6) inches into roof field, followed with a cap sheet extending nine (9) inches into the roof field. Install membrane and cap sheet with proper material and procedure according to manufacturer's recommendations.
- E. Edge Metal With Gutter
1. Positions base plies of the Built-Up and/or Modified Roofing membrane over the roof edge covering nailers completely, fastening eight (8) inches on center. Install manufacturer's membrane and cap sheet with proper material and procedure according to manufacturer's recommendations.
 2. Install gutter and strapping fastening six (6) inches on center.
 3. Install continuous cleat on face of nailer and fasten six (6) inches on center.

4. Install new edge metal hooked to continuous cleat. Set metal flange into roofing cement, nail every three (3) inches on center, and prime at a rate of one hundred (100) square feet per gallon.
5. Strip in edge metal with base flashing membrane extending six (6) inches into roof field, followed with a cap sheet extending nine (9) inches into the roof field. Install membrane and cap sheet with proper material and procedure according to manufacturer's recommendations.

10. CLEANING

- A. Clean installed work in accordance with the manufacturer's instructions.
- B. Replace damaged work than cannot be restored by normal cleaning methods.

11. CONSTRUCTION WASTE MANAGEMENT

- A. Remove and properly dispose of waste products generated. Comply with requirements of authorities having jurisdiction.

12. FINAL INSPECTION

- A. At completion of installation and associated work, meet with Contractor, Architect, installer, installer of associated work, Owner, roofing system manufacturer's representative, and other representatives directly concerned with performance of roofing system.
- B. Inspect work and flashing of roof penetrations, walls, curbs, and other equipment. List all items requiring correction or completion and furnish copy of list to each party in attendance.
- C. Repair or replace deteriorated or defective work found at time above inspection as required to a produce an installation which is free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- D. Notify the [Contractor] [Architect] [Owner] upon completion of corrections.
- E. Following the final inspection, provide written notice of acceptance of the installation from the roofing system manufacturer.
- F. Immediately correct roof leakage during construction. If the Contractor does not respond within twenty-four (24) hours, the Owner will exercise rights to correct the Work under the terms of the Conditions of the Contract.

END OF SECTION 07 62 00

SECTION 079200

JOINT SEALANTS

PART 1 – GENERAL

1.1 SUMMARY

- A. This document describes the sealing of vertical joints/cracks using a one-component elastomeric joint sealant.
- B. Related Sections:
 - 1. Division 07 Section - Modified Bituminous Membrane Roofing
 - 2. Division 07 Section – Alternate: EPDM Roofing
 - 3. Division 07 Section – Edge Metal, Sheet Flashing, & Trim
 - 4. Division 07 Section - Roof Accessories

1.2 SYSTEM DESCRIPTION

- A. Design Requirements:
 - 1. Design number of joints and joint widths for maximum of $\pm 25\%$ movement.
 - 2. Design depth of sealant to be $\frac{1}{2}$ width of joint.
 - a. Maximum Depth: $\frac{1}{2}$ in.
 - b. Minimum Depth: $\frac{1}{4}$ in.
 - c. Maximum Recommended Width: 1 in.
- B. Performance Requirements: ASTM C 920, Type S, Grade NS, Use T2, NT, M, A, G and O, Federal Specification TT-C-0230C, ASTM C 1382 for use with EIFS

1.3 DELIVERY, STORAGE AND HANDLING

- A. All materials must be delivered in original packaging.
- B. Materials must be kept off the ground and protected from inclement weather conditions including but not limited to rain, snow, ice, frost, and high temperatures.

1.4 SUBMITTALS

- A. Product Data: For each joint-sealant product indicated.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of the material for this project.
- B. Source Limitations: Obtain each kind of joint sealant and primer from single source and single manufacturer.
- C. Product Testing: Field Test to ensure proper adhesion with or without primer
- D. Pre-installation Conference: Conduct conference at project site.

1.6 PROJECT CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:

1. When ambient and substrate temperature conditions are outside limits permitted by joint sealant manufacturer.
2. When joint substrates surfaces are damp or wet.
3. Where joint widths are outside of the joint width parameters set by the joint sealant manufacturers recommendations.
4. Where contaminants capable of interfering with adhesion have not yet been properly removed from joint substrates.
5. Where joint movement will occur exceeding the sealants capabilities.

1.7 WARRANTY

- A. Upon completion of installation, and acceptance by the owner and architect, the manufacturer will supply to the owner the appropriate warranty.
- B. Installer will submit a two (2) year labor warranty to the sealant manufacturer directly and provide a copy directly to owner (5 Year Material Only)

PART 2 – PRODUCTS

1.1 GENERAL MATERIALS

- A. Compatibility: Provide joint sealants, approved backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer, based on testing and field experience.
- B. Liquid-Applied Joint Sealants: Comply with ASTM C 920 and other requirements for each liquid-applied joint sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.
- C. Joint Priming: (Only when manufacture recommends) Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- D. Backing Material: Provide backing material or bond breaker tape compatible with joint sealant based on manufacturers recommendations.

1.2 SILICONE JOINT SEALANT PRODUCTS

- A. Silicone Sealant: One part, medium, modulus, non-corrosive high performance silicone sealant as recommended and furnished by the membrane manufacturer.
 1. Tensile Strength (ASTM D412): 230 psi
 2. Elongation (ASTM D412): 360%
 3. Hardness, Shore A (ASTM C920): 24

1.3 MS JOINT SEALANTS

- A. Sealant: Single component, 100% solids structural adhesive as furnished and recommended by the membrane manufacturer.
 1. Elongation (ASTM D412): 450 - 550%
 2. Hardness, Shore A (ASTM C920): 25 - 35
 3. Shear Strength (ASTM D1002): 275 psi

- 1.4 POLYETHER JOINT SEALANTS Sealant: Single component, 100% solids structural adhesive as furnished and recommended by the membrane manufacturer.
1. Elongation at Break: 750%
 2. Hardness, Shore A (ASTM D-2240) at 21 days: 24 ±

PART 3 – SCOPE OF WORK

3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants. With installer present, ensure joint sealant manufacturer's requirements for joint configuration, installation tolerances, and other conditions proven to affect joint sealants performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant including; dust, old joint sealant, oil, grease, frost, moisture, and any other foreign contaminants that could interfere with proper adhesion.
 2. Prepare and clean porous joint substrate surfaces by mechanical abrading, grinding, brushing, or a combination of these methods to produce a virgin, sound substrate capable of developing a tenacious bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air.
 3. Once joint is prepared adequately wipe surface with the sealant manufacturer's recommended cleaner prior to sealant application.
 4. If primer is specified install once the joint is cleaned and dry by manufacturer's recommended method of preparation and backing material must be installed following the primer and not before or 3 point adhesion will occur.

3.2 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
- B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Install approved sealant backings of kind indicated on sealant manufacturer's data sheet to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
 1. Ensure sealant backing material is continuous and free of any gaps between each section.
 2. Do not stretch, twist, puncture, or tear sealant backings.
 3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry approved material.
- D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
 1. Ensure proper backing material is used.
 2. Ensure backing material is installed at proper depth.
 3. Ensure proper size backing material is used.

- E. Install masking tape to protect surfaces adjacent to recessed tooled joints.
- F. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
 - 1. Install sealant into prepared joints when joint is at the midpoint of its contraction and expansion cycle.
 - 2. Install sealants so they directly contact and fully wet the joint substrates.
 - 3. Completely fill the recesses in each joint configuration.
 - 4. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow sealants to utilize maximum movement capabilities.

END OF SECTION



THE GARLAND COMPANY, INC.

HIGH PERFORMANCE ROOFING AND BUILDING ENVELOPE SYSTEMS

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PHONE: (216) 641-7500 • FAX: (216) 641-0633
NATIONWIDE: 1-800-321-9336

Palmer Building Roof Improvement 2021 – Foamed In Place Insulation

Scope of work: Bid Item 1:

1. Provide all labor and materials to install a code compliant foamed in place thermal insulation system on the underside of the wood deck – between joists.
2. The system shall also be code compliant for fireproofing that meets or exceeds UL 1715.
3. The system minimum R-value: R38
4. Refer to provided specification The Staycell® HYBRID Spray Polyurethane Insulation Systems.
5. The contractor should also apply this system to cover all air gaps along the top of the existing CMU wall stopping flush with the top of the CMU.

End of Section

SECTION 07 21 19 - FOAMED-IN-PLACE INSULATION

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. 1. General Conditions, Supplementary Conditions, Instructions to Bidders and Division One General Requirements shall be read in conjunction with and govern this section.

1.2 SECTION INCLUDES

- A. Staycell® HYBRID Spray Polyurethane Foam Insulation System consisting of:
 - 1. Staycell® 265, 275-1.8 or 275-2.0 spray polyurethane foam insulation applied as the base layer on specified substrates.
 - 2. Staycell ONE STEP® 255 spray polyurethane foam insulation (top layer) applied onto the Staycell® 265, 275-1.8 or 275-2.0 base layer as the exposed surface.

1.3 REFERENCES

- A. ASTM C 518-04 Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter
- B. ASTM D 1621-04a Standard Test Method for Compressive Properties of Rigid Cellular Plastics
- C. ASTM D 1622-03 Standard Test Method for Apparent Density of Rigid Cellular Plastics
- D. ASTM D 1623-03 Standard Test Method for Tensile and Tensile Adhesion Properties for Rigid Cellular Plastics
- E. ASTM D 6226-05 Standard Test Method for Open Cell Content of Rigid Cellular Plastics
- F. ASTM E 283-04 Standard Test Method for Determining Rate of Air Leakage
- G. ASTM E 2178-03 Standard Test Method for Determining Air Permeance
- H. ASTM E 84-08 Standard Test Method for Surface Burning Characteristics of Building Materials
- I. ASTM E 96-05 Standard Test Method for Water Vapor Transmission of Materials
- J. UL 1715 - 97 Fire Test of Interior Finish Material (revisions thru 2008)

1.4 SUBMITTALS

- A. Qualifications:

1. Submit certificates of completion for all workers of the Center for Polyurethane Industry (CPI) Health and Safety Training Course.
2. Applicator shall be a designated Authorized Applicator of Preferred Solutions, Inc., Cleveland, Ohio. Such designation certified in writing by Preferred Solutions, Inc. shall be submitted by the applicator.

B. Products:

1. Manufacturer's technical data sheets.
2. Manufacturer's installation instructions.
3. Material Safety Data Sheets (MSDS).
4. Evaluation Reports: Issued by an organization accredited by International Accreditation Services, Inc. (a subsidiary of ICC) indicating the products have a flame spread index ≤ 25 , smoke developed index ≤ 450 and complies with all acceptance criteria of the UL 1715, UL 1040, FM 4880 or NFPA 286 large-scale fire test standards when tested without thermal barriers, ignition barriers or any other fire protective surface(s).
5. Field quality control procedures to be utilized by Applicator to assure proper installation of the products.
6. Shop drawings on sheet metal, accessories or other fabricated items, if required.
7. Samples: Submit samples (3" x 3") of each material specified.

1.5 MATERIALS DELIVERY AND STORAGE

- A. Materials shall be delivered in the manufacturer's original, tightly sealed containers, labeled with the manufacturer's name, product identification, date of manufacture, lot number(s) and fire ratings issued by an accredited inspection agency.
- B. Containers shall be stored out of the weather, direct sun and in compliance with manufacturer's recommendations.

1.6 PROJECT CONDITIONS

- A. Temperature and field conditions: Install products within range of ambient air and substrate temperatures recommended by manufacturer. Do not apply products when substrate has surface moisture or has been contaminated by condensation, rain, mist, fog or snow. It is recommended that spray foam application not be done within 5 degrees F of the dew point.

PART 2 - PRODUCTS

2.1 INSULATION & AIR BARRIER (Basis of Design)

- A. Total System R-value:
 1. Minimum R38 continuous
- B. Staycell® 265 spray polyurethane foam insulation shall have the following minimum properties:
 1. Thermal Resistance/Insulation Value (ASTM C-518):
 - R-6.7 per inch @ < 4-inch thick
 - R-6.9 per inch @ \geq 4-inch thick
 2. Compressive Strength (ASTM D-1621): 26 psi
 3. Nominal Density (ASTM D-1622): 2.0 pcf
 4. Tensile Strength (ASTM D-1623): 62.4 psi

5. Closed Cell Content (ASTM D-6226): 98%
 6. Air Permeance (ASTM E-283): 0.005 L/s/m² @ 1 inch
 7. Water Vapor Permeance (ASTM E-96):
 - 1.39 perms @ 1"
 - .70 perms @ 2"
 - .46 perms @ 3"
 - .35 perms @ 4"
 8. Fire Ratings:
 - ASTM E-84 (tested at 4 inch thickness):
 - Flame spread index: 25
 - Smoke developed index: 350
 9. Manufacturer: Preferred Solutions, Inc., Cleveland, OH
- C. Staycell® 275-1.8 spray polyurethane foam insulation shall have the following minimum properties:
1. Thermal Resistance/Insulation Value (ASTM C-518): R-6.47 per inch
 2. Compressive Strength (ASTM D-1621): 25 psi
 3. Nominal Density (ASTM D-1622): 1.8 pcf
 4. Tensile Strength (ASTM D-1623): 55 psi
 5. Closed Cell Content (ASTM D-6226): 93%
 6. Air Permeance (ASTM E-283): 0.0036 L/s/m² @ 1 inch
 7. Water Vapor Permeance (ASTM E-96): .97 perms @ 1 inch
 8. Fire Ratings:
 - ASTM E-84 (tested at 4 inch thickness):
 - Flame spread index: 20
 - Smoke developed index: 450
 9. Manufacturer: Preferred Solutions, Inc., Cleveland, OH
- D. Staycell® 275-2.0 spray polyurethane foam insulation shall have the following minimum properties:
1. Thermal Resistance/Insulation Value (ASTM C-518): R-6.47 per inch
 2. Compressive Strength (ASTM D-1621): 35 psi
 3. Nominal Density (ASTM D-1622): 2.0 pcf
 4. Tensile Strength (ASTM D-1623): 55 psi
 5. Closed Cell Content (ASTM D-6226): 94%
 6. Air Permeance (ASTM E-283): 0.0036 L/s/m² @ 1 inch
 7. Water Vapor Permeance (ASTM E-96): .97 perms @ 1 inch
.47 perms @ 2 inch
 8. Fire Ratings:
 - ASTM E-84 (tested at 4 inch thickness):
 - Flame spread index: 20
 - Smoke developed index: 450
 9. Manufacturer: Preferred Solutions, Inc., Cleveland, OH
- E. Staycell ONE STEP® 255 spray polyurethane foam insulation shall have the following minimum properties:
1. Thermal Resistance/Insulation Value (ASTM C-518): R-4.6 per inch
 2. Compressive Strength (ASTM D-1621): 22 psi
 3. Density (ASTM D-1622): 2.0 pcf
 4. Tensile Strength (ASTM D-1623): 28 psi
 5. Closed Cell Content (ASTM D-6226): 90%

6. Air Leakage (ASTM E-283): .0014 cfm/ft² @ 1.25"
7. Water Vapor Permeance (ASTM E-96): .99 perms @ 2.4 inches
8. Fire Ratings:
ASTM E-84 (tested at 4 inch thickness):
Flame spread index: 25
Smoke developed index: 400
9. Manufacturer: Preferred Solutions, Inc., Cleveland, OH

2.2 AUXILIARY MATERIALS

- A. Transition membranes for joints and transitions
 1. AIR-SHIELD or AIR-SHIELD LT by W.R. Meadows, Inc.
 2. Blueskin SA or Blueskin SA LT by Henry Corporation
 3. CCW 705 or CCW 705 LT by Carlisle Coatings and Waterproofing
- B. Primers to prepare substrates for receipt of transition membranes
 1. MEL-PRIME Adhesive or MEL-PRIME W/B by W.R. Meadows, Inc.
 2. Blueskin Adhesive or Blueskin LVC Adhesive by Henry Corporation
 3. CCW-702 WD or CCW-702 LV by Carlisle Coatings and Waterproofing
- C. Foam stop angle: Plastic angle used for foam stop at terminations and transitions
 1. Jam-Ex extruded plastic angle or equal made by Exo-Tec Manufacturing, Inc.
- D. Single-component sealant to bond plastic angle to substrate
 1. Dow 795 silicone building sealant, Dow Corning Corporation
 2. Sikaflex 1A polyurethane sealant, Sika Sarnafil Corporation
 3. Dymonic FC polyurethane sealant, Tremco Corporation
- E. Portable SPF application units for sealing around windows, doors and penetrations
 1. Versi-Foam by RHH, Inc.
 2. Froth-Pak, Dow Chemical Company
 3. Filler Foam by Hilti, Inc.
 4. Touch n' Foam by Convenience Products, Inc.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions over which the spray polyurethane foam insulation and air barrier will be installed for compliance with requirements.
- B. Verify that surfaces and conditions are suitable prior to commencing work of this section. Do not proceed with installation until unsatisfactory conditions have been corrected.
- C. Ensure items such as hangers for piping and ductwork are installed before work begins.

3.2 SURFACE PREPARATION

- A. Clean, prepare and treat substrate according to manufacturer's written instructions. Provide clean,

dust-free and dry substrate for spray polyurethane foam application.

- B. Ensure installed transition membranes and foam stop angles are fully adhered to all applicable surfaces and are capable of receiving spray polyurethane foam.

3.3 PROTECTION

- A. Mask and cover adjacent areas to protect from over spray.
- B. Ensure any required foam stop or back up material are in place to prevent over-spray.
- C. Seal off existing ventilation equipment and ductwork.
- D. Erect barriers, isolate area and post warning signs to advise non-protected personnel to avoid the spray area.

3.4 APPLICATION OF SPRAYED POLYURETHANE FOAM

- A. Spray-application of spray polyurethane foam shall be installed in accordance with manufacturer's written instructions.
- B. Apply only when surfaces and environmental conditions are within limits prescribed by the material manufacturer.
- C. Apply in consecutive passes as recommended by manufacturer to thickness as indicated on drawings and to achieve the specified R-Value.
- D. Staycell® HYBRID System: The Staycell® HYBRID System (comprised of either the Staycell® 265, 275- 1.8 or 275-2.0 base layer sprayed at a nominal 6 inch thickness covered by the Staycell ONE STEP® 255 top layer sprayed at a nominal 2.5 inch thickness) shall be sprayed onto the specified substrates where shown on the applicable drawings.
- E. Do not install spray polyurethane foam within 3 inches of heat emitting devices such as light fixtures and chimneys.
- F. Remove masking materials and overspray from adjacent areas after the foam surface has hardened. Ensure cleaning methods do not damage work performed by other sections.
- G. Trim as required any excess thickness that would interfere with the installation of the interior finish (steel framing, gypsum board, etc.) by other trades.
- H. Clean and restore surfaces soiled or damaged by Work of the section.
- I. Do not permit adjacent Work to be damaged by Work of this section. Damage to work of this section caused by other trades shall be repaired at the expense of the subcontractor causing the damage.

3.5 FIELD QUALITY CONTROL

- A. Daily records: The applicator shall keep daily records as to the square feet of surface sprayed each day, quantities of all materials used and thickness tests performed. One thickness test shall be conducted on every 500 square feet of covered surface. Such records shall be provided upon request.
- B. Installed product evaluation: In addition to verifying the thickness of all installed products, the following characteristics shall also be provided:
 - 1. The cellular structure shall be uniform and not be soft or spongy.
 - 2. The foam shall not have areas with hard or brittle sections or improperly proportioned materials.

3.6 SAFETY REQUIREMENTS

- A. Applicator shall comply with all provisions of MSDS sheets for the product.
- B. Ventilation shall be provided to assure fresh air is brought into the area being sprayed. Air shall be exhausted to the outside of the building by utilizing existing fans or by supplemental ventilation.
- C. Disposal of waste materials and containers shall be comply with federal, state and local regulations.

3.7 CLEAN-UP

- A. At the completion of the project, applicator shall clean up and remove from the site all material containers, waste materials and debris.

END OF SECTION 07 21 19

SECTION 072119
FOAMED-IN-PLACE INSULATION

PART 1 – GENERAL

1.1 SUMMARY

- A. Closed-cell spray polyurethane foam.
 - 1. Including required intumescent paint finish.
- B. Related Sections:
 - 1. Bid Package

1.4 SUBMITTALS

- A. Product Data: Provide manufacturer's specification data sheets for each product.
- B. Product Test Reports: For each product, for tests performed by a qualified testing agency.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: An authorized representative who is trained and approved by the manufacturer.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver products to site with seals and labels intact, in manufacturer's original containers, dry and undamaged.

PART 2 – PRODUCTS

2.1 CLOSED-CELL SPRAY POLYURETHANE FOAM

- A. Installation design:
 - 1. Install at a maximum thickness of 6-1/4" thick.
OR
Minimum R-value: R-38 between joists.
- B. Closed-Cell Spray Polyurethane Foam: ASTM C 1029, Type II, minimum density of 2.0 lb/cu. Ft. and minimum R-value at 1-inch thickness of 6.2 deg F x h x sq. ft.Btu at 75 deg. F.
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but not limited to the following:
 - a. BASF Corp.
 - b. Carlisle Spray Foam Insulation
 - c. Icynene-Lapolla; Icynene.
 - 2. Surface-Burning Characteristics: Comply with ASTM E 85; testing by a qualified agency. Identify products with appropriate markings of applicable testing agency.
 - a. Flame-Spread Index: 25 or less.

SECTION 072119
FOAMED-IN-PLACE INSULATION

- b. Smoke-Developed Index: 450 or less.
- 3. Fire Propagation Characteristics: Passes NFPA 285 testing as part of an approved assembly.

2.2 RELATED MATERIALS

- A. Intumescent Paint: System to include a layer of intumescent paint that serves as a thermal barrier to be used in an exposed ceiling application compatible with the closed cell foam and approved by the manufacturer.
- B. Primer: Materials recommend by the insulation manufacturer where required for adhesion of insulation to substrates.

PART 3 – EXECUTION

3.1 PREPARATION

- A. Verify that substrates are clean, dry, and free of substance that are harmful to insulation.
- B. Priming; Prime substrates where recommended by insulation manufacturer. Apply primer to comply with insulation manufacturer's written instructions. Confine primers to areas to be insulated; do not allow spillage or migration onto adjoining surfaces.

3.2 INSTALLATION

- A. Comply with insulation manufacturer's written instructions applicable to products and applications.
- B. Spray insulation to envelop entire area to be insulated (between joists) and fill voids.
- C. Apply in multiple passes to not exceed maximum thicknesses recommended by manufacturer. Do no spray into rising foam.
- D. Framed Construction: Install into cavities formed by framing members to achieve thicknesses indicated per design.
- E. Apply the insulation to fill all voids in cavity between tops of masonry walls and framed construction to insure there are no air gaps present.

3.3 PROTECTION

- A. Protect surrounding window frames from being sprayed with insulation.

3.4 CLEAN UP

- A. Remove any large amounts of foam off the floor and walls due to over spray.

END OF SECTION

All Style Industries, LLC
2114 Sunset Vista Avenue
Henderson, NV 89052
702-570-5520 or fax 702-754-2597
"mailto:info@stormcollar.com"
www.spinflashing.com, www.stormcollar.com

Installation Instructions

All Style Standard “STD-Storm” Collar Flashings



Small STD-Storm Collar Flashing

Please review the following installation instructions to be assured of receiving the quality you expect when installing a **Small STD-Storm Collar Flashing**

One Retro-Split Collar Includes:

1. One (1) All Style Industries Small STD-Storm Collar® EPDM rubber umbrella flashing boot which includes one (1) storm collar, and one (1) stainless steel band clamp.

Tools & Other Building Materials Required for Kit Installation:

1. One Nut Driver or Screw Driver

Installation of a Retro-Split Storm Collar Flashing:

An STD-Storm Collar is molded to correctly match the geometric diameter size of a roof penetration which has already passed through a roof deck flashing jack. The roof deck flashing jack raises the roof deck level higher than any expected high rain water level, and the STD-Storm Collar “Counter-Flashes” the Roof Flashing creating a weatherproof assembly via the down facing overlap or umbrella effect. **It is necessary to order the correct diameter opening on the STD-Storm collar to create a weatherproof assembly.**

In order to install an STD-Storm Collar Umbrella, the top of the penetration must be accessible for the collar to slide on from the top. STD-Storm Collars are not retro-fit repair collars and must slide onto a roof penetration.

Now, slide the STD-Storm collar facing the wide part of the umbrella downward and onto the penetration. Wetting the rubber with a little water can make the assembly slippery, and a little easier, for the rubber to slide along the penetration. Slide the collar boot assembly down the roof penetration to a height necessary to create a proper counter-flashing umbrella cover which over laps the existing roof deck jack flashing.

Finally, the STD-Storm Collar includes a pre-molded nipple with recessed channels that will accept the width of the hose clamp. Position the band clamp, around the nipple and into the channel. By using the worm drive action of the clamp, loosely tighten the clamp.

Before fully tightening the clamp, check the position the STD-Collar and double check that the elevation is proper to cover and overlay the roof penetration flashing. The overlap provides a weatherproof counter-flashing umbrella.

After positioning the Collar, complete the tightening process of the stainless-steel clamp using a screw or nut driver. This compresses the rubber nipples, pressing and firmly holding the umbrella onto the roof penetration. Be careful not to over tighten, as this can distort the new storm collar.

Note:

STD-Strom Collar Flashing umbrella boots are not retro-fit roof counter flashings. Access over the penetration must be available in order to slide the collar onto the roof penetration.

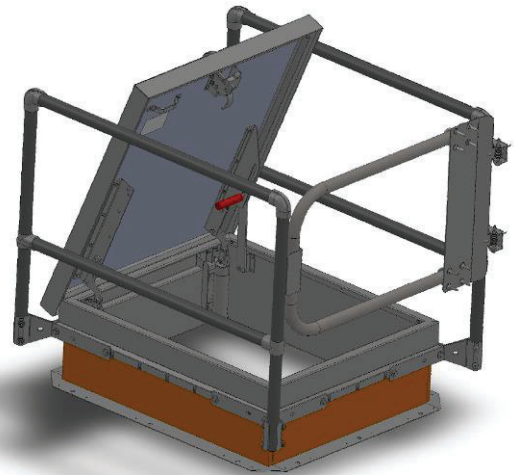
Model(s): SRC, SRV, SRTA

Overview:

Safety Railing products are designed for use as a safety accessory to roof hatch, smoke vent and floor door products. The following are general instructions for installing, operating and maintaining safety railing products. These are recommended general guidelines only.

Tools Required:

- Level
- Marking Tool
- Drill
- 1/2 inch drill bit
- Caulking
- 3/16 inch allen wrench (included)
- 1/2 inch wrench
- 9/16 inch socket
- Torque wrench



Unpack and Set Up:

Railings may ship in multiple boxes, depending on its size and exit configuration. To help keep systems together, the boxes will come banded together that form a full system.

Installation:

Reference *Figure 1* for installation of Post Brackets, Corner Posts, Center Posts, Top Rails, Middle Rails and Self Closing Gate.

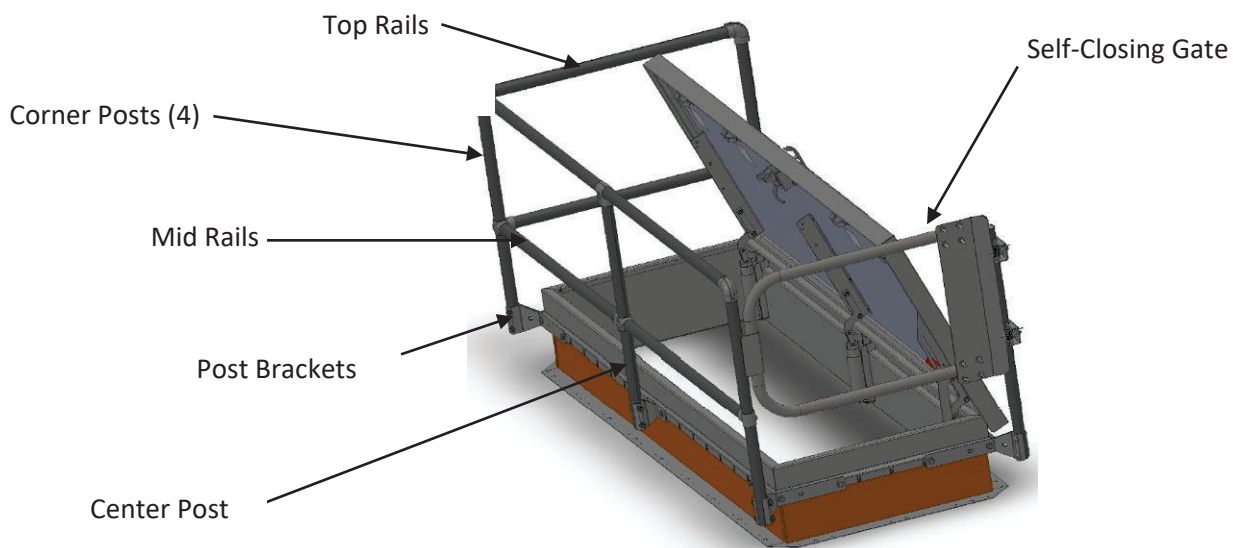


Figure 1

Corner Posts and Post Brackets: (See Figure 2) Note the position of the door in open position.

- Temporarily assemble **corner brackets** using temporary assembly holes in bracket halves (10) and a 3/8-16 nut and bolt (20, 30) See Figure 2.

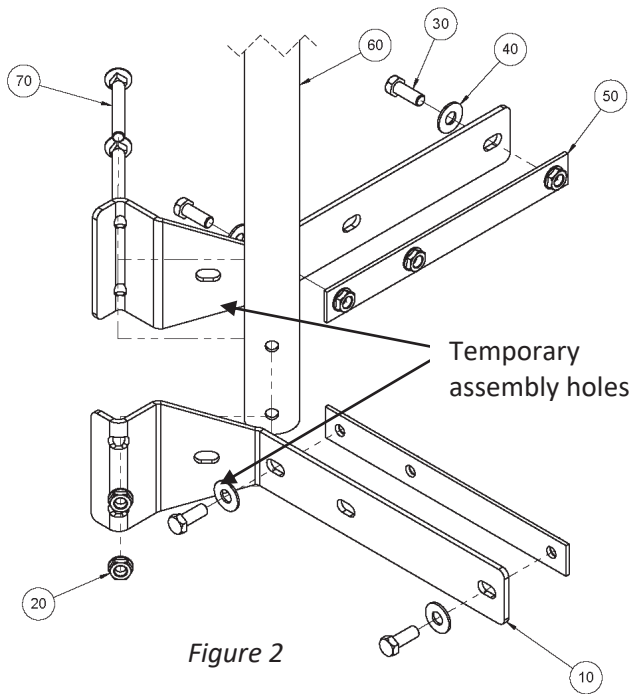


Figure 2

ITEM NO.	DESCRIPTION	QTY
10	CORNER BRACKET, HALF, 1-1/4 inch PIPE	2
20	NUT, HEX, LOCK, FLANGE, 3/8-16	2
30	HEX HEAD SCREW, 3/8-16 x 3/4 inch	4
40	WASHER, FLAT, 3/8	4
50	THREADED NUT PLATE	2
60	POST, GALV or ALUM , 1/1/4 inch, SCHEDULE 40	1
70	CARRIAGE BOLT, 3/8-16 x 3.00	2

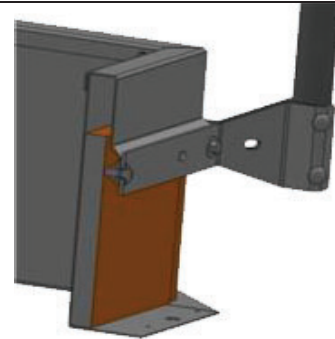


Figure3

- The railing brackets are designed for mounting on the counterflash of the roof hatch. See Figure 3. **Do not mount brackets through the roof hatch curb or through roofing material.**
- Ensure that the bracket is sitting square and level on the counterflash.
- Mark the mounting holes on each corner and drill 1/2 inch diameter holes. Remove 3/8-16 nut and bolt (20, 30) from bracket halves (10).
- Fasten to the corner on counter flashing using 3/8-16 x 3/4 inch bolts (30), washers (40) and threaded nut plate (50), which is placed behind the counterflash for quick, easy installation.
 - If mounting holes were drilled, apply roofers' caulk around hole in counter flashing.
 - Align and hold the threaded nut plate (50) behind the counter flash.
 - Screw the 3/8-16 x 3/4 inch bolts (30) and washers (40) through the bracket and into the threaded nut plate.
- Tighten all mounting brackets to the counter flashing making sure that all brackets are square and level with each other.
- Set torque to 29ft/lbs.
- Insert the 35 inch upright post (60) into the installed brackets and insert the 3/8-16 x 3 inch bolts (70). Tighten the bolts using the 3/8-16 nuts (20).
- Repeat for all corner posts.

Center Post: (See Figure 1) Note the position of the door in open position. Center posts are included for roof hatch lengths > 8 feet.

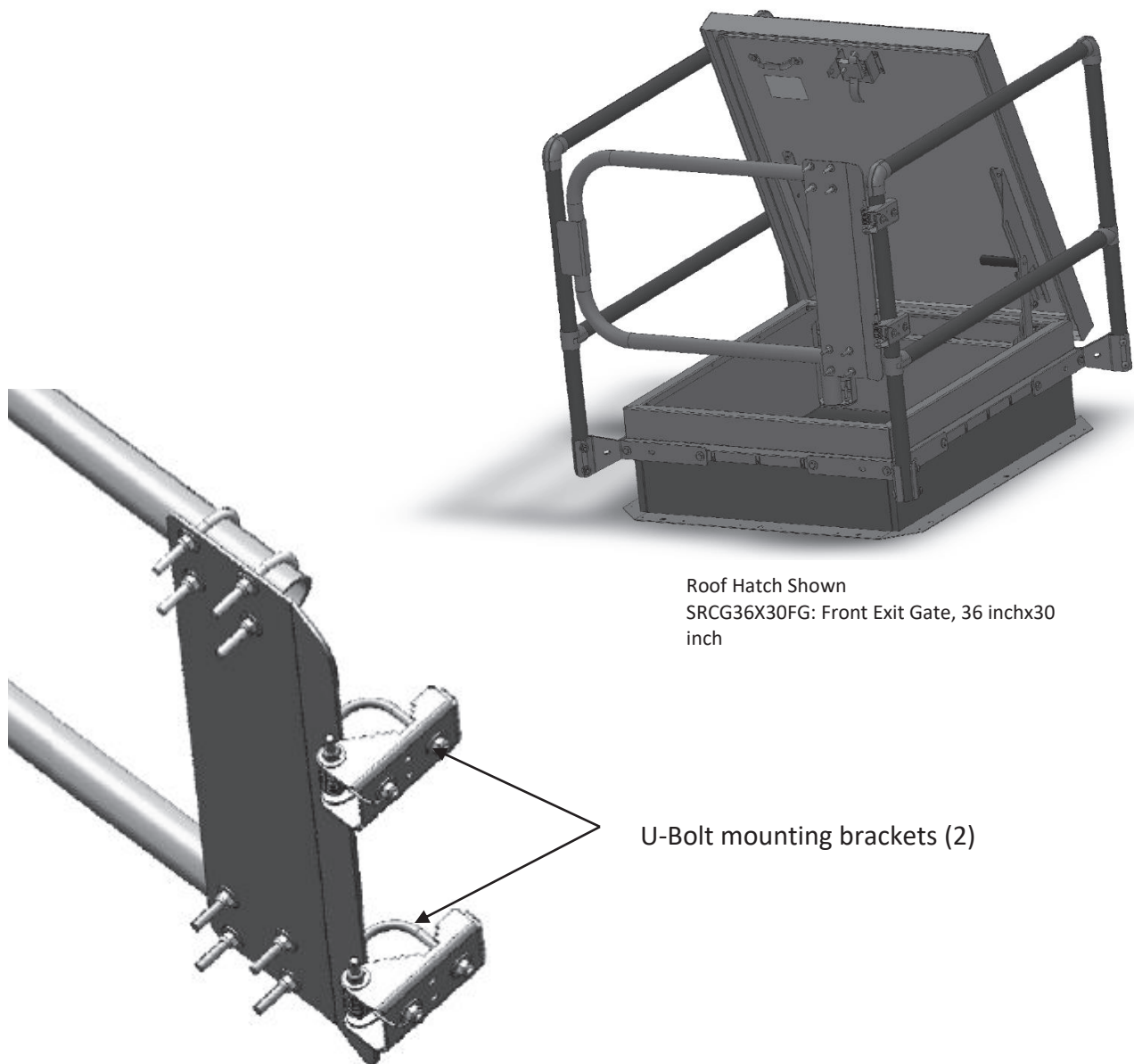
- Temporarily assemble **center brackets** using temporary assembly holes in bracket halves and a 3/8-16 nut and bolt. (See Figure 2 for example with corner brackets)
- Assemble top rail and center post. Temporarily attach it to corner posts to verify location of center post bracket.
- Assure that the bracket is sitting square and level on the counter flashing.
- Mark the mounting holes on the counter flash and drill 1/2 inch diameter holes. Remove 3/8-16 nut and bolt from bracket halves and top rail assembly.
- Fasten to the center of the counter flashing using 3/8-16 x 3/4 inch bolts, washers, and threaded nut plate.
 - If mounting holes were drilled, apply roofers' caulk around hole in counter flashing.
 - Align and hold the threaded nut plate behind the counter flash.
 - Screw the 3/8-16 x 3/4 inch bolts and washers through the bracket and into the threaded nut plate.
- Tighten all mounting brackets to the counter flashing making sure that all brackets are square and level with each other.
- Set torque to 29ft/lbs.
- Insert the 35 inch upright post into the installed brackets and insert the 3/8-16 x 3 inch bolts. Tighten the bolts using the 3/8-16 nuts.
- Repeat for all center posts.

Railing Top and Middle Rails: (See Figure 1) Note the position of the door in open position.

- If necessary, cut horizontal rails to appropriate length.
- Assemble the appropriate fittings with the horizontal rails and tighten the set screws using the provided 3/16 inch allen wrench.
- Slide the horizontal mid rails over the upright posts.
- If necessary, install collar fitting over upright post that will not have an elbow.
- Install the top rails over the upright posts and tighten the set screws.
- Position the mid rail 21 inch, center to center, from the top rail.
- If necessary, install end cap on single upright post.

Exit Option- Self Closing Gate

- Railing packages include a chain. If installing a gate, the chain is not used.
- Remove provided hardware pouch attached to the safety gate.
- Install safety gate using two U bolt mounting brackets on applicable upright post.
- Set the safety gate to the height of the top safety rail and temporarily tighten using the provided hardware.
- Rotate gate hinges so the gate stop makes contact with the opposing upright post.
- Tighten U-Bolt on the hinge to 20 ft/lbs.
- Test the full range of gate operation to ensure the gate automatically closes when opened fully.

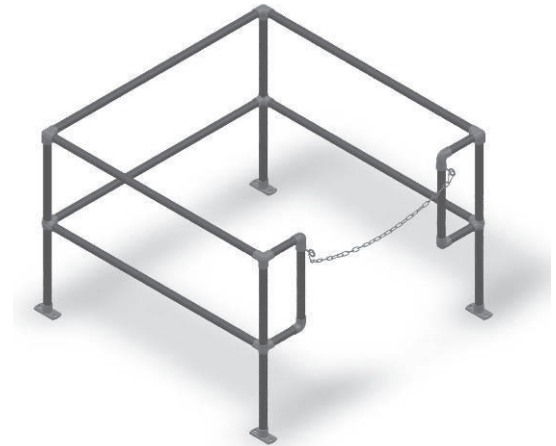
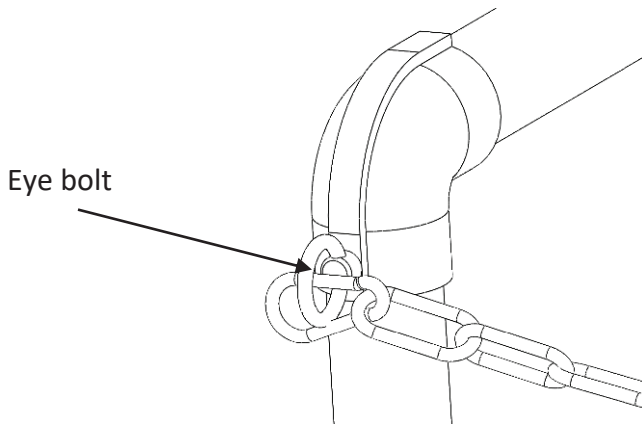


Roof Hatch Shown
SRCG36X30FG: Front Exit Gate, 36 inchx30
inch

U-Bolt mounting brackets (2)

Exit Options – Chain

- This option is intended for roof hatches and floor door applications.
- Remove set screws from top elbow or collar fitting of railing system.
- Install provided eye bolts in set screw holes.
- Assemble chain and spring clips and install on eye bolts.



Floor Door Railing Shown
SRTA36X36FC: Front Exit Chain, 36 inchx36 inch

Exit Options- No Exit, all sides with rails

- This option is intended for smoke vents as well as equipment roof hatches, when there is no required exit.



Smoke Vent Shown
SRVA48X96NN: No Exit, 48 inchx96 inch

Operation

Assure that all the fasteners are fastened to the suggested torque. The gate should fully open and close with no interference. The roof hatch should operate without interfering with the safety railing.

Maintenance

It is recommended that the springs in gate be lubricated once a year to preserve the spring, and that all fasteners meet the recommended torque setting.

If any questions arise during the operation or maintenance of the products, please feel free to call our toll-free number for assistance, 1-888-412-3726.

Nonventilated Roof Curbs

Prefabricated, leakproof curbs provide compatibility between ventilator, curb, and roof opening on commercial and industrial buildings. Most include 1" insulation and integral damper tray. Adjustable curbs are shipped unassembled.

Canted—For flat, noninsulated roof decks with thick or rigid roofing material. 18-ga. galvanized steel body construction with fully welded corners. Fixed curbs include 1½" wood nailer.

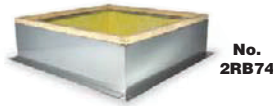
- For noninsulated metal, concrete, or wood roof decks
- For built-up asphalt or coal tar roofing materials

Straight-Sided—For flat roof decks with up to 6" of insulation. Roll-formed with 18-ga. galvanized steel and 1 welded side for added strength. Fixed curbs include 1½" lap-joint wood nailer.

Curb Sq. O.D. (in.)	Curb Sq. I.D. (in.)	Damper Size (in.)	8"H Item No.	12"H Item No.
Fixed, Canted, 1½" Flashing Flange				
15	11½	12 x 12	3TZ53	—
17½	14½	12 x 12	4HX38	4HX46
20½	17½	15 x 15	4HX39	4HX47
24½	21½	19 x 19	4HX40	4HX48
28½	25½	23 x 23	4HX41	4HX49
32½	29½	27 x 27	4HX42	4HX50
40½	37½	35 x 35	4HX43	4HX51
44½	41½	39 x 39	4HX44	4HX52
55½	52½	50 x 50	4HX45	4HX53
62½	59½	50 x 50	4YY76	4YY77

Curb Sq. O.D. (in.)	Curb Sq. I.D. (in.)	Damper Size (in.)	6¾"H Item No.	12¾"H Item No.
Adjustable, Canted, 1½" Flashing Flange				
14½ to 23	10½ to 19	12 to 19 Sq.	4C453	4C670
23½ to 32	19½ to 28	19 to 27 Sq.	4C454	3C437
32½ to 41	28½ to 37	27 to 39 Sq.	4C455	3C438
41 to 49½	37 to 45½	39 to 50 Sq.	3C597	3C598
50 to 58½	46 to 54½	50 x 50 Sq.	3C216	3C439
64 to 72½	60 to 68½	—	—	1VN43

* Does not include damper tray.



★ **Dayton**
No. 2RB74

- For insulated and noninsulated metal, concrete, or wood roof decks
- For rubber membrane and urethane foam roofing materials

Curb Sq. O.D. (in.)	Curb Sq. I.D. (in.)	Damper Size (in.)	12"H Item No.
Fixed, Straight-Sided, 2" Flashing Flange			
15	11½	9½ x 9½	2RB74
15½	12½	9½ x 9½	5EFJ2
17½	14½	12 x 12	2RB75
20½	17½	15 x 15	2RB76
23	20	17½ x 17½	3FLT5
24½	21½	19 x 19	2RB77
27	24	21½ x 21½	3AZH7
27½	24½	—	2RB78 *
28½	25½	23 x 23	2RB79
32½	29½	27 x 27	2RB80
33	30	27½ x 27½	3AZH8
34½	31½	—	3AZH9 *
37½	34½	—	3AZJ1 *
38½	35½	27 X 27	24Y860
39	36	33½ x 33½	3AZJ2
40½	37½	35 x 35	2RB81
43½	40½	—	3AZJ3 *
44½	41½	39 x 39	2RB82
45	42	39½ x 39½	3AZJ4
49	46	—	3AZJ5 *
50½	47½	39 x 39	5EFJ3
53	50	47½ x 47½	3AZJ6
55½	52½	—	3AZJ7 *
59	56	53½ x 53½	3FLT6
62½	59½	50 x 50	2RB83
65	62	59½ x 59½	3AZJ8
71	68	—	3AZJ9 *
Adjustable, Straight-Sided, 4" Flashing Flange			
14½ to 23	10½ to 19	12 to 19 Sq.	2ZV82
23½ to 32	19½ to 28	19 to 27 Sq.	2ZV83
32½ to 41	28½ to 37	27 to 39 Sq.	2ZV84
41 to 49½	37 to 45½	39 to 50 Sq.	2ZV85
50 to 58½	46 to 54½	50 x 50	2ZV86
64 to 72½	60 to 68½	—	2ZV87



Roof Curb Adapters

Allow existing roof curb to be used when replacing a fan or ventilator. Adapt standard fan base dimension to existing curb. Add no height to the installation. Galvanized steel. Top and bottom flange surface is 2½".

Fan Side Sq. O.D. (in.)	Curb Side Sq. O.D. (in.)	Function	Item No.
Increaser			
18½	21	19" Fan Base Fits 21" Curb	3AZK8
21½	24	22" Fan Base Fits 24" Curb	6KWP5
21½	26	22" Fan Base Fits 26" Curb	3AZK9
25½	30	26" Fan Base Fits 30" Curb	3AZL1
29½	34	30" Fan Base Fits 34" Curb	3AZL2
33½	40	34" Fan Base Fits 40" Curb	3AZL3
40	44½	40½" Fan Base Fits 44½" Curb	3AZL4
Reducer			
18½	17	19" Fan Base Fits 17" Curb	3AZK1
21½	18	22" Fan Base Fits 18" Curb	3AZK2
21½	20	22" Fan Base Fits 20" Curb	3AZK3
25½	22	26" Fan Base Fits 22" Curb	3AZK4
25½	24	26" Fan Base Fits 24" Curb	6KWP6
29½	24	30" Fan Base Fits 24" Curb	6KWP7
29½	26	30" Fan Base Fits 26" Curb	3AZK5
33½	30	34" Fan Base Fits 30" Curb	3AZK6
45½	42	46" Fan Base Fits 42" Curb	3AZK7

Rooftop Accessories

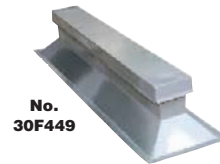
Rooftop Equipment Mounting Rail—Provides uniform mounting pedestals for various roof-mounted equipment.

Flat Roof Flashing—Flexible rubber cap fastens to seamless aluminum base for secure, watertight seal. Stainless steel clamps included.

Shingle Roof Flashing—Galvanized base with elastomeric center collar for slopes up to 40°.

Corrugated-Metal Roof and Wall Flashing—1-pc. weather-resistant EPDM flexible rubber flashing with integral aluminum base.

No. 4YN42—Includes carry box, seam tape to join pieces of rubber, adhesive-backed cover tape for repairing punctures and tears in membranes, and adhesive-backed flashing tape to repair corner molding and flashing. Also includes primer wash and applicator, scissors, and seam roller.



No. 30F449



No. 4YN30

Description	Pipe Size (in.)	Brand	Mfr. Model	Item No.
Rooftop Equipment Mounting Rail, 3 ft. L	—	GA	—	30F449
Rooftop Equipment Mounting Rail, 4 ft. L	—	GA	—	30F450
Rooftop Equipment Mounting Rail, 6 ft. L	—	GA	—	30F451
Flat Roof Flashing, 1 Pipe	2 to 6	Portals Plus	—	4YN30
Flat Roof Flashing, 4 Pipes	(2) ¾ to 1; (2) 1 to 2	Portals Plus	—	4YN31
Shingle Roof Flashing, 1 Pipe	1¼ to 1½	Portals Plus	—	4YN38
Shingle Roof Flashing, 1 Pipe	2	Portals Plus	—	4YN39
Shingle Roof Flashing, 1 Pipe	3	Portals Plus	—	4YN40
Shingle Roof Flashing, 1 Pipe	4	Portals Plus	—	4YN41
Corrugated-Metal Roof and Wall Flashing, 1 Pipe	¼ to 5¼	Master Flash	SQ301GA	46E374
Corrugated-Metal Roof and Wall Flashing, 1 Pipe	4 to 8¼	Master Flash	SQ501GA	46E375
Corrugated-Metal Roof and Wall Flashing, 1 Pipe	6¾ to 13½	Master Flash	SQ801GA	46E376
Single-Ply EPDM Rubber Roof Repair Kit	—	Portals Plus	—	4YN42

Description	Item No.
Roof Repair Products	
4 mil. Aluminum Backed Sealant Tape, 2" x 50 ft., 20 mil.	3GYH6
4 mil. Aluminum Backed Sealant Tape, 4" x 50 ft., 20 mil.	3GYE7
Double Stick Sealant Tape, Gray, 2" x 50 ft., 60 mil.	3GYE8
Double Stick Sealant Tape, Black, Gray And White, 40 Rolls Total (15 Rolls White, 15 Rolls Black 2" x 4 ft., 65 mil., and 10 Rolls of 60 mil. Double-Sided)	3GYG9
RoofSeal Tape, Black, 4" x 50 ft., 35 mil.	3GYF4
RoofSeal Tape, White, 4" x 50 ft., 35 mil.	3GYG2
RoofSeal Tape, Black, 6" x 50 ft., 35 mil.	3GYF5
RoofSeal Tape, White, 6" x 50 ft., 35 mil.	3GYG3
RoofSeal Tape, Black, 12" x 50 ft., 35 mil.	3GYF3
RoofSeal Plus Tape, Black, 4" x 25 ft., 65 mil.	3GYF6
RoofSeal Plus Tape, White, 4" x 25 ft., 65 mil.	3GYF8
RoofSeal Plus Tape, Black, 6" x 25 ft., 65 mil.	3GYF7
RoofSeal Plus Tape, White, 6" x 25 ft., 65 mil.	3GYF9
Paintable Woven Fabric-Coated Tape, Gray, 2" x 50 ft., 25 mil.	3GYJ1
Paintable Woven Fabric-Coated Tape, Gray, 4" x 50 ft., 25 mil.	3GYG4
Paintable Woven Fabric-Coated Tape, Gray, 6" x 50 ft., 25 mil.	3GYG5
Paintable Woven Fabric-Coated Tape, Gray, 12" x 50 ft., 25 mil.	3GYG8
Roof Repair Tape Kit and Surface Prep Pads, White, 4" x 5 ft., 35 mil.	3GYH1
Roof Repair Tape Kit and Surface Prep Pads, Black, 4" x 5 ft., 35 mil.	3GYH2



Roof Repair Tapes, Primers, and Tools

Description	Item No.
Roof Repair Kit	
6" x 50-ft. RoofSeal, 2" x 50-ft. Double-Sided Stick, 4" x 50-ft. WebSeal, 14-oz. Spray Can EternaPrime, 14-oz. Spray Can EternaClean, 2 Lb. x 2.5" Curved End Steel Roller, Heavy Duty Scissors, Surface Preparation Pad, Seam Probe, Tool Bag, and Instructions	3GYE6
Cleaners and Tools	
Primer, 1 qt., Covers 75 sq. ft., Aggressive Adhesive and Surface Conditioner for MicroSealants	3GYF1
Primer Spray, 14 oz., Aggressive Adhesive and Surface Conditioner for MicroSealants	3GYF2
Cleaning Spray, 14 oz., A Nonchlorinated Cleaner Formulated with Proprietary Mixture of Hot Solvents	3GYE9
Steel Roller, 8" L, Curved End with Handle	3GYH4



No. 3GYG2



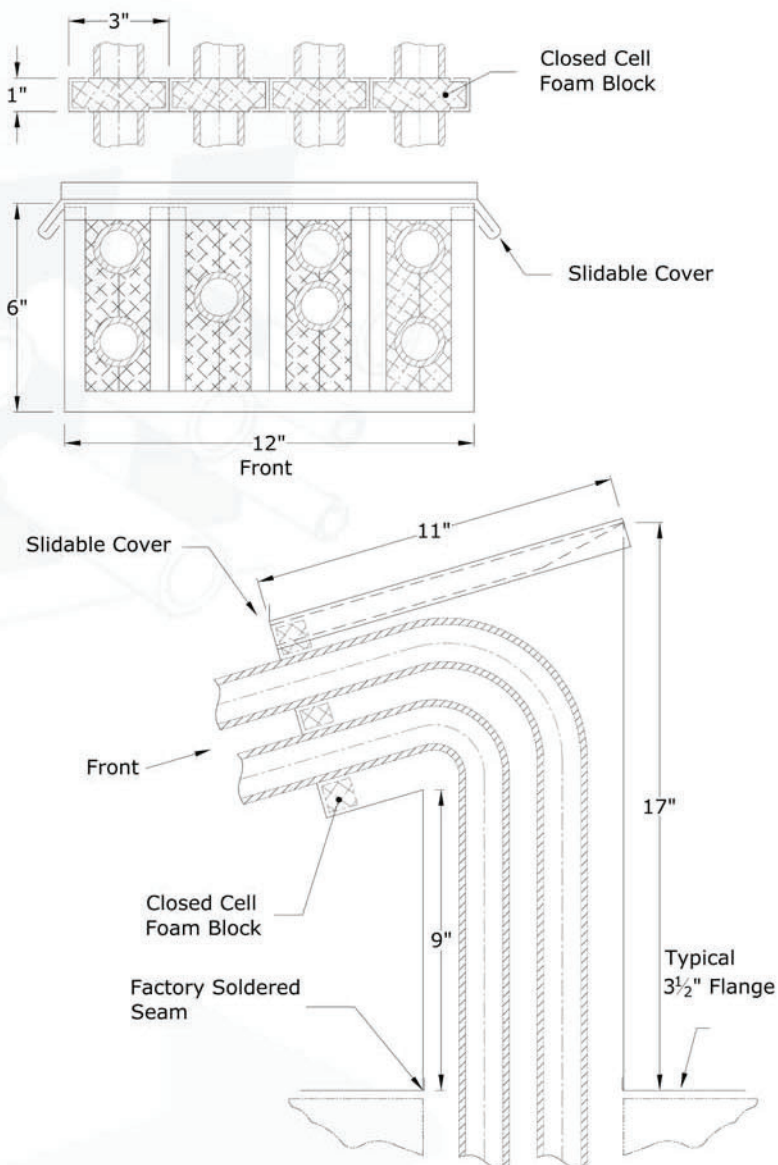
No. 3GYF1

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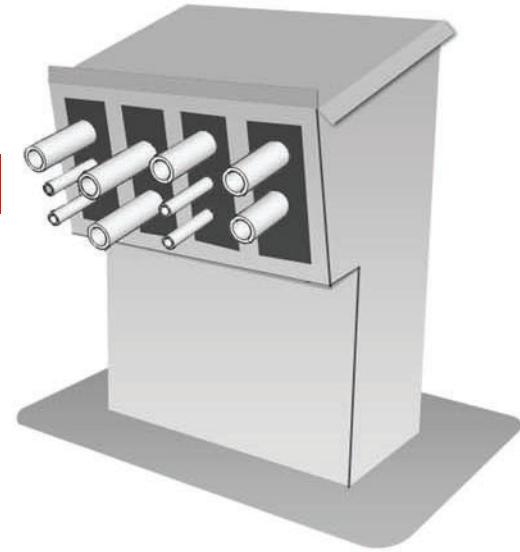


SPECIFICATION SHEET

LINE SHACK MODEL LS



* Drawing and dimensions are based on in stock model.
Custom models for slopes, size variations, capacity,
etc. are available upon request.



Model LS

Intended Use:

To house and flash a/c tubing and conduit through the roof, SBC Industries developed the "Line Shack", a stainless steel housing with a slide off top for access and closed cell foam for weatherproofing and insulating lines. The "Line Shack" will accommodate refrigerant tubing and conduit for up to four a/c units.

Advantages and Unique Features:

1. Closed cell foam insulates and waterproofs tubing exiting housing.
2. Slide off lid provides access to tubing and conduits.

Materials:

1. 26 Ga. stainless steel type 304 2B finish ASTM A240 with closed cell foam at tubing exit ASTM D 1056 2A2
2. 50% lead / 50% tin ASTM B32 or specify non lead solder ASTM 96.5TS

**CONTINUING SERVICES AGREEMENT
BETWEEN CONTRACTOR AND SUBCONTRACTOR
FOR PROJECTS**

THIS AGREEMENT made this 14th day of **January, 2020** between

CONTRACTOR: **Garland/DBS, Inc.**
3800 East 91st Street
Cleveland, OH 44105

SUBCONTRACTOR: **Contractor**
Address
Adress

DBS SUBCONTRACT NO: **1-14-2020**

This Continuing Services Agreement constitutes the entire agreement and understanding between the parties with respect to ALL documents incorporated herein, and supersedes all prior representations and agreements. It shall not be varied except by an instrument in writing of subsequent date duly executed by authorized representatives of the parties.

The term of the Agreement shall be one (1) year following the proper execution of the Agreement. This Agreement may be extended for additional one (1) year terms upon the written consent of the parties.

Subcontractor shall perform only as authorized by Purchase Orders issued by Contractor. Specific terms and conditions for the applicable Project/Sub-project will be incorporated in the Purchase Order. There is no limit on the number of Purchase Orders that Contractor may issue. All Purchase Orders issued hereunder are subject to the terms and conditions of this Agreement. Task Orders may be modified in accordance with the Article entitled CHANGES.

Any Purchase Order issued but not completed during the term of this Agreement shall be completed by the Subcontractor within the time specified in the Purchase Order. This Agreement shall govern the parties' rights and obligations with respect to that Purchase Order to the same extent as if the Purchase Order were completed during the Agreement's term.

All notice to the parties shall be given at the above addresses.

**ARTICLE 1
DEFINITIONS**

- 1.1 Agreement: means this continuing services contract and general conditions for the completion of Contractor's minor construction projects where the basis of payment is the cost of the work plus Subcontractor's overhead and profit, not to exceed twenty (20%) percent, unless a lump sum price is agreed to in the Project Purchase Order.
- 1.2 Architect/Engineer: means the licensed architect, architect/engineer or engineer, and its consultants, retained by Contractor to perform design services for the Project on behalf of Contractor.
- 1.3 Change Order: means work, or performance schedule criteria that is different from the original scope-of-work.

- 1.4 Contract Documents: consist of this Agreement, the drawings, specifications, exhibits, attachments and Contractor issued Purchase Orders as they relate to the Work.
- 1.5 Contractor: is the independent contractor person or entity identified in this Agreement and includes Contractor's Representative.
- 1.6 Day: means workday during Contractor's normal hours of operation unless otherwise specifically defined.
- 1.7 Defective Work: is any portion of the Work that is not in conformance with the Contract Documents.
- 1.8 Hazardous Conditions: means the presence of any Hazardous Materials or the existence of any condition which may violate the Occupational Safety and Health Act, 29 U.S.C. §§ 651 et seq., or any other applicable federal, state, or local health or safety law, ordinance, or regulation.
- 1.9 Hazardous Materials: means, without limit, any oil, petroleum products, flammable explosives, mold, asbestos, urea formaldehyde, polychlorinated biphenyls, radioactive materials or waste, or other hazardous, toxic, contaminated or polluting materials, substances or wastes, including without limitation, any "hazardous substances," "hazardous wastes," "hazardous materials" or "toxic substances" or related materials defined in the Comprehensive Environmental Response Compensation and Liability Act of 1980, as amended (42 U.S.C. Sections 9601, et seq.), The Hazardous Materials Transportation Act, as amended (49 U.S.C. Sections 1801, et seq.), The Resource Conservation and Recovery Act, as amended (42 U.S.C. Sections 9601, et seq.), and in the regulations adopted and publications promulgated pursuant thereto, or any other federal, state, or local environmental law, ordinance, rule or regulations.
- 1.10 Material Supplier: is a person or entity retained by Contractor and/or Subcontractor to provide material and/or equipment for the Work.
- 1.11 Others: means other contractors, material suppliers and persons at the Work Site who are not employed by Contractor and/or Contractor's subcontractors.
- 1.12 Owner: is the person, or entity that owns the real property at the Work Site for which the work is being performed, which includes the Owner's Representative.
- 1.13 Contractor's Project Criteria: the scope-of-work developed by or for Owner, describing the Contractor's design and construction requirements and objectives for the Project, including budgetary and time constraints, submittal requirements and other requirements governing Subcontractor's performance of the Work. Contractor's Project Criteria may include conceptual estimates, conceptual schedule and other Project-specific technical materials and requirements needed to define the scope-of-work.
- 1.14 Project: is the project and/or subproject scope-of-work defining the improvements required by Owner, including budgetary and time criteria as issued by individual Purchase Order from Contractor for which Subcontractor is to perform Work under this Agreement.
- 1.15 Performance Schedule: is the document prepared by Contractor that specifies the dates on which Subcontractor plans to begin and complete various parts of the Work, including dates which information and approvals are required from Owner.
- 1.16 Subcontractor: is a person or entity retained by Contractor pursuant to this Agreement as an independent contractor to provide labor, materials, equipment and/or services necessary to complete a specific portion of the Work. The term Subcontractor does not include the architect/engineer.

- 1.17 Substantial Completion: the date when the Work is sufficiently complete in accordance with the Contract Documents so it can be used or utilized by Owner for its intended purpose.
- 1.18 Sub-subcontractor: is a person or entity that has an agreement with a Subcontractor to perform any portion of the Work.
- 1.19 Work: means all planning, design, construction and other services necessary or incidental to fulfill the scope-of-work defined by Contractor's individual Purchase Order for a specific Project in accordance with this Agreement and the other Contract Documents. The Work may refer to the whole Project or only a part of the Project if work is also being performed by the Owner or Others. The Agreement applies design responsibility to Subcontractor only when design elements are specifically identified in the scope-of-work on the Purchase Order as part of Subcontractor's performance. Otherwise, Subcontractor is not responsible for the design.
- 1.20 Work Site: means the location where the Work is to be performed.

ARTICLE 2 GENERAL PROVISIONS

- 2.1 Contractor and Subcontractor agree to furnish its best skill and judgment and to proceed with the Projects on the basis of mutual trust, good faith and fair dealing. Contractor and Subcontractor shall endeavor to promote harmony and cooperation among all Project participants.
- 2.2 Subcontractor agrees to comply with all required licenses, permits and inspections as required by the authority having jurisdiction over the Work.
- 2.3 Subcontractor represents that it is an independent contractor and that in its performance of the Work it shall act as an independent contractor.
- 2.4 Neither Subcontractor nor any of its agents or employees shall act on behalf of or in the name of Contractor or Owner except as provided in the Agreement or unless authorized in writing by Contractor's Representative.
- 2.5 Contractor and Subcontractor will work as a team through the planning and construction phases of the Project.
- 2.6 All Subcontractor records pertaining to the Project shall be retained and made available for audit by Contractor or Owner, before, during and for up to five (5) years after completion of the Project.
- 2.7 Where this Agreement is silent, the requirements of the plans and specifications will prevail. This Agreement may be amended only by written instrument signed by Contractor and Subcontractor.
- 2.8 All Contract Documents related to the Purchase Order, any Change Order to the Purchase Order, the Purchase Order, and any correspondence related to the Work, shall be identified by the Subcontract Number for this Agreement.

ARTICLE 3 PAYMENT

- 3.1 Subcontractor's services under the Agreement shall include all labor, tools, materials, equipment and all other incidentals to fulfill the scope-of-work defined by Contractor's individual Purchase Order(s), with workmanship of the highest quality by industry standards. The Purchase Order(s) shall be considered part of the Contract Documents. Subcontractor shall submit a cost proposal

- for each Project. Should Contractor and Subcontractor not reach a Price agreement on any Project, Contractor reserves the right to cease negotiations with Subcontractor for that Project and perform the work by other means without affecting this Agreement or any other Project.
- 3.2 Contractor shall administer design and construction management phase services as provided by the Contract Documents and the Purchase Order.
- 3.3 If the Project involves construction of a public improvement at a cost exceeding the threshold for payment of prevailing wage rates of pay or as otherwise required by law, each laborer, workman or mechanic employed by Contractor or Subcontractor for performance of the Work shall not be paid less than the minimum rate of pay for the applicable pay classification. When Contractor or Subcontractor is subject to the requirements of paying prevailing wages, it shall keep full and accurate payroll records covering all disbursements of wages to employees whom it is required to pay not less than the prevailing rate of wages. Subcontractor shall deliver to Contractor a certified copy of its payroll for each pay period during its performance of the Project.
- 3.4 For each Project, Subcontractor shall commence Work within ten (10) working days after receipt of the Purchase Order as authorization of Notice to Proceed from Contractor. Subcontractor shall submit for Contractor's review and approval a schedule-of-values for all of the Project Work. The Schedule-of-Values will: (a) subdivide the Work into its respective parts, (b) include values for all items comprising the Work, including but not limited to general conditions, and (c) serve as the basis for progress payments made to Subcontractor throughout the Work.
- 3.5 On or before the 25th day of the month, Subcontractor shall submit for Contractor's review and approval, its Application for Payment requesting payment for all Work performed and projected through to the end of the month. The Application for Payment shall be accompanied by an updated Schedule-of-Values. Any Subcontractor Application and Certification for Payment received by Contractor after the 25th of the month shall not be processed for payment until the next month's pay application submission to Owner. Notwithstanding anything to the contrary in the Contract Documents, Contractor shall pay Subcontractor all undisputed amounts in an Application for Payment no later than the 45th day following the receipt of a properly completed and submitted Application for Payment.
- 3.6 The Application for Payment may not request payment for equipment and materials not yet incorporated into the Project.
- 3.7 Subcontractor shall not bill for defective work until the work has been re-inspected and accepted by Contractor.
- 3.8 The Application for Payment shall constitute Subcontractor's representation that the Work has been performed consistent with the Contract Documents; and has progressed to the point indicated in the Application for Payment.
- 3.9 Payment hereunder will not be evidence of or construed to be proper performance or progress of the Work or acceptance of the Work.
- 3.10 On or before the dates established in Sections 3.4 and 3.5 of this Agreement, Contractor shall pay Subcontractor all amounts properly due. If Contractor determines that Subcontractor is not entitled to all or part of an Application for Payment, Contractor will notify Subcontractor in writing prior to the date payment is due. The notice shall indicate the specific amounts Contractor intends to withhold, the reasons and contractual basis for the withholding, and the specific measure Subcontractor must take to rectify Contractor's concerns. Subcontractor will attempt to resolve Contractor's concerns prior to the date payment is due. If the parties cannot resolve such concerns, Contractor may pursue its rights under the Contract Documents.

- 3.11 If Contractor fails to pay Subcontractor any undisputed amount that becomes due, Subcontractor, in addition to all other remedies provided in the Contract Documents or at law, may stop Work after providing proper notification to the Contractor that a problem exists. Proper notification shall be defined as written notice, served by certified mail to Contractor, defining the problem that exists and Subcontractor's intent to stop work. If Contractor does not cure the problem within a five (5) day period, Subcontractor must provide Contractor with another written notice, served by certified mail to Contractor, of Subcontractor's intent to stop work. If Contractor does not cure the problem within an additional three (3) day period, Subcontractor may stop work. In such case, Subcontractor may be entitled to make a claim for adjustment to the Contract Price and Contract Time(s) to the extent it has been adversely impacted by such stoppage, provided that Contractor is solely responsible for failure to make payment to Subcontractor.
- 3.12 Subcontractor shall not stop work for reason of payments withheld in whole or in part, for failure of Contractor to make payment to Subcontractor for applications for payment submitted after the 25th of the month, or for disputes as identified in Article 13.
- 3.13 Subcontractor shall not stop work for reason of payments withheld in whole or in part for extra work performed by Subcontractor without a properly executed Change Order to the Purchase Order, provided all other undisputed amounts owed for the extra work are timely paid by Contractor.
- 3.14 As a condition for payment and in addition to Contractor's receipt of a Final Application for Payment for the Project, Subcontractor shall provide the following information:
- .1 An affidavit that there are no claims, obligations or liens outstanding or unsatisfied for labor, services, material, equipment, taxes or other items performed, furnished or incurred for or in connection with the Work which in any way affect Contractor's interests.
 - .2 A general release executed by Subcontractor waiving, upon receipt of final payment by Subcontractor, all claims, except those claims previously made to Contractor and remaining unsettled at the time of final payment.
 - .3 If applicable, consent of Subcontractor's surety to final payment.
 - .4 All operating manuals, warranties and other deliverables required by the Contract Documents.
- 3.15 The acceptance by Subcontractor of the final payment under a Purchase Order or this Agreement shall constitute and operate as a release to Owner for all claims and liabilities for payment to Subcontractor, its representatives, subcontractors, and assigns as well as for any additional compensation or payment related to any and all things done or furnished with respect to the services rendered by Subcontractor under, or in connection with, the Purchase Order or this Agreement. However, final payment shall in no way relieve Subcontractor of liability for its obligations or for faulty or defective work discovered after final payment. The final payment shall be due within forty (40) days after all of the conditions precedent required under this section have been satisfied.

ARTICLE 4 TIME

- 4.1 Subcontractor agrees that it will commence performance of the Work and achieve the Contract Time(s) in accordance with the Purchase Order. Subcontractor agrees to the Contract Time(s) that are provided in the Purchase Order upon the execution or acceptance of the Purchase Order.
- 4.2 If Subcontractor is delayed in the performance of the Work due to acts, omissions, conditions, events, or circumstances beyond its control, the Contract Time(s) for performance shall be reasonably extended by Change Order to the Purchase Order. By way of example, events that will entitle Subcontractor to an extension of the Contract Time(s) include, but are not limited to, acts or

omissions of Owner or anyone not under Contractor's control (including separate contractors), changes in the Work, Differing Site Conditions, Hazardous Conditions, wars, fires, floods, labor disputes, unusual delay in transportation, epidemics, earthquakes, adverse weather conditions not reasonably anticipated, and other acts of God.

- 4.3 Owner Caused Delay: Contractor shall not be obligated or liable to Subcontractor for payment or extension of time due to Owner caused delays beyond the extent of recovery by Contractor from Owner in the form of a properly executed Change Order in accordance with Article 5 of the Agreement.
- 4.4 Subcontractor shall notify Contractor when it believes the Work, or to the extent permitted in the Contract Documents, a portion of the Work, is substantially completed. Within five (5) days of Contractor's receipt of Subcontractor's notice, Contractor and Subcontractor will jointly inspect such Work to verify that it is substantially completed in accordance with the Contract Documents and prepare Contractor's Punch-List to Subcontractor. The Work will be deemed Substantially Complete when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so it can be occupied or utilized for its intended purpose by Owner. If Contractor determines that such Work is substantially completed, Subcontractor shall submit its Final Application for Payment.
- 4.5 Upon Substantial Completion of the entire Work or, if applicable, any portion of the Work, Contractor shall release Subcontractor all retained amounts related, as applicable, to the entire Work or completed portion of the Work, less any amount equal to the reasonable value of all remaining or incomplete items of Work as noted in the Contractor's Punch-List to Subcontractor.

ARTICLE 5 CHANGES TO THE CONTRACT PRICE AND TIME

- 5.1 A Change Order to a Purchase Order is a written instrument issued after execution of this Agreement signed by Owner and Contractor, stating their agreement upon all of the following:
- .1 The scope of the change in the Work.
 - .2 The amount of the adjustment to the Contract Price.
 - .3 The extent of the adjustment to the Contract Time(s).
- 5.2 All changes in the Work authorized by applicable Change Order shall be performed under the applicable conditions of the Contract Documents. Contractor and Subcontractor shall negotiate in good faith and as expeditiously as possible the appropriate adjustments for such changes.
- 5.3 Subcontractor must seek approval from Contractor before performing any or any addition to the Work. The Contractor must provide Subcontractor written documentation of the modification to the Purchase Order within three (3) business days of verbal approval from Contractor that the modification constitutes a change to the Work. Subcontractor is not obligated to perform additional work until written modification has been received from Contractor, but may commence work based upon a reasonable assumption that a Change Order will be issued.
- 5.4 No claims for a Change Order or extra work to the Contract Price shall be valid unless so authorized.
- 5.5 The increase or decrease in the Purchase Order/Contract Price resulting from a change in the Work shall be determined by one or more of the following methods:
- .1 Unit prices subsequently agreed to between the parties.

- .2 Lump sum price, mutually agreed to between the parties.
- .3 Cost, fees, and other markups mutually agree to between the parties.
- 5.6 In any emergency affecting the safety of persons and/or property, Subcontractor shall act, at its discretion, to prevent threatened damage, injury or loss. Any change in the Purchase Order/Contract Price and/or Contract Time(s) on account of emergency work shall be determined as provided in this Article 5.5.
- 5.7 Change Orders shall be prepared by Subcontractor and submitted to Contractor along with backup documentation to include, but not limited to, material, labor, equipment, tools, taxes, insurance, and all incidentals to provide a complete and working system.
- 5.8 Contractor shall be the only party authorized to request Subcontractor to perform extra Work in accordance with Article 5 of this Agreement. Except as provided in Paragraph 5.3 above, any extra work performed by Subcontractor prior to receiving a properly executed Change Order shall be considered incidental and no adjustments will be made to the Purchase Order Price and/or Time.
- 5.9 If Contractor and Subcontractor disagree upon whether Subcontractor is entitled to be paid for any services required by Owner, or if there are any other disagreements over the Scope-of-Work or proposed changes to the Work, Contractor and Subcontractor shall resolve the disagreement pursuant to Article 13 hereof.

ARTICLE 6 LEGAL REQUIREMENTS

- 6.1 Subcontractor shall perform the Work in accordance with all applicable statutes, regulations, and ordinances of any federal, state, or local governmental regulatory agency, commission, bureau, authority, or court (the "Legal Requirements") and shall provide all notices applicable to the Work as required by the Legal Requirements. If Subcontractor discovers the prescribed Work is not in accordance with codes, Subcontractor will promptly notify Contractor and await direction from Contractor and Design Professional. Subcontractor is not responsible for the design, including design errors or omissions, unless the Purchase Order so provides.
- 6.2 Subcontractor and its sub-subcontractors shall comply with all Legal Requirements relating to safety, as well as any Owner-specific safety requirements set forth in the Contract Documents, provided that such Owner-specific requirements do not violate any applicable Legal Requirements. Subcontractor will immediately report any safety-related injury, loss, damage or accident arising from the Work to the extent mandated by Legal Requirements, to Contractor and all government or quasi-government authorities having jurisdiction over safety-related matters involving the Project or the Work.
- 6.3 Subcontractor shall conform to the requirements as designated by the United States Federal Government, Occupational Safety and Health Administration (O.S.H.A).
- 6.4 By signing this Agreement, Subcontractor certifies that that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal, state or local government department, agency or entity.
- 6.5 To ensure equal employment opportunity in accordance with applicable state and federal laws, Subcontractor agrees to prohibit employment discrimination against employees and applicants based on race, color, age, disability, religion, sex (including gender identification and sexual harassment), sexual orientation, national origin, military status or veteran status.

- 6.6 This Agreement is executed in the state where Contractor's office set forth on page one is located and will be interpreted in accordance with the laws of the state where the Work is performed.

ARTICLE 7
GOVERNMENT COMPLIANCE, APPROVALS AND PERMITS

- 7.1 Subcontractor shall give notices, pay all fees, permits and comply with all laws, ordinances, rules and regulations bearing on the conduct of work, except as provided in Paragraph 6.1 above.
- 7.2 Subcontractor shall obtain and pay for all government charges and inspection fees required for the execution of the Work by any government or quasi-government entity having jurisdiction over the Project. Contractor shall reimburse Subcontractor for direct costs associated with obtaining such government charges and inspection fees.
- 7.3 All state and local licenses will be required by Subcontractor and its sub-subcontractors prior to commencement of the Work. Subcontractor shall provide Contractor with a current copy of all licenses at the time the Purchase Order is executed.
- 7.4 Subcontractor must comply with all state, federal and local taxes. Subcontractor accepts sole and exclusive responsibility for any and all state and federal taxes with respect to Social Security, old age benefits, unemployment benefits, withholdings taxes, sales taxes, and worker's compensation premiums.
- 7.5 If the Purchase Order is funded in whole or part by a Federal Emergency Management Agency (FEMA) or U.S. Department of Housing and Urban Development (HUD) grant, Subcontractor shall comply with all federal laws and regulations applicable to the receipt of FEMA/HUD grants, as set forth in the FEMA Standard Terms and Conditions for Contracts and Grants Addendum or the Community Development Block Grant Addendum attached to this Agreement.

ARTICLE 8
SUBCONTRACTOR'S RESPONSIBILITIES

- 8.1 Unless otherwise provided in the Contract Documents imputing the responsibility to Owner, a separate contractor or others, Subcontractor shall provide through itself the necessary supervision, labor, inspections, material, equipment, machinery, and temporary facilities to permit Subcontractor to complete the Project consistent with the Contract Documents.
- 8.2 Subcontractor shall abide by all rules created by Owner. Subcontractor must contact Contractor for specific information regarding the rules governing all operations of the Project.
- 8.3 Subcontractor acknowledges receipt of the Contract Documents, to include but not necessarily limited to the Purchase Order, Project Manual, and/or plans and specifications.
- 8.4 The Project Manual shall contain Supplemental Conditions that are job specific and incorporated as a contract document by reference to this Agreement.
- 8.5 Subcontractor accepts responsibility for the visual inspection of conditions that could affect Subcontractor's Work at the Work Site, and based on that inspection acknowledges its responsibility to satisfactorily perform the Work without additional expense to Contractor. Subcontractor shall promptly report any discrepancies between its observations and the Contract Documents to Contractor.
- 8.6 Subcontractor shall perform all construction activities efficiently. Subcontractor shall supply trained workers with the requisite expertise, skill and competence, in proper numbers, including

scheduling and laying out the Work, so that the Work will be started and completed in a professional manner to satisfy the requirements of the Contract Documents.

- 8.7 Subcontractor shall be solely responsible for the accuracy of all measurements and for estimating the material quantities required to satisfy the Contract Documents, plans and specifications. Drawings provided are for reference only, quantities must be field verified prior to providing Subcontractor's pricing to Contractor.
- 8.8 All temporary site facilities, such as storage sheds, water, heat, light, power, toilets, hoists, elevators, scaffolding, cold weather protection, ventilation, pumps, watchman service, etc., required in performing the Work will be furnished by Subcontractor unless otherwise provided for by Contractor and identified in the Contract Documents.
- 8.9 In connection with its furnishing of temporary facilities indicated, Contractor shall not be liable for conditions beyond the control of Contractor, which may interrupt, delay or otherwise interfere with the availability of such facilities to Subcontractor. Unless otherwise expressly indicated, the temporary facilities furnished by Contractor will not be for the exclusive use of Subcontractor, but will be shared by others performing Project work. Contractor, therefore, reserves the exclusive right to schedule the use of any facilities in accordance with its determinations as to the needs of the Project, and will incur no liability as a result thereof.
- 8.10 If either party from time to time furnishes the other a crane, hoisting equipment or other machinery or equipment, with or without an operator, for such party's exclusive use, then the using party will at all times furnish adequate and competent supervision and direction therefore and will be fully liable and responsible for safe and proper care, use and custody of such machinery and equipment.
- 8.11 Subcontractor assumes responsibility for proper performance of the Work by Subcontractor's employees, vendors and sub-subcontractors and any acts and omissions in connection with such performance. Nothing in the Contract Documents is intended or deemed to create legal or contractual relationship between Contractor and any vendor, equipment provider, material supplier or sub-subcontractor, including but not limited to any third party beneficiary rights.
- 8.12 Subcontractor shall not subcontract any of the Work without prior written approval from Contractor.
- 8.13 Subcontractor shall coordinate the activities of all employees of Subcontractor and its sub-subcontractors. If Contractor performs other work on the Project or at the Work Site with separate subcontractors under Contractor's control, Subcontractor, under Contractor's direction, agrees to reasonably cooperate and coordinate its activities with those of such separate contractors so that the Project can be completed in an orderly and coordinated manner without unreasonable disruption.
- 8.14 Subcontractor shall keep the Work Site reasonably free from construction materials not incorporated into the Work, debris, trash and construction waste to permit Subcontractor to perform its construction services efficiently, safely and without interfering with the use of adjacent land areas. Upon completion of the day's Work, Subcontractor shall remove all debris, trash, construction waste, materials, equipment, machinery and tools arising from the Work or applicable portion thereof to permit Owner the use of the Project for its intended purpose.
- 8.15 Upon completion of the Work under this Agreement, Subcontractor shall promptly remove all its debris, trash and construction waste from and about the Work Site, as well as its tools, construction equipment, machinery and surplus materials as to leave the Work Site "Broom Clean" or its equivalent.

- 8.16 If the Subcontractor refuses at any time to remove the debris and left over construction materials from the premises, or to keep the working area clean, such cleaning and disposal will be completed by Contractor and deducted from the balance due to Subcontractor.
- 8.17 All materials shall be stored and protected against weather, vandalism, and theft. Except to the extent caused by Contractor or separate subcontractors under Contractor's control.\
- 8.18 Contractor will not be liable or responsible for loss or damage to the equipment, tools, facilities, scaffolds or other personal property owned, rented or used by Subcontractor, or its agents, employees or servants, in the performance of the Work. Subcontractor will maintain such insurance and will take such protective action as it deems desirable with respect to such property. Subcontractor will be responsible for the correction or restoration of any such loss or damage to the Work or to the work of Contractor or any of the Contractor's other subcontractors, resulting from the operations or activities of Subcontractor, or its subcontractors, agents, employees or servants hereunder. This Section 8.18 will be included in the subcontract agreements of all of the Contractor's other subcontractors involved in the Work, providing the Subcontractor with reciprocal protection from any of the other contractors on-site. If Subcontractor's Work or its equipment, tools, facilities, scaffolds or other personal property owned, rented or used by Subcontractor, or its agents, employees, or servants, in the performance of the Work suffers a loss or is damaged due to the fault of the Contractor's other subcontractor(s), Contractor shall fully enforce its contractual right against the responsible subcontractor(s) and transfer the benefit(s) from any claim(s) or back charge(s) against the responsible subcontractor(s) directly to Subcontractor to the extent that the benefits relate to damages incurred by the Subcontractor.
- 8.19 Subcontractor shall take necessary precautions to protect the Work of others from loss or damage. Should Subcontractor cause damage to the Work or property of the Owner, Contractor or others, Subcontractor shall promptly remedy such damage to the satisfaction of Contractor, or, if Subcontractor fails to do so, Contractor may remedy the damage and deduct its cost from any amounts due or to become due Subcontractor, unless such costs are recovered under applicable property insurance. This Section 8.19 will be included in the subcontract agreements of all the Contractor's other subcontractors involved in the Work, providing Subcontractor with reciprocal protection from any of the other contractors on-site.
- 8.20 Subcontractor shall protect all grounds, copings, pavings and exterior of all buildings where the Work will be performed.
- 8.21 Subcontractor shall protect Owner's facility from water infiltration. Damage caused by water infiltration resulting from the failure of Subcontractor to secure each day's work in a weather tight manner, will be corrected at Subcontractor's expense. Included as damages will be all labor costs incurred by Owner as a result of such water infiltration. Subcontractor shall not be responsible for damages due to events of Force Majeure or non-Project-related causes of loss covered by the applicable Builder's Risk Insurance Policy, Contractor's Installation Floater or the Owner's Property Insurance. Subcontractor will be responsible for the deductible(s) of any Builders' Risk Insurance Policy, Contractor's Installation Floater or the Owner's Property Insurance claims for damages the extent that the damages were caused by Subcontractor.
- 8.22 Contractor may direct Subcontractor to uncover portions of Subcontractor's Work for inspection by Contractor at any time. Subcontractor is required to uncover such work whether or not Contractor or Owner had requested to inspect Subcontractor's Work prior to it being covered. Except as provided in the paragraph above, this Agreement shall be adjusted by Change Order for the cost and time of uncovering and restoring any work which is uncovered for inspection and proves to be installed in accordance with the Contract Documents, provided Contractor had not previously instructed Subcontractor to leave the work uncovered. If Subcontractor uncovers work pursuant to a directive issued by Contractor, and such work upon inspection does not comply with the Contract Documents, Subcontractor shall be responsible for all costs and time of uncovering, correcting and restoring the work so as to make it conform to the Contract Documents. If

Contractor or some other entity for which Subcontractor is not responsible caused the nonconforming condition, Contractor shall be required to adjust the Purchase Order by Change Order for all such costs and time.

- 8.23 Subcontractor shall promptly remove any work that does not meet the requirements of the Contract Documents, plans and specifications or is incorrectly installed or otherwise disapproved by the Contractor's Representative as failing to meet the intent of the Contract Documents, plans and specifications. Subcontractor shall promptly replace such work without expense to Contractor and shall bear the cost of making good all work of other subcontractors, or Owner, destroyed by such removal or replacement.
- 8.24 Acceptability of completed Work will be based on whether the Work conforms to the Contract Documents. Contractor shall not be responsible for Subcontractor's errors or omissions.
- 8.25 If Contractor deems it unacceptable to have Subcontractor correct work that has been incorrectly done, the parties shall agree upon a deduction from the Purchase Order price. Such a deduction from the Purchase Order price shall in no way affect Subcontractor's responsibility for defects that may occur, nor Subcontractor's responsibility for correcting them, and any damage caused by them.
- 8.26 Subcontractor is required to cooperate with the hierarchy of construction sequencing and coordinate its activities to not interfere with Contractor's work and/or Contractor's other subcontractor(s)'s Work, to enable Contractor to timely complete the Project Work consistent with the Contract Documents.
- 8.27 Subcontractor shall plan and conduct the operations of the Work so that each section started on one day is complete and thoroughly protected before the close of work for that day.
- 8.28 If Owner or any other person or entity asserts a claim or institutes a suit, action or proceeding against Contractor involving the manner or sufficiency of the performance of the Work, upon request of Contractor, Subcontractor will promptly assume the defense of such claim, suit, action, or proceeding, at Subcontractor's sole expense, and Subcontractor will indemnify and hold harmless Contractor and its agents, employees and servants, from and against all liability, loss, damage or expense (including attorney's fees, expert witness fees, court cost, and similar costs) arising out of or relating to such claim, suit, action or proceeding, but only to the extent caused by Subcontractor or persons or entities for whose acts Subcontractor may be liable.
- 8.29 Subcontractor acknowledges that it must comply with this Agreement's E-Verify Certification Addendum, and its failure to comply will result in termination of this Agreement.
- 8.30 Subcontractor acknowledges that Contractor has a zero tolerance policy regarding substance abuse, profane language and harassment by Subcontractor's employees and/or sub-subcontractors. Subcontractor shall immediately remove from the Work Site any employee and/or sub-subcontractor that Contractor's Representative deems to be disruptive to the work environment and/or objectionable to Owner's Representative.

ARTICLE 9 WARRANTY

- 9.1 Subcontractor warrants to Contractor and Owner that the construction, including all Subcontractor-supplied materials and equipment furnished as part of the construction, shall be new unless otherwise specified in the Contract Documents, of good quality, in conformance with the Contract Documents and free of defects in material and workmanship. Subcontractor's warranty obligation excludes defects caused by abuse, alterations, or failure to maintain the Work by persons other than Contractor or anyone for whose acts Contractor may be liable. Nothing in this

warranty shall provide Owner with greater warranty rights than set forth in this section or the Contract Documents. Subcontractor will provide Contractor, on behalf of Owner, all manufacturers' warranties upon Final Completion of the Project. Subcontractor is not responsible for design, including design errors or omissions, unless the Purchase Order assigns Subcontractor design responsibility.

- 9.2 Subcontractor agrees to correct any Work that is found to be not in conformance with the Contract Documents, including that part of the Work subject to Section 8.1 hereof, within a period of two (2) years from the date of Substantial Completion of the Work or any portion of the Work, or within such longer period of time, to the extent required by the Contract Documents.
- 9.3 Subcontractor shall guarantee all labor and Subcontractor-supplied materials for two (2) years from the date of final payment by Contractor. Subcontractor shall promptly respond to and make repairs during the warranty period in accordance with the terms and conditions of the manufacturer's material warranty and the Contract Documents, including any damage done to Owner's property due to such defects.
- 9.4 Subcontractor shall, within two (2) days of receipt of written notice from Contractor that the Work is not in conformance with the Contract Documents, take meaningful steps to commence correction of such nonconforming Work, including the removal and replacement of the nonconforming Work and any damage caused to other parts of the Work affected by the nonconforming Work.
- 9.5 The two-year period referenced in Section 9.2 above applies only to Subcontractor's obligation to correct nonconforming Work and is not intended to constitute a period of limitations for any other rights or remedies Contractor may have regarding Subcontractor's other obligations under the Contract Documents or this Agreement.

ARTICLE 10 CONTRACTOR'S RESPONSIBILITIES

- 10.1 Contractor shall, throughout the performance of the Work, cooperate with Subcontractor and perform its responsibilities, obligations and services in a timely manner to facilitate Subcontractor's timely and efficient performance of the Work and to prevent delay or interference with Subcontractor's performance of its obligations under the Contract Documents.
- 10.2 Contractor agrees to furnish planning, design phase, construction administration and management services and to use its best efforts to complete the Projects in an expeditious and economical manner consistent with the interests of Owner.
- 10.3 Contractor shall provide timely reviews and approvals of interim design submissions and construction documents consistent with the turn-around times set forth in Contractor's performance schedule.
- 10.4 Contractor's Representative shall be responsible for providing Owner-supplied information and approvals in a timely manner to permit Subcontractor to fulfill its obligations under the Contract Documents. Contractor's Representative shall also provide Subcontractor with prompt notice if it observes any failure on the part of Subcontractor to fulfill its contractual obligations, including any errors, omissions or defects in the performance of the Work.
- 10.5 Contractor is responsible for all work performed on the Project or at the Work Site by separate contractors under Contractor's control. Contractor shall contractually require its separate contractors to cooperate with the hierarchy of construction sequencing, and to coordinate their activities to not interfere with Subcontractor's Work to enable Subcontractor to timely complete the Work consistent with the Contract Documents.

**ARTICLE 11
HAZARDOUS CONDITIONS AND
DIFFERING SITE CONDITIONS**

- 11.1 If Subcontractor or its sub-subcontractors on the site use Hazardous Materials or any substances which by law would have required notification to employees, they shall, prior to harmful exposure by any employee to such substance, give written notice of the chemical composition thereof in sufficient detail and provide proper employee training to comply with such laws and will comply with such laws in the handling of such Hazardous Materials.
- 11.2 Unless otherwise expressly provided in the Contract Documents to be part of the Work, Subcontractor is not responsible for any pre-existing Hazardous Conditions encountered at the Work Site. Should Subcontractor encounter any Hazardous Conditions, Subcontractor will stop Work immediately in the affected area and duly notify Contractor and, if required by Legal Requirements, notify all government or quasi-government entities with jurisdiction over the Project or Work Site.
- 11.3 Upon receiving notice of the presence of suspected Hazardous Conditions, Contractor shall notify Owner. Owner shall take the necessary measures required to ensure that the Hazardous Conditions are remediated or rendered harmless. Such necessary measures shall include Owner retaining qualified independent experts to ascertain whether Hazardous Conditions have actually been encountered, and if they have been encountered to prescribe the remedial measures that Owner must take either to remove the Hazardous Conditions or render the Hazardous Conditions harmless.
- 11.4 Subcontractor shall be obligated to resume Work at the affected area of the Project only after Owner's expert provides Contractor with written certification that: (a) the Hazardous Conditions have been removed or rendered harmless; and (b) all necessary approvals have been obtained from all government and quasi-government entities having jurisdiction over the Project or Site. Contractor will provide Subcontractor with written notice to proceed with the work.
- 11.5 Subcontractor will be entitled, in accordance with the terms of this Agreement, to an adjustment in its Purchase Order price and/or time(s) to the extent Subcontractor's cost and/or time of performance have been adversely affected by the presence of unknown, unanticipated, or unforeseen Hazardous Conditions.
- 11.6 To the fullest extent permitted by law, Subcontractor shall indemnify, defend and hold harmless Contractor, Design Consultants, other subcontractors, anyone employed directly or indirectly by any of them, and their officers, directors, employees and agents, from and against any and all claims, losses, damages, liabilities and expenses, including attorney's fees and expenses, arising out of or resulting from its removal or remediation of Hazardous Conditions at the Work Site.
- 11.7 Concealed or latent physical conditions at the Work Site that: (a) materially differ from the conditions indicated in the Contract Documents; or (b) are of an unusual nature differing materially from the conditions ordinarily encountered and generally recognized as inherent in the Work, are collectively referred to and defined herein as "Differing Site Conditions." If Subcontractor encounters a Differing Site Condition, Subcontractor shall immediately notify Contractor. Subcontractor shall be entitled to an adjustment in the Purchase Order price and/or time(s) to the extent Contractor's cost and/or time of performance are compensated by Owner for the adverse impact by the Differing Site Condition.
- 11.8 Upon encountering a Differing Site Condition and proper notification by Subcontractor, Contractor shall provide prompt notice to Owner of such condition, which notice shall not be later than two (2) days after such condition has been encountered. Contractor shall, to the extent

reasonably permitted, provide such notice before the Differing Site Condition has been substantially disturbed or altered.

**ARTICLE 12
INSURANCE AND BONDS**

- 12.1 Subcontractor is responsible for procuring and maintaining from insurance companies authorized to do business in the state in which the Project is located, and with a minimum rating set forth in the Agreement, the following insurance coverages for certain claims which may arise from or out of the performance of the Work and obligations under the Contract Documents:
- .1 Coverage for claims arising under workers' compensation, disability and other similar employee benefit laws applicable to the Work.
 - .2 Coverage for claims by Subcontractor's employee for bodily injury, sickness, disease, or death.
 - .3 Coverage for claims by any person other than Subcontractor's employees for bodily injury, sickness, disease, or death.
 - .4 Coverage for usual personal injury liability claims for damages sustained by a person as a direct or indirect result of Subcontractor's employment of the person, or sustained by any other person.
 - .5 Coverage for claims for damages (other than to the Work) because of injury to or destruction of tangible property, including loss of use.
 - .6 Coverage for claims of damages because of personal injury or death, or property damage resulting from ownership, use and maintenance of any motor vehicle.
 - .7 Coverage for contractual liability claims arising out of Subcontractor's obligations under Section 11 hereof.
- 12.2 Subcontractor's liability insurance required by Section 12 above shall be written for the coverage amounts set forth in the Article 12.3 and shall include completed operations insurance for the period of time set forth in this Agreement.
- 12.3 Subcontractor shall maintain the following insurance:
- (a) Worker's Compensation and Employer's Liability Insurance in an amount not less than: Worker's Compensation Insurance for the legal liability for bodily injury by accident or disease to an employee arising out of and in the course of the employee's employment.

Bodily Injury by Accident	\$1,000,000 each accident
Bodily Injury by Disease	\$1,000,000 per employee
Bodily Injury by Disease	\$1,000,000 policy limit
 - (b) Comprehensive General Liability Insurance in amounts not less than:

Contractual Liability Insurance – to cover the obligations of the Subcontractor with minimum limits as required for Commercial General Liability Insurance.

Each Occurrence Limit - Bodily Injury & Property Damage	\$1,000,000
Damage to Premises Rented to You	\$500,000
Medical Expense Limit	\$10,000

Personal Injury & Advertising Injury	\$1,000,000
General Aggregate Limit	\$2,000,000
Products/Completed Operation Aggregate Limit	\$2,000,000

(c) Comprehensive Automobile Liability Insurance in the following amounts:

Automobile Liability Insurance – for all vehicles used in performance of the work, whether owned, hired, or non-owned with minimum limits of \$1,000,000 Combined Single Limit.

Bodily Injury	\$1,000,000 per person \$1,000,000 per occurrence
Property Damage	\$1,000,000 per occurrence

(d) Umbrella or Excess Liability Insurance in the following amounts:

Umbrella or Excess Liability Insurance for liability insurance that is in excess of specified limits for all of the other above listed policies in this Article 12.3.

All projects (excluding torch-applied roofing)	\$5,000,000 per occurrence \$5,000,000 general aggregate \$5,000,000 products & completed operations aggregate
Torch-applied roofing projects	\$10,000,000 per occurrence \$10,000,000 General Aggregate \$10,000,000 products and completed operations aggregate

The General Aggregate applies per project and per location.

Contractor understands that Subcontractor may need to procure an umbrella or excess liability rider policy for each torch-applied roofing project. In situations where Subcontractor does not have a \$10,000,000 per occurrence limit for umbrella or excess liability insurance, Subcontractor shall submit a quote to Contractor on their insurance agent’s letterhead for approval prior to binding the rider policy for the torch-applied roofing project. Contractor will issue a Change Order to Subcontractor after review and approval of the quote. Upon receipt of the Change Order and prior to beginning work on the Project, Subcontractor shall bind the \$10,000,000 per occurrence limit umbrella or excess liability insurance rider policy and provide evidence to Contractor of the policy in force.

- 12.4 The Certificate of Insurance furnished by Subcontractor as evidence of the insurance maintained by Subcontractor shall include a clause obligating the Insurer to give Contractor thirty (30) days prior written notice of cancellation of any material change in the insurance.
- 12.5 Subcontractor is required to file Certificates of Insurance properly completed and signed by an authorized insurance company representative before it commences Work at the Work Site. No monies will be paid to Subcontractor until the acceptable certificates are on file with Contractor.
- 12.6 When Subcontractor is designated design responsibility in the Scope-of-Work on the Purchase Order, Subcontractor's liability insurance set forth in Section 12 shall specifically delete any design-build or similar exclusions that could compromise coverages because of the design-build delivery of the Project.

- 12.7 Prior to commencing any construction phase services, Subcontractor shall provide Contractor with certificates evidencing that: (a) all insurance obligations required by the Contract Documents are in full force and in effect and will remain in effect for the duration required by the Contract Documents; and (b) no insurance coverage will be canceled, renewal refused, or materially changed unless written notice is provided to Contractor at least thirty (30) days prior to such change.
- 12.8 Any loss covered under Subcontractor's property insurance shall be adjusted and made payable to Owner and Contractor as trustees for the insured as their interests may appear. All insurance proceeds received as a result of any loss will be placed in a separate account and distributed in accordance with such agreement as the interested parties may reach. Any disagreement concerning the distribution of any proceeds will be resolved in accordance with Article 13.
- 12.9 Contractor and Subcontractor mutually waive against each other and Contractor's separate contractors, Design Consultants, subcontractors, agents and employees of each and all of them, all damages covered by insurance provided in Paragraph 12.3 above, except such rights as they may have to the proceeds of such insurance. Contractor and Subcontractor shall, where appropriate, required similar waivers of subrogation from Subcontractor's sub-subcontractors, and shall require each of them to include similar waivers in their contracts.
- 12.10 If Contractor requires Subcontractor to obtain performance, labor and material payment bonds, or other forms of performance security, the amount of such security shall be set forth in the Contract Documents for the Purchase Order and cost and expense of such forms of security shall be paid by Contractor to Subcontractor as part of and included in Subcontractor's price and claim for General Conditions. Subcontractor shall use standard industry bond forms.
- 12.11 Subcontractor's additional insured endorsements, as required by the Purchase Order, are applicable to claims or losses that arise out of Subcontractor's performance of the Work, but only to the extent the claims or losses are caused by Subcontractor or persons or entities for whose acts Subcontractor may be liable.

ARTICLE 13 DISPUTE RESOLUTION

- 13.1 If either Contractor or Subcontractor believes it is entitled to relief against the other for any event arising out of or relating to the Work or a Purchase Order, such party shall provide written notice to the other explaining the basis for its claim. Such notice shall, if possible, be made prior to incurring any cost or expense and in accordance with any specific notice requirements contained in applicable sections of this Agreement. In the absence of any specific notice requirement, written notice shall be given within a reasonable time after the occurrence giving rise to the claim. Such notice shall include sufficient information to advise the other party of the circumstances giving rise to the claim, the specific contractual adjustment or relief requested, and the basis of such request.
- 13.2 The parties are fully committed to working with each other throughout the Project and agree to communicate regularly with each other at all times to avoid or minimize disputes or disagreements. If disputes or disagreements do arise, Contractor and Subcontractor each commit to resolve them in an amicable, professional and expeditious manner to avoid unnecessary losses, delays and disruption to the Work.
- 13.3 Contractor and Subcontractor shall first attempt to resolve disputes or disagreements at the field level through discussions between Contractor's Representative and Subcontractor's Representative.

- 13.4 If a dispute or disagreement cannot be resolved through Contractor's Representative and Subcontractor's Representative, Contractor's Senior Representative and Subcontractor's Senior Representative shall meet as soon as conveniently possible, but not later than thirty (30) days after such a request is made to attempt to resolve such dispute or disagreement. Prior to any meetings between the Senior Representatives, the parties shall exchange relevant information that will assist the parties in resolving their dispute or disagreement.
- 13.5 If the Senior Representatives determine that the dispute or disagreement cannot be resolved or settled for terms satisfactory to both parties, the parties shall submit the dispute or disagreement to arbitration.
- 13.6 Any claims, disputes or controversies between the parties arising out of or relating to this Agreement, or the breach thereof, which have not been resolved in accordance with the procedures set forth in Section 13.3 through 13.5 above shall be decided by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association ("AAA") then in effect, unless the parties mutually agree otherwise.
- 13.7 The decision of the arbitrator(s) shall be final and binding upon the parties without the right of appeal to the courts. Judgments may be entered upon it in accordance with applicable law by any court having jurisdiction thereof.
- 13.8 Contractor and Subcontractor expressly agree that any arbitration pursuant to this Article 13 may be joined or consolidated with any arbitration involving any other person or entity that will be: (a) necessary to resolve the claim, dispute or controversy; or (b) substantially involved or affected by such claim, dispute or controversy. Both Contractor and Subcontractor shall include appropriate provisions in all contracts they execute with other parties in connection with the Project or Purchase Order to require such joinder or consolidation.
- 13.9 The prevailing party in any arbitration, or any other final, binding dispute proceeding upon which the parties may agree, shall be entitled to recover from the other party its reasonably incurred attorney's fees, expert witness fees and expenses.
- 13.10 Notwithstanding anything to the contrary in this Article 13, neither Contractor nor Subcontractor shall be liable to the other for any consequential losses or damages, whether arising in contract, warranty, tort (including negligence), strict liability or otherwise, including but not limited to losses of use, business, reputation or financing.

ARTICLE 14 TERMINATION AND ACCELERATION

- 14.1 If Subcontractor persistently fails to perform the following obligations: (a) provide a sufficient number of skilled workers; (b) supply materials required by the Contract Documents; (c) comply with applicable Legal Requirements; (d) timely pay, without reasonable cause, vendors, material suppliers and/or sub-subcontractors; (e) prosecute the Work with promptness and diligence to ensure that the Work is completed by the Contract Time(s), as such may be adjusted; or (f) perform material obligations under the Contract Documents, then Contractor shall have the rights set forth in Articles 14.2 through 14.9 below.
- 14.2 Contractor may accelerate or supplement the work of the Subcontractor by engaging a third party. The direct costs incurred by the Contractor for such third party plus a standard mark-up of 10% will be set-off against the amount currently owed or shall become due to the Subcontractor. If the remaining unpaid balance due to the Subcontractor is not sufficient to set-off the additional costs incurred by the Contractor to accelerate or supplement the work of the Subcontractor, then the Subcontractor will pay Contractor the amount of the shortfall upon written demand.

- 14.3 Contractor may terminate the contract with Subcontractor and finish the work by whatever reasonable method Contractor deems expedient if Subcontractor:
- (a) Persistently or repeatedly refuses to supply specified materials or to provide enough skilled workers to ensure the project will be completed within the time period indicated in the project schedule;
 - (b) Fails to make payment to employees, sub-subcontractors, equipment suppliers, and/or suppliers for labor and/or materials;
 - (c) Is guilty of material breach of a provision of the contract documents; or
 - (d) Fails to perform one of the obligations set forth in 14.1.
- 14.4 When Contractor terminates the contract for any of the above reasons, Subcontractor shall not be entitled to receive further payment until the work is finished and accepted by Owner. If the unpaid balance of the contract sum exceeds the cost of finishing the work, it will be paid to Subcontractor. If the cost to finish the work exceeds the unpaid balance, Subcontractor shall pay the difference to Contractor.
- 14.5 Upon the occurrence of an event set forth in Section 14.1 or Section 14.3 above, Contractor shall provide written notice to Subcontractor that it intends to terminate the Agreement unless the problem cited is cured, or commenced to be cured, within five (5) days of the Subcontractor's receipt of such notice. If Subcontractor fails to cure, or reasonably commence to cure, such problem, then Contractor may declare the Agreement terminated by default by providing written notice to Subcontractor of such declaration.
- 14.6 Upon declaration that the Agreement has been terminated pursuant to Section 14.5 above, Contractor may enter upon premises and take possession of all materials and equipment which have been purchased or provided for the performance of the Work and paid for by Contractor for the purpose of completing the Work. In the event of such termination, Contractor shall be liable only for payment of costs incurred for services rendered and accepted before the effective date of the termination and Subcontractor shall not be entitled to receive such payment until the Work is finally completed and accepted by Owner in accordance with the Contract Documents.
- 14.7 If Contractor improperly terminates the Agreement for cause, the termination for cause will be converted to a termination for convenience. Contractor shall pay Subcontractor for the Work performed as of the date of such termination, according to the schedule of values. Subcontractor shall also be entitled to receive "demobilization items" as provided in the schedule of values to the extent that the corresponding tasks are completed throughout the termination. Payment by Owner for Contractor's costs and expenses does not preclude the Subcontractor's rights and remedies pursuant to Section 13 above.
- 14.8 Subcontractor, in addition to any other rights and remedies provided in the Contract Documents or by law, may terminate the Agreement for cause for the following reasons:
- .1 The Work has been stopped for sixty (60) consecutive days, or more than ninety (90) days during the duration of the Project, due to circumstances beyond Contractor's control.
 - .2 Contractor's failure to provide Subcontractor with any information, or approvals that are Contractor's responsibility under the Contract Documents which result in the Work being stopped for sixty (60) consecutive days, or more than ninety (90) days during the duration of the Project.
 - .3 Contractor's failure to cure the problems set forth in Section 3.8 above after Subcontractor has stopped work.
- 14.9 Upon the occurrence of an event set forth in Section 14.7 above, Subcontractor shall provide notice to Contractor that it intends to terminate the Agreement unless the problems cited are cured,

or commence to be cured, within ten (10) days of Contractor's receipt of such notice. If Contractor fails to cure, or reasonably commence to cure, such problem, then Subcontractor shall give a second written notice to Contractor of its intent to terminate within an additional five (5) day performance period. If Contractor, within the five (5) day performance period, fails to cure, or reasonably commence to cure, such problem, then Subcontractor may declare the Agreement terminated for default by providing written notice to Contractor of such declaration. In such case, Subcontractor shall be entitled to recover in the same manner as if Contractor had terminated the Agreement for its convenience under Article 14.5 of the Agreement.

- 14.10 At any time Contractor may terminate this Agreement in whole or in part if: (a) Contractor determines that a termination is in its best interests; or (b) if Owner exercises its termination-for-convenience rights. Contractor may terminate this Agreement by issuing Subcontractor written notice of the termination, specifying the extent of the termination and the effective date. In the event of such termination, Contractor shall be liable only for payment of costs incurred for services rendered and accepted prior to the effective date of the termination.

**ARTICLE 15
MISCELLANEOUS**

- 15.1 Contractor and Subcontractor intend that the provisions of the Contract Documents are binding upon the parties, their employees, agents, successors and assigns.
- 15.2 The Contract Documents shall be governed by the laws of the state where the Work is performed without giving effect to its conflict of law principles.
- 15.3 If any provision of the Contract Documents is determined to be superseded, invalid, illegal, or otherwise unenforceable, such determination shall not impair or otherwise affect the validity, legality, or enforceability of the remaining provision or parts of the provision of the Contract Documents, which shall remain in full force and effect as if the unenforceable provision or part were deleted.
- 15.4 The failure of either Contractor or Subcontractor to demand, in any one or more instances, on the performance of any of the obligations required by the Contract Documents, shall not be construed as a waiver or relinquishment of such obligation or right with respect to future performance.
- 15.5 Whenever the Contract Documents require that notice be provided to the other party, notice will be deemed to have been validly given five (5) days after being sent by registered or certified mail, postage prepaid to the address indicated in the Agreement; or (c) if transmitted by facsimile, by the time stated on a machine generated confirmation that notice was received at the facsimile number of the intended recipient.
- 15.6 The Contract Documents may not be changed, altered, or amended in any way except in writing, signed by a duly authorized representative of each party.

CONTRACTOR:
Garland/DBS, Inc.

SUBCONTRACTOR:
Contractor

(Signature) (Date)

(Signature) (Date)

(Printed name and title)

(Printed name and title)

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 - 14.4 Payment After Termination
 - 14.5 CONTRACTOR May Stop or Terminate

- 15. Miscellaneous
 - 15.1 Claims for Injury or Damage
 - 15.2 Non-Discrimination in Employment
 - 15.3 Temporary Street Closing or Blockage
 - 15.4 Percentage of Work Performed by Prime CONTRACTOR
 - 15.5 Clean-up
 - 15.6 General
 - 15.7 Debris Disposal

END OF SECTION

PART IV

GENERAL CONDITIONS

1. DEFINITIONS

Wherever used in these General Conditions or the other Contract Documents, the following terms have the meanings indicated which are applicable to both the singular and plural thereof.

1.1 Addenda

Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bid Documents or the Contract Documents.

1.2 Agreement

The written agreement between OWNER and CONTRACTOR covering the Work to be performed; other Contract Documents are attached to the Agreement and made a part thereof as provided therein.

1.3 Application for Payment

The form accepted by CONSULTANT which is to be used by CONTRACTOR in requesting progress or final payments and which is to include such supporting documentation as is required by the Contract Documents.

1.4 Bid

The offer or proposal of the Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

1.5 Bidder

An individual, partnership, or corporation, who submit a Bid for a prime contract with the OWNER, for the Work described in the proposed Contract Documents.

1.6 Bonds

Bid, performance and payment bonds and other instruments of security.

1.7 Calendar Day

A calendar day of twenty-four hours measured from midnight to the next midnight shall constitute a day.

1.8 Change Order

A document recommended by CONSULTANT, which is signed by CONTRACTOR and OWNER and authorizes an addition, deletion or revision in the Work, or an adjustment in the Contract Price or the Contract Time, issued on or after the Effective Date of the Agreement.

1.9 Contract Documents

The Advertisement for Bidders, Information for Bidders, Agreement, Addenda (which pertain to the Contract Documents), CONTRACTOR'S Bid (including documentation accompanying the Bid and any post-bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Agreement, the Bonds, these General Conditions, the Special Conditions, the Specifications and the Drawings as the same are more specifically identified in the Agreement, together with all amendments, modifications and supplements.

1.10 Contract Unit Price

The monies payable by OWNER to CONTRACTOR under the Contract Documents as stated in the Agreement. Unit Prices are to be firm for the term of this Contract.

1.11 Contract Time

The number of consecutive calendar days between the date of issuance of the Notice to Proceed and the contract completion date.

1.12 CONTRACTOR

The person, firm or corporation with whom OWNER has entered into the Agreement.

1.13 Defective

An adjective which when modifying the word Work refers to Work that is unsatisfactory, faulty or deficient, or does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents, or has been damaged prior to CONSULTANT'S recommendation of final payment (unless responsibility for the protection thereof has been assumed by OWNER).

1.14 Drawings

The drawings which show the character and scope of the Work to be performed and which have been prepared or approved by CONSULTANT and are referred to in the Contract Documents.

1.15 Effective Date of the Agreement

The date indicated in the Agreement on which it becomes effective.

1.16 CONSULTANT

The Lexington-Fayette Urban County Government or its authorized representative.

1.17 Field Order

A documented order issued by CONSULTANT which orders minor changes in the Work, but which does not involve a change in the Contract Price or the Contract Time.

1.18 Giving Notice

Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

1.19 Laws and Regulations

Laws, rules, regulations, ordinances, codes and/or orders.

1.20 Notice of Award

The written notice by OWNER to the apparent successful bidder stating that upon compliance by the apparent successful bidder with the conditions enumerated therein, within the time specified, OWNER will sign and deliver the Agreement.

1.21 Notice to Proceed

A written notice given by OWNER to CONTRACTOR fixing the date on which the Contract Time will commence to run and on which CONTRACTOR shall start to perform CONTRACTOR'S obligations under the Contract Documents.

1.22 OWNER

The Lexington-Fayette Urban County Government.

1.23 Partial Utilization

Placing a portion of the Work in service for the purpose for which it is intended (or related purpose) before reaching Completion for all the Work.

1.24 Project

The total construction of which the Work to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents.

1.25 Inspector

The authorized representative who is assigned to the site or any part thereof.

1.26 Shop Drawings

All drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for CONTRACTOR to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a Supplier and submitted by CONTRACTOR to illustrate material or equipment for some portion of the Work.

1.27 Specifications

Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards and

workmanship as applied to the Work and certain administrative details applicable thereto.

1.28 Standard Specifications

The "Standard Specifications for Road and Bridge Construction", Transportation Cabinet, Department of Highways, Commonwealth of Kentucky, current edition. MUTCD shall refer to the "Manual of Uniform Traffic Control Devices.

1.29 Subcontractor

An individual, firm or corporation having a direct contract with CONTRACTOR or with any other Subcontractor for the performance of a part of the Work at the site.

1.30 Special Conditions

The part of the Contract Documents which amends or supplements these General Conditions.

1.31 Supplier

A manufacturer, fabricator, supplier, distributor, materialman or vendor.

1.32 Underground Facilities

All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.

1.33 Unit Price Work

An amount equal to the sum of the established unit prices for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

1.34 Work

The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work is the result of performing services, furnishing labor and furnishing and incorporating materials and equipment into the construction, all as required by the Contract Documents.

1.35 Time Period

When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

2. PRELIMINARY MATTERS

2.1 Delivery of Bonds

When the CONTRACTOR delivers the executed Agreements to OWNER, CONTRACTOR shall also deliver to OWNER, such Bonds, Insurance Certificate, and Power of Attorney as CONTRACTOR may be required to furnish.

2.2 Copies of Documents

Owner shall furnish to CONTRACTOR up to three copies (unless otherwise specified in the Special Conditions) of the Contract Documents as are reasonably necessary for the execution of the Work. Additional copies will be furnished, upon request, at the cost of reproduction.

2.3 Commencement of Contract Time; Notice to Proceed

The Contract Time will commence to run on the day specified in the Notice to Proceed.

2.4 Starting the Project

CONTRACTOR shall start to perform the Work on the date when the Contract Time commences to run, but no Work shall be done at the site prior to the date on which the Contract Time commences to run.

2.5 Before Starting Construction

Before undertaking each part of the Work, CONTRACTOR shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. CONTRACTOR shall promptly report in writing to CONSULTANT any conflict, error or discrepancy which CONTRACTOR may discover and shall obtain a written interpretation or clarification from CONSULTANT before proceeding with any Work affected thereby; however, CONTRACTOR shall not be liable to OWNER or CONSULTANT for failure to report any conflict, error or discrepancy in the Contract Documents, unless CONTRACTOR had actual knowledge thereof or should reasonably have known thereof.

2.6 Submittal of Schedules

Within ten days after the effective date of the Agreement (unless otherwise specified) CONTRACTOR shall submit to CONSULTANT for review:

2.6.1 an estimated progress schedule indicating the starting and completion dates of the various stages of the Work;

2.6.2 a preliminary schedule of Shop Drawing submissions; and

2.6.3 a preliminary schedule of values for all of the Work which will include quantities and prices of items aggregating the Contract Price and will subdivide the Work into costs per labor and materials by specification

section to serve as the basis for progress payments during construction. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work which will be confirmed in writing by CONTRACTOR at the time of submission. Schedule of values shall be submitted on AIA G702/703 forms, or approved equal.

2.7 Preconstruction Conference

Before CONTRACTOR starts the Work at the proposed site, a conference attended by CONTRACTOR, CONSULTANT, EEO-Affirmative Action Officer, and other appropriate parties will be held to discuss the following issues: (1) The scheduling of the Work to be completed; (2) The procedures for handling shop drawings and other submittals; (3) The processing of applications for payment; (4) The establishment of an understanding among the involved parties in regard to the proposed project; (5) The establishment of procedures for effectively implementing the LFUCG's 10% minimum DBE goals; and (6) Requirement for Mechanic's Lien on Partial Applications for Payment.

2.8 Finalizing Schedules

At least ten days before submission of the first Application for Payment a conference attended by CONTRACTOR, CONSULTANT and others as appropriate will be held to finalize the schedules submitted in accordance with paragraph 2.6. The finalized progress schedule will be acceptable to CONSULTANT as providing orderly progression of the Work to completion within the Contract Time, but such acceptance will neither impose on CONSULTANT responsibility for the progress or scheduling of the Work nor relieve CONTRACTOR from full responsibility thereof. The finalized schedule of Shop Drawing submissions will be acceptable to CONSULTANT as providing a workable arrangement for processing the submissions. The finalized schedule of values will be acceptable to CONSULTANT as to form and substance.

3. CONTRACT DOCUMENTS: INTENT, CONFLICTS, AMENDING AND REUSE

3.1 General

The Contract Documents comprise the entire agreement between OWNER and CONTRACTOR concerning the Work. The Contract Documents are complementary; what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with the law of the place of the Project.

3.2 Intent

It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any Work, materials or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result will be supplied whether or not specifically called for. When words which have a well-known technical or trade meaning are used

to describe Work, materials or equipment such words shall be interpreted in accordance with that meaning. Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code or laws or regulations in effect at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated. However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of OWNER, CONTRACTOR or CONSULTANT, or any of their consultants, agents or employees from those set forth in the Contract Documents, nor shall it be effective to assign to CONSULTANT, or any of CONSULTANT'S consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 8.12.3 or 8.12.4. Clarifications and interpretations of the Contract Documents shall be issued by CONSULTANT as provided in paragraph 8.4.

3.3 Conflicts

If, during the performance of the Work, CONTRACTOR finds a conflict, error or discrepancy in the Contract Documents, CONTRACTOR shall so report to CONSULTANT in writing at once and before proceeding with the Work affected thereby shall obtain a written interpretation or clarification from CONSULTANT; however, CONTRACTOR shall not be liable to OWNER or CONSULTANT for failure to report any conflict, error or discrepancy in the Contract Documents unless CONTRACTOR had actual knowledge thereof or should reasonably have known thereof.

In resolving such conflicts, errors and discrepancies, the documents shall be given precedence in the following order:

1. Agreement
2. Field and Change Orders
3. Addenda
4. Special Conditions
5. Instruction to Bidders
6. General Conditions
7. Specifications and Drawings

Figure dimension on drawings shall govern over scale dimensions and detailed Drawings shall govern over general Drawings.

3.4 Amending and Supplementing Contract Documents

The Contract Documents may be amended to provide for additions, deletions and revisions in the Work or to modify the terms and conditions thereof by means of a Change Order or a Field Order. Contract Price and Contract Time may only be changed by a Change Order.

3.5 Reuse of Documents

Neither CONTRACTOR nor any Subcontractor or Supplier or other person or organization performing or furnishing any of the Work under a direct or indirect contract with OWNER shall have or acquire any title to or ownership rights in any of the Drawings, Specifications or other documents (or copies of any thereof) prepared by or bearing the seal of CONSULTANT; and they shall not reuse any of them on extensions of the Project or any other project without written consent of OWNER and CONSULTANT and specific written verification or adaptation by CONSULTANT.

4. AVAILABILITY OF LANDS; PHYSICAL CONDITIONS, REFERENCE POINTS

4.1 Availability of Lands

OWNER shall furnish, as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and such other lands which are designated for the use of CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by OWNER, unless otherwise provided in the Contract Documents. If CONTRACTOR believes that any delay in OWNER'S furnishing these lands, rights-of-way or easements entitles CONTRACTOR to an extension of the Contract Time, CONTRACTOR may make a claim therefor as provided in Article 11. CONSULTANT shall determine if the claim is legitimate or not. CONTRACTOR shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.2 Physical Conditions

4.2.1 Explorations and Reports

Reference is made to the Special Conditions for identification of those reports of explorations and tests of subsurface conditions at the site that have been utilized by CONSULTANT in preparation of the Contract Documents. CONTRACTOR may rely upon the accuracy of the technical data contained in such reports, but not upon non-technical data, interpretations or opinions contained therein or for the completeness thereof for CONTRACTOR'S purposes. Except as indicated in the immediately preceding sentence and in paragraph 4.2.6, CONTRACTOR shall have full responsibility with respect to subsurface conditions at the site.

4.2.2 Existing Structures

Reference is made to the Special Conditions for identification of those drawings of physical conditions in or relating to existing surface and

subsurface structures (except Underground Facilities referred to in paragraph 4.3 which are at or contiguous to the site that have been utilized by CONSULTANT in preparation of the Contract Documents. CONTRACTOR may rely upon the accuracy of the technical data contained in such drawings, but not for the completeness thereof for CONTRACTOR'S purposes. Except as indicated in the immediately preceding sentence and in paragraph 4.2.6, CONTRACTOR shall have full responsibility with respect to physical conditions in or relating to such structures.

4.2.3 Report of Differing Conditions

If CONTRACTOR believes that:

4.2.3.1 any technical data on which CONTRACTOR is entitled to rely as provided in paragraphs 4.2.1 and 4.2.2 is inaccurate, or

4.2.3.2 any physical conditions uncovered or revealed at the site differ materially from that indicated, reflected or referred to in the Contract Documents,

CONTRACTOR shall, promptly after becoming aware thereof and before performing and WORK in connection therewith (except in an emergency) notify OWNER and CONSULTANT in writing about the inaccuracy or difference.

4.2.4 CONSULTANT'S Review

CONSULTANT will promptly review the pertinent conditions, determine the necessity of obtaining additional explorations or tests with respect thereto and advise CONTRACTOR of CONSULTANT'S findings and conclusions.

4.2.5 Possible Document Change

If CONSULTANT concludes that there is a material error in the Contract Documents or that because of newly discovered conditions a change I the Contract Documents is required, a Change Order will be issued as provided in Article 10 to reflect and document the consequences of the inaccuracy or difference.

4.2.6 Possible Price and Time Adjustments

In each such case, an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, or any combination thereof, will be allowable to the extent that they are attributable to any such inaccuracy or difference.

4.3 Physical Conditions-Underground Facilities

4.3.1 Shown or Indicated

The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the site is

based on information and data furnished to OWNER or CONSULTANT by the owners of such underground facilities or by others. Unless it is otherwise expressly provided in the Special Conditions:

4.3.1.1 OWNER and CONSULTANT shall not be responsible for the accuracy or completeness of any such information or data; and,

4.2.1.2 CONTRACTOR shall have full responsibility for reviewing and checking all such information and data; for locating all underground facilities shown or indicated in the Contract Documents; for coordination of the Work with the owners of such underground facilities during construction; and for the safety and protection thereof and repairing any damage thereto resulting from the Work, the cost of all of which will be considered as having been included in the Contract Price.

4.3.2 Not Shown or Indicated

If an underground facility is uncovered or revealed at or contiguous to the site which was not shown or indicated in the Contract Documents and which CONTRACTOR could not reasonably have been expected to be aware of, CONTRACTOR shall, promptly after becoming aware thereof and before performing any Work affected thereby (except in an emergency), identify the owner of such Underground Facility and give written notice thereof to that owner and to OWNER and CONSULTANT. CONSULTANT will promptly review the underground facility to determine the extent to which the Contract Documents should be modified to reflect and document the consequences of the existence of the Underground Facility, and the Contract Documents will be amended or supplemented to the extent necessary. During such time, CONTRACTOR shall be responsible for the safety and protection of such underground facility. CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, to the extent that they are attributable to the existence of any underground facility that was not shown or indicated in the Contract Documents and which CONTRACTOR could not reasonably have been expected to be aware of.

4.4 Reference Points

OWNER shall provide engineering surveys to establish reference points for construction which in CONSULTANT'S judgment are necessary to enable CONTRACTOR to proceed with the Work. CONTRACTOR shall be responsible for laying out the Work (unless otherwise specified), shall protect and preserve the established reference points and shall make no changes or relocations without the prior written approval of OWNER. CONTRACTOR shall report to CONSULTANT whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points by a Registered Land Surveyor.

5. CONTRACTOR'S RESPONSIBILITIES

5.1 Supervision

CONTRACTOR shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. CONTRACTOR shall assure that all CONTRACTOR personnel (including subcontractors, etc.) conduct themselves in a courteous and respectful manner toward the CONSULTANT and the general public. CONTRACTOR shall keep at the Project Site during the progress of the Work a competent project manager/superintendent and all necessary assistants, all of whom shall be satisfactory to OWNER. OWNER reserves the right to reject CONTRACTOR'S construction superintendent and project management personnel if they are unsatisfactory to OWNER and upon such rejection CONTRACTOR shall designate and provide competent successors. Failure to comply with this condition of the Contract will result in immediate suspension of the Work. Following a review by the Commissioner of Public Works, the Contract may be terminated (see GC section 14). CONTRACTOR shall be solely responsible for the means, methods, techniques, sequences and procedures of construction, but CONTRACTOR shall not be responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence or procedure of construction which is indicated in and required by the Contract Documents. CONTRACTOR shall be responsible to see that the finished Work complies accurately with the Contract Documents.

5.2 Superintendence

CONTRACTOR shall keep on the Work at all times during its progress a competent resident superintendent, who shall not be replaced without written notice to OWNER and CONSULTANT except under extraordinary circumstances. The superintendent will be CONTRACTOR'S representative at the site and shall have authority to act on behalf of CONTRACTOR. All communications given to the superintendent shall be as binding as if given to CONTRACTOR.

5.3 Labor

CONTRACTOR shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. CONTRACTOR shall at all times maintain good discipline and order at the site. OWNER reserves the right to require CONTRACTOR to remove from the Project any of its personnel, or subcontractor's personnel for violating LFUCG Policies, Rules or Regulations. Except in connection with the safety or protection of persons or the Work or property at the site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all Work at the site shall be performed during regular working hours, and CONTRACTOR will not permit overtime work or the performance of Work on Saturday, Sunday or any legal holiday without OWNER'S written consent given after prior written notice to CONSULTANT.

5.4 Start-Up and Completion of Work

Unless otherwise specified, CONTRACTOR shall furnish and assume full responsibility for all materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up and completion of the Work.

5.5 Materials and Equipment

All materials and equipment shall be of good quality and new, except as otherwise provided in the Contract Documents. If required by CONSULTANT, CONTRACTOR shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment. All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable supplier except as otherwise provided in the Contract Documents; but no provision of any such instructions will be effective to assign to CONSULTANT, or any of CONSULTANT'S consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 8.12.3 or 8.12.4.

5.5.1 Not Clearly Specified or Indicated

In all instances where materials specified are obtainable in different sizes, weights, trade grades, qualities or finishes, etc., whose weights, trade grades, qualities or finishes, etc., are not clearly specified or indicated on the Drawings, the CONTRACTOR shall notify the CONSULTANT of all such instances at least five (5) days in advance of receiving the proposals. The CONSULTANT will then determine which size, weight, trade grade, quality, finish, etc., is required.

5.5.2 Coordination of Work

The CONTRACTOR shall see that for his own Work and for the work of each subcontractor, proper templates and patterns necessary for the coordination of the various parts of the Work are prepared. The CONTRACTOR shall furnish or require the Subcontractor to furnish such duplicates as will enable the Subcontractors to fit together and execute fully their respective portions of the Work.

5.6 Adjusting Progress Schedule

CONTRACTOR shall submit to CONSULTANT for acceptance (to the extent indicated in paragraph 2.8) adjustments in the progress schedule to reflect the impact thereon of new developments; these will conform generally to the progress schedule then in effect and additionally will comply with any provisions of the Contract Documents applicable thereto.

5.7 Substitutes or “Or-Equal” Items

5.7.1 General

Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular supplier, the naming of the item is intended to establish the type, function, and quality required. Unless the name is followed by words indicating that no substitution is permitted, materials or equipment of other Suppliers may be accepted by OWNER/CONSULTANT if sufficient information is submitted by CONTRACTOR to allow OWNER/CONSULTANT to determine that the material or equipment proposed is equivalent or equal to that named. The procedure for review by OWNER/CONSULTANT will include the following. Requests for review of substitute items of material and equipment will not be accepted by OWNER/CONSULTANT from anyone, other than CONTRACTOR. If CONTRACTOR wishes to furnish or use a substitute item of material or equipment, CONTRACTOR shall make written application to OWNER/CONSULTANT for acceptance thereof, certifying that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified and be suited to the same use as that specified. The application will state that the evaluation and acceptance of the proposed substitute will not prejudice CONTRACTOR’S achievement of completion on time, whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with OWNER for work on the Project) to adapt the design to the proposed substitute and whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty. All variations of the proposed substitute from that specified will be identified in the application and available maintenance, repair and replacement service will be indicated. The application will also contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which shall be considered by OWNER/CONSULTANT in evaluating the proposed substitute. OWNER/CONSULTANT may require CONTRACTOR to furnish at CONTRACTOR’S expense additional data about the proposed substitute.

5.7.2 Substitutes

If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, CONTRACTOR may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to OWNER/CONSULTANT, if CONTRACTOR submits sufficient information to allow OWNER/CONSULTANT to determine that the substitute proposed is equivalent to that indicated or required by the Contract

Documents. The procedure for review by OWNER/CONSULTANT will be similar to that provided in paragraph 5.7.1 as applied by OWNER/CONSULTANT.

5.7.3 OWNER/CONSULTANT'S Approval

OWNER/CONSULTANT will be allowed a reasonable time within which to evaluate each proposed substitute. OWNER/CONSULTANT will be the sole judge of acceptability, and no substitute will be ordered, installed or utilized without OWNER/CONSULTANT'S prior written acceptance which will be evidenced by either a Change Order or an approved Shop Drawing. OWNER may require CONTRACTOR to furnish at CONTRACTOR'S expense a special performance guarantee or other surety with respect to any substitute. OWNER/CONSULTANT will record time required by OWNER/CONSULTANT and OWNER/CONSULTANT'S consultants in evaluating substitutions proposed by CONTRACTOR and in making changes in the Contract Documents occasioned thereby. Whether or not OWNER/CONSULTANT accepts a proposed substitute, CONTRACTOR shall reimburse OWNER for the charges of OWNER/CONSULTANT and OWNER/CONSULTANT'S consultants for evaluating each proposed substitute.

5.8 Subcontractors, Suppliers, and Others

5.8.1 Acceptable to CONSULTANT

CONTRACTOR shall not employ any Subcontractor, Supplier or other person or organization (including those acceptable to OWNER and CONSULTANT as indicated in paragraph 5.8.2), whether initially or as a substitute, against whom OWNER or CONSULTANT may have reasonable objection. CONTRACTOR shall not be required to employ any Subcontractor, Supplier or other person or organization to furnish or perform any of the Work against whom CONTRACTOR has reasonable objection.

5.8.2 Objection After Due Investigation

If the Contract Documents require the identity of certain Subcontractors, Suppliers or other persons or organizations (including those who are to furnish the principal items of materials and equipment) to be submitted to OWNER in advance of the specified date prior to the Effective Date of the Agreement for acceptance by OWNER and CONSULTANT and if CONTRACTOR has submitted a list thereof, OWNER'S or CONSULTANT'S acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the bidding documents or the Contract Documents) of any such Subcontractor, Supplier or other person or organization so identified may be revoked on the basis of reasonable objection after due investigation, in which case CONTRACTOR shall submit an acceptable substitute. No acceptance by

OWNER or CONSULTANT of any such Subcontractor, Supplier or other person or organization shall constitute a waiver of any right of OWNER or CONSULTANT to reject defective Work.

5.8.3 Contractor Responsible for Acts of Subcontractors

The CONTRACTOR shall perform on the site, and with its own organization, work equivalent to at least fifty (50) percent of the total amount of Work to be performed under the Contract. This percentage may be reduced by a supplemental agreement to this Contract if, during performing the Work, the CONTRACTOR requests a reduction and the Urban County project manager determines that the reduction would be to the advantage of the Urban County Government.

The CONTRACTOR shall, at the time he submits his proposal for the Contract, notify the OWNER in writing of the names of Subcontractors proposed for the Work. He shall not employ any Subcontractor without the prior written approval of the OWNER.

CONTRACTOR shall be fully responsible to OWNER and CONSULTANT for all acts and omissions of the Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with CONTRACTOR just as CONTRACTOR is responsible for CONTRACTOR'S own acts and omissions. Nothing in the Contract Documents shall create any contractual relationship between OWNER or CONSULTANT and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of OWNER or CONSULTANT to pay or to see to the payment of any moneys due any such Subcontractor, Supplier or other person or organization except as may otherwise be required by Laws and Regulations.

5.8.4 Division of Specifications

The divisions and sections of the Specifications and the identifications of any Drawings shall not control CONTRACTOR in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

5.8.5 Agreement Between Contractor and Subcontractors

All Work performed for CONTRACTOR by a Subcontractor will be pursuant to an appropriate agreement between CONTRACTOR and the Subcontractor which specifically binds the Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of OWNER and CONSULTANT.

5.8.6 Statements and Comments by CONTRACTOR

Neither the CONTRACTOR, his employees, nor his subcontractors shall at any time make any statement or comment as

to the project scope, nature, intention, design, or construction method to any third party or parties without the explicit written consent of the OWNER.

Any third party requesting such information shall be referred to the OWNER or his representative.

Should there be any change from the original intent of the project as a result of any statement or comment by the contractor, his employees or subcontractors, contractor shall be held liable for any change in the scope, nature, design, or construction method and shall bear the full cost for the previously mentioned changes.

5.9 Patent Fees and Royalties

CONTRACTOR shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product or device which is the subject of patent rights or copyrights held by others.

5.10 Permits

Unless otherwise provided in the Special conditions, CONTRACTOR shall obtain and pay for all construction permits and licenses. OWNER shall assist CONTRACTOR, when necessary, in obtaining such permits and licenses. CONTRACTOR shall pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of opening of Bids, or if there are no Bids on the Effective Date of the Agreement. CONTRACTOR shall pay all charges of utility owners for connections to the Work, and OWNER shall pay all charges of such utility owners for capital costs related thereto such as plant investment fees.

5.11 Laws and Regulations

5.11.1 CONTRACTOR to Comply

CONTRACTOR shall give all notices and comply with all Laws and Regulations applicable to furnishing and performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither OWNER nor CONSULTANT shall be responsible for monitoring CONTRACTOR'S compliance with any Laws and Regulations.

5.11.2 Specifications and Drawings at Variance

If CONTRACTOR observes that the Specifications or Drawings are at variance with any Laws or Regulations, CONTRACTOR shall give CONSULTANT prompt written notice thereof, and any necessary changes will be authorized by one of the methods indicated in paragraph 3.4. If CONTRACTOR performs any Work knowing or having reason to know that it is contrary to such Laws, or Regulations, and without such notice to CONSULTANT, CONTRACTOR shall bear all costs arising therefrom; however, it shall not be CONTRACTOR'S primary responsibility to make certain that the Specifications and Drawings are in accordance with such Laws and Regulations.

Any party, firm or individual submitting a proposal pursuant to invitation must have paid all taxes owed to the Lexington-Fayette Urban County Government at the time the proposal is submitted, and must maintain a "current" status in regard to those taxes throughout the Contract. If applicable, business must be licensed in Fayette County.

5.12 Taxes

CONTRACTOR shall pay all sales, consumer, use and other similar taxes required to be paid by CONTRACTOR in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work. Any party, firm or individual submitting a proposal pursuant to invitation must have paid all taxes owed to the Lexington-Fayette Urban County Government at the time the proposal is submitted, and must maintain a "current" status in regard to those taxes throughout the Contract. If applicable, business must be licensed in Fayette County.

5.13 Use of Premises

5.13.1 Project Site

CONTRACTOR shall confine construction equipment, the storage of materials and equipment and the operations of workers to the staging areas or work site areas identified in and permitted by the Contract Documents and other land and areas permitted by Laws and Regulations, rights-of-way, permits and easements, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment. CONTRACTOR shall assume full responsibility for any damage to any such

land or area, or to the owner or occupant thereof or of any land or areas contiguous thereto, resulting from the performance of the Work. Should any claim be made against OWNER or CONSULTANT by any such owner or occupant because of the performance of the Work, CONTRACTOR shall promptly attempt to settle with such other party by agreement or otherwise resolve the claim by arbitration or at law. CONTRACTOR shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold OWNER and CONSULTANT harmless from and against all claims, damages, losses and expenses (including, but not limited to, fees of engineers, architects, attorneys and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any such other party against OWNER or CONSULTANT to the extent based on a claim arising out of CONTRACTOR'S performance of the Work.

5.13.2 Clean UP

During the progress of the Work, CONTRACTOR shall keep the premises free from accumulations of waste materials, rubbish and other debris resulting from the Work. At the completion of the Work, CONTRACTOR shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, appliances, construction equipment and machinery, and surplus materials, and shall leave the site clean and ready for occupancy by OWNER. CONTRACTOR shall restore to original condition all property not designated for alteration by the Contract Documents.

5.13.1 Loading of Structures

CONTRACTOR shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall CONTRACTOR subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

5.14 Record Drawings

CONTRACTOR shall maintain in a safe place at the site one record copy of all Drawings, Specifications, Addenda, Change Orders, Field Orders and written interpretations and clarifications (issued pursuant to paragraph 9.4) in good order and annotated to show all changes made during construction. These record documents together with all approved samples and a counterpart of all approved Shop Drawings will be available to CONSULTANT for reference. Upon completion of the Work, these record documents, samples and Shop Drawings will be delivered to CONSULTANT for OWNER.

5.15 Shop Drawings and Samples

5.15.1 Shop Drawing Submittals

After checking and verifying all field measurements and after complying

with applicable procedures specified, CONTRACTOR shall submit to CONSULTANT for review and approval in accordance with the accepted schedule of Shop Drawing submissions (see paragraph 2.8), or for other appropriate action if so indicated in the Special Conditions, five copies (unless otherwise specified) of all Shop Drawings, which will bear a stamp or specific written indication that CONTRACTOR has satisfied CONTRACTOR'S responsibilities under the Contract Documents with respect to the review of the submission. All submissions will be identified as CONSULTANT may require. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to enable CONSULTANT to review the information as required.

5.15.2 Sample Submittals

CONTRACTOR shall also submit to CONSULTANT for review and approval with such promptness as to cause no delay in Work, all samples required by the Contract Documents. All samples will have been checked by and accompanied by a specific written indication that CONTRACTOR has satisfied CONTRACTOR'S responsibilities under the Contract Documents with respect to the review of the submission and will be identified clearly as to material, Supplier, pertinent data such as catalog numbers and the use for which intended.

5.15.3 Review by CONTRACTOR

Before submission of each Shop Drawing or sample CONTRACTOR shall have determined and verified all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar data with respect thereto and reviewed or coordinated each Shop Drawing or sample with other Shop Drawings and samples and with the requirements of the Work and the Contract Documents.

5.15.4 Notice of Variation

At the time of each submission, CONTRACTOR shall give CONSULTANT specific written notice of each variation that the Shop Drawings or samples may have from the requirements of the Contract Documents, and, in addition, shall cause a specific notation to be made on each Shop Drawing submitted to CONSULTANT for review and approval of each such variation.

5.15.5 CONSULTANT'S Approval

CONSULTANT will review and approve with reasonable promptness Shop Drawings and samples, but CONSULTANT'S review and approval will be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents and shall not extend to means, methods, techniques, sequences or procedures of construction (except where a specific means, method, technique, sequence or

procedure of construction is indicated in or required by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions. CONTRACTOR shall make corrections required by CONSULTANT, and shall return the required number of corrected copies of Shop Drawings and submit, as required, new samples for review and approval. CONTRACTOR shall direct specific attention in writing to revisions other than the corrections called for by CONSULTANT on previous submittals.

5.15.6 Responsibility for Errors and Omissions

CONSULTANT'S review and approval of Shop Drawings or samples shall not relieve CONTRACTOR from responsibility for any variation from the requirements of the Contract Documents unless CONTRACTOR has in writing called CONSULTANT'S attention to each such variation at the time of submission as required by paragraph 5.15.4 and CONSULTANT has given written approval of each such variation by a specific written notation thereof incorporated in or accompanying the Shop Drawing or sample approval; nor will any approval by CONSULTANT relieve CONTRACTOR from responsibility for errors or omissions in the Shop Drawings or from responsibility for having complied with the provisions of paragraph 5.15.3.

5.15.7 Cost of Related Work

Where a Shop or sample is required by the Specifications, any related Work performed prior to CONSULTANT'S review and approval of the pertinent submission will be the sole expense and responsibility of CONTRACTOR.

5.16 Continuing the Work

CONTRACTOR shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with OWNER. No Work shall be delayed or postponed pending resolutions of any disputes or disagreements, except as permitted by paragraph 14.5 or as CONTRACTOR and OWNER may otherwise agree in writing.

5.17 Erosion and Sediment Control

5.17.1 General Environmental Requirements

The CONTRACTOR and Subcontractors performing work on projects on behalf of the OWNER shall comply with all applicable federal, state, and local environmental regulations and all requirements and conditions set forth in "special" permits including but not limited to Corp of Engineers 404 permits, 401 Water Quality Certifications, Stream Crossing and Floodplain Encroachment Permits.

Any fines or penalties resulting from the failure to comply with the terms of the federal, state or local permits or perform necessary corrective action are solely the obligation of the CONTRACTOR.

5.17.2 Stormwater Pollution Prevention

A. The CONTRACTOR shall exercise due care to prevent or minimize any damage to any stream or wetland from pollution by debris, sediment or other material. The operation of equipment and/or materials in a jurisdictional wetland is expressly prohibited. Water that has been used for washing or processing, or that contains oils, sediments or other pollutants shall not be discharged from the job site. Such waters shall be collected and properly disposed of by the CONTRACTOR in accordance with applicable local, state and federal law.

B. The CONTRACTOR is solely responsible for securing all required state and local permits associated with stormwater discharges from the project including, but not necessarily limited to the KY Notice of Intent to Disturb (NOI) for Coverage of Storm Water Discharges Associated with Construction Activities under the KPDES Storm Water General Permit KYR100000 and the LFUCG, Land Disturbance Permit. Permit application preparation and all required documentation are the responsibility of the CONTRACTOR. The CONTRACTOR is solely responsible for maintaining compliance with the stormwater pollution prevention plan or erosion and sediment control plan and ensuring the following:

- a. That the Stormwater Pollution Prevention Plan (SWPPP) or erosion control plan is current and available for review on site;
- b. That any and all stormwater inspection reports required by the permit are conducted by qualified personnel and are available for review onsite; and
- c. That all best management practices (BMPs) are adequately maintained and effective at controlling erosion and preventing sediment from leaving the site.

C. The CONTRACTOR shall provide the necessary equipment and personnel to perform any and all emergency measures that may be required to contain any spillage or leakage and to remove materials, soils or liquids that become contaminated. The collected spill material shall be properly disposed at the CONTRACTOR's expense.

D. Upon completion of the work and with the concurrence of the OWNER, the CONTRACTOR must file a Notice of Termination (NOT) of Coverage Under the KPDES General Permit for Storm Water Discharges Associated with Construction Activity with the appropriate local and state authorities.

E. Any fines or penalties resulting from the failure to comply with the terms of the state or local stormwater permits or perform necessary corrective action are solely the obligation of the CONTRACTOR.

6. OTHER WORK

6.1 Related Work at Site

OWNER may perform other work related to the Project at the site by OWNER'S own forces, have other work performed by utility owners or let other direct contracts therefor which shall contain General Conditions similar to these. If the fact that such other work is to be performed was not noted in the Contract Documents, written notice thereof will be given to CONTRACTOR prior to starting any such other work; and, if such performance will involve additional expense to CONTRACTOR or requires additional time, a Change Order to the Contract will be negotiated.

6.2 Other Contractors or Utility Owners

CONTRACTOR shall afford each utility owner and other contractor who is a party to such a direct contract (or OWNER, if OWNER is performing the additional work with OWNER'S employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work, and shall properly connect and coordinate the Work with theirs. CONTRACTOR shall do all cutting, fitting and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. CONTRACTOR shall not endanger any work of others by cutting, excavating or otherwise altering their work and will only cut or alter their work with the written consent of CONSULTANT and the others whose work will be affected. The duties and responsibilities of CONTRACTOR under this paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of CONTRACTOR in said direct contracts between OWNER and such utility owners and other contractors.

6.3 Delays Caused by Others

If any part of CONTRACTOR'S Work depends for proper execution or results upon the work of any such other contractor or utility owner (or OWNER), CONTRACTOR shall inspect and promptly report to CONSULTANT in writing any delays, defects or deficiencies in such work that render it unavailable or unsuitable for such proper execution and results. CONTRACTOR'S failure so to report will constitute an acceptance of the other work as fit and proper for integration with CONTRACTOR'S Work except for latent or non-apparent defects and deficiencies in the other work.

6.4 Coordination

If OWNER contracts with others for the performance of other work on the Project at the site, the person or organization who will have authority and responsibility for coordination of the activities among the various prime contractors will be identified in the Special Conditions, and the specific matters to be covered by such authority and

responsibility will be itemized, and the extent of such authority and responsibilities will be provided, in the Special Conditions.

7. OWNER'S RESPONSIBILITIES

7.1 Communications

OWNER shall issue all communications to CONTRACTOR through CONSULTANT.

7.2 Data and Payments

OWNER shall furnish the data required of OWNER under the Contract Documents promptly after they are due.

7.3 Lands, Easements, and Surveys

OWNER'S duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in paragraphs 4.1 and 4.4. Paragraph 4.2 refers to OWNER'S identifying and making available to CONTRACTOR copies of reports of explorations and tests of subsurface conditions at the site and in existing structures which have been utilized by CONSULTANT in preparing the Drawings and Specifications.

7.4 Change Orders

OWNER is obligated to execute Change Orders as indicated in paragraph 9.4.

7.5 Inspections, Tests and Approvals

OWNER'S responsibility in respect to certain inspections, tests and approvals is set forth in paragraph 13.3.

7.6 Stop or Suspend Work

In connection with OWNER'S right to stop Work or suspend Work, see paragraph 12.4 and 14.1 Paragraph 14.2 deals with OWNER'S rights to terminate services of CONTRACTOR under certain circumstances.

8. CONSULTANT'S STATUS DURING CONSTRUCTION

8.1 OWNER'S Representative

CONSULTANT will be OWNER'S representative during the construction period. The duties and responsibilities and the limitations of authority of CONSULTANT as OWNER'S representative during construction are set forth in the Contract Documents and shall not be extended without written consent of OWNER and CONSULTANT.

8.2 Visits to Site

CONSULTANT will make visits to the site at intervals appropriate to the various stages of construction to observe the progress and quality of the executed Work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents. CONSULTANT will not be required to make exhaustive or

continuous on-site inspections to check the quality or quantity of the Work. CONSULTANT'S efforts will be directed toward providing for OWNER a greater degree of confidence that the completed Work will conform to the Contract Documents. On the basis of such visits and on-site observations, CONSULTANT will keep OWNER informed of the progress of the Work and will endeavor to guard OWNER against defects and deficiencies in the Work.

8.3 Project Representation

CONSULTANT will provide an Inspector to assist CONSULTANT in observing the performance of the Work. If OWNER designates another agent to represent OWNER at the site who is not CONSULTANT'S agent or employee, the duties, responsibilities and limitations of authority of such other person will be as provided in the Special Conditions.

8.4 Clarifications and Interpretations

CONSULTANT will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents (in the form of Drawings or otherwise) as CONSULTANT may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents.

8.5 Authorized Variations in Work

CONSULTANT may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Time and are consistent with the overall intent of the Contract Documents. These may be accomplished by a Field Order.

8.6 Rejecting Defective Work

CONSULTANT will have authority to disapprove or reject Work which CONSULTANT believes to be defective, and will also have authority to require special inspection or testing of the Work as provided in paragraph 12.3, whether or not the Work is fabricated, installed or completed.

8.7 Shop Drawings

In connection with CONSULTANT'S responsibility for Shop Drawings and samples, see paragraphs 5.15.1 through 5.16 inclusive.

8.8 Change Orders

In connection with CONSULTANT'S responsibilities as to Change Orders, see Articles 10, 11 and 12.

8.9 Payments

In connection with CONSULTANT'S responsibilities with respect to Applications for Payment, etc., see Article 13.

8.10 Determinations for Unit Prices

CONSULTANT will determine the actual quantities and classifications of Unit Price Work performed by CONTRACTOR.

CONSULTANT will review with CONTRACTOR CONSULTANT'S preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise).

8.11 Decision on Disputes

CONSULTANT will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. Claims, disputes and other matters relating to the acceptability of the Work or the interpretation of the requirements of the Contract Documents pertaining to the performance and furnishing of the Work and claims under Articles 10 and 11 in respect of changes in the Contract Price or Contract Time will be referred initially to CONSULTANT in writing with a request for a formal decision in accordance with this paragraph, which CONSULTANT will render in writing within a reasonable time. Written notice of each such claim, dispute and other matter will be delivered to CONSULTANT promptly (but in no event later than thirty days) after the occurrence of the event giving rise thereto, and written supporting data will be submitted to CONSULTANT within sixty days after such occurrence unless CONSULTANT allows an additional period of time to ascertain more accurate data in support of the claim.

8.12 Limitations on CONSULTANT's Responsibilities

8.12.1 CONTRACTOR, Supplier, or Surety

Neither CONSULTANTS authority to act under this Article 8 or elsewhere in the Contract Documents nor any decision made by CONSULTANT in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of CONSULTANT to CONTRACTOR, any Subcontractor, any Supplier, or any other person or organization performing any of the Work, or to any surety for any of them.

8.12.2 To Evaluate the Work

Whenever in the Contract Documents the terms "as ordered", "as directed", "as required", "as allowed", "as approved" or terms of like effect or import are used, or the adjectives "reasonable", "suitable", "acceptable", "proper", or "satisfactory" or adjectives or like "effect" or "import" are used to describe a requirement, direction, review or judgment of CONSULTANT as to the Work, it is intended that such requirement, direction, review or judgment will be solely to evaluate the Work for compliance with the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective shall not be effective to assign CONSULTANT any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraph 8.12.3 or 8.12.4.

8.12.3 CONTRACTOR'S Means, Methods, Etc.

CONSULTANT will not be responsible for CONTRACTOR'S means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, and CONSULTANT will not be responsible for CONTRACTOR'S failure to perform or furnish the Work in accordance with the Contract Documents.

8.12.4 Acts of Omissions of CONTRACTOR

CONSULTANT will not be responsible for the acts or omissions of CONTRACTOR or of any Subcontractor, any Supplier, or of any other person or organization performing or furnishing any of the Work.

9. CHANGES IN THE WORK

9.1 OWNER May Order Change

Without invalidating the Agreement and without notice to any surety, OWNER may, at any time or from time to time, order additions, deletions or revisions in the Work; these will be authorized by a Change Order. Upon receipt of such notice, CONTRACTOR shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

9.2 Claims

Claims for an increase or decrease in the Contract Price or an extension or shortening of the Contract Time that should be allowed as a result of a Change Order will be settled as provided for in Article 10 or Article 11.

9.3 Work Not in Contract Documents

CONTRACTOR shall not be entitled to an increase in the Contract Price or an extension of the Contract Time with respect to any Work performed that is not required by the Contract Documents as amended, modified and supplemented as provided in paragraph 3.4, except in the case of an emergency and except in the case of uncovering Work as provided in paragraph 12.3.4.

9.4 Change Orders

OWNER and CONTRACTOR shall execute appropriate Change Orders covering:

9.4.1 changes in the Work which are ordered by OWNER pursuant to paragraph 9.1, are required because of acceptance of defective Work under paragraph 12.7 or corrective defective Work under paragraph 12.8, or are agreed to by the parties;

9.4.2 changes in the Contract Price or Contract Time which are agreed to by the parties; and

9.4.3 changes in the Contract Price or Contract Time which embody the substance of any written decision rendered by CONSULTANT pursuant to paragraph 8.11; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and REGULATIONS, but during any such appeal, CONTRACTOR shall carry on the Work and adhere to the progress schedule as provided in paragraph 5.16.

9.5 Notice of Change

If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Time) is required by the provisions of any Bond to be given to a surety, the giving of any such notice will be CONTRACTOR'S responsibility, and the amount of each applicable Bond will be adjusted accordingly.

10. CHANGE OF CONTRACT PRICE

10.1 Total Compensation

The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to CONTRACTOR for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by CONTRACTOR shall be at his expense without change in the Contract Price.

10.2 Claim for Increase or Decrease in Price

The Contract Price may only be changed by a Change Order. Any claim for an increase or decrease in the Contract Price shall be based on written notice delivered by the CONTRACTOR to the CONSULTANT promptly (but in no event later than thirty days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the amount of the claim with supporting data shall be delivered within sixty days after such occurrence (unless CONSULTANT allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by CONTRACTOR'S written statement that the amount claimed covers all known amounts (direct, indirect, and consequential) to which the CONTRACTOR is entitled as a result of the occurrence of said event.

10.3 Value of Work

The value of any Work covered by a Change Order or of any claim for an increase or decrease in the Contract Price shall be determined in one of the following ways:

10.3.1 Unit Prices

Where the Work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of

the items involved (subject to the provisions of paragraphs 10.9.1. through 10.9.3, inclusive).

10.3.2 Lump Sum

By mutual acceptance of a lump sum (which may include an allowance for overhead and profit not necessarily in accordance with paragraph 10.6.2.1).

10.3.3 Cost Plus Fee

On the basis of the Cost of the Work (determined as provided in paragraphs 10.4 and 10.5) plus a CONTRACTOR'S fee for overhead and profit (determined as provided in paragraphs 10.6 and 10.7).

10.4 Cost of the Work

The term Cost of the Work means the sum of all costs necessarily incurred and paid by CONTRACTOR in the proper performance of the Work. Except as otherwise may be agreed to in writing by OWNER, such costs shall be in amounts no higher than those prevailing in the locality of the Project; shall include only the following items; and shall not include any of the costs itemized in paragraph 10.5:

10.4.1 Payroll Costs

Payroll costs for employees in the direct employ of CONTRACTOR in the performance of the Work under schedules of job classifications agreed upon by OWNER and CONTRACTOR. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workers' or workmen's compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. Such employees shall include superintendents and foremen at the site. The expenses of performing Work after regular working hours, on Saturday, Sunday or legal holidays, shall be included in the above to the extent authorized by OWNER.

10.4.2 Materials and Equipment Costs

Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to CONTRACTOR unless OWNER deposits funds with CONTRACTOR with which to make payments, in which case the cash discounts shall accrue to OWNER. All trade discounts, rebates and refunds and all returns from sale of surplus materials and equipment shall accrue to OWNER, and CONTRACTOR shall make provisions so that they may be obtained.

10.4.3 Subcontractor Costs

Payments made by CONTRACTOR to the Subcontractors for Work performed by Subcontractors. If required by OWNER, CONTRACTOR shall obtain competitive bids from Subcontractors acceptable to CONTRACTOR and shall deliver such bids to OWNER who will then determine, with the advice of CONSULTANT, which bids will be accepted. If a subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work Plus a Fee, the Subcontractor's Cost of the Work shall be determined in the same manner as CONTRACTOR'S Cost of the Work. All subcontracts shall be subject to the other provisions of the Contract Documents insofar as applicable.

10.4.4 Special Consultant Costs

Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys and accountants) employed for services specifically related to the Work.

10.4.5 Supplemental Costs

10.4.5.1 The proportion of necessary transportation, travel and subsistence expenses of CONTRACTOR'S employees incurred in discharge of duties connected with the Work.

10.4.5.2 Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost less market value of such items used but not consumed which remain the property of CONTRACTOR.

10.4.5.3 Rentals of all construction equipment and machinery and the parts thereof whether rented from CONTRACTOR or others in accordance with rental agreements approved by OWNER with the advice of CONSULTANT, and the costs of transportation, loading, unloading, installation, dismantling and removal shall be in accordance with terms of said rental agreements. The rental of any such equipment, machinery or parts shall cease when the use thereof is no longer necessary for the Work.

10.4.5.4 Sales, consumer, use or similar taxes related to the Work, and for which CONTRACTOR is liable, imposed by Laws and Regulations.

10.4.5.5 Deposits lost for causes other than negligence of CONTRACTOR, any Subcontractor or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

10.4.5.6 Losses and damages (and related expenses), not compensated by insurance or otherwise, to the Work or otherwise sustained by CONTRACTOR in connection with the performance and furnishing of the Work (except losses and damages within the deductible amounts of property insurance established by OWNER), provided they have resulted from causes other than the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of OWNER. No such losses, damages and expenses shall be included in the Cost of the Work for the purpose of determining CONTRACTOR'S fee. If, however, any such loss or damage requires reconstruction and CONTRACTOR is placed in charge thereof, CONTRACTOR shall be paid a fee proportionate to that stated in paragraph 10.6.2 for services.

10.4.5.7 The cost of utilities, fuel and sanitary facilities at the site.

10.4.5.8 Minor expenses such as telegrams, long distance telephone calls, telephone service at the site, expressage and similar petty cash items in connection with the Work.

10.4.5.9 Cost of premiums for additional Bonds and insurance required because of changes in the Work and premiums for property insurance coverage within the limits of the deductible amounts established by OWNER.

10.5 Not to Be Included in Cost of the Work

The term Cost of the Work shall not include any of the following:

10.5.1 Costs of Officers and Executives

Payroll costs and other compensation of CONTRACTOR'S officers, executives, principals (of partnership and sole proprietorships), general

managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by CONTRACTOR whether at the site or in CONTRACTOR'S principal or a branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in paragraph 10.4.1 or specifically covered by paragraph 10.4.4 - all of which are to be considered administrative costs covered by the CONTRACTOR'S fee.

10.5.2 Principal Office

Expenses of CONTRACTOR'S principal and branch offices other than CONTRACTOR'S office at the site.

10.5.3 Capital Expense

Any part of CONTRACTOR'S capital expenses, including interest on CONTRACTOR'S capital employed for the Work and charges against CONTRACTOR for delinquent payments.

10.5.4 Bonds and Insurance

Cost of premiums for all Bonds and for all insurance whether or not CONTRACTOR is required by the Contract Documents to purchase and maintain the same (except for the cost of premiums covered by subparagraph 10.4.5.9 above).

10.5.5 Costs Due to Negligence

Costs due to the negligence of CONTRACTOR, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied and making good any damage to property.

10.5.6 Other Costs

Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraph 10.4.

10.6 Contractor's Fee

The CONTRACTOR'S Fee allowed to CONTRACTOR for overhead and profit shall be determined as follows:

10.6.1 a mutually acceptable fixed fee; or if none can be agreed upon,

10.6.2 a fee based on the following percentages of the various portions of the Cost of the Work:

10.6.2.1 for costs incurred under paragraphs 10.4.1 and 10.4.2, the CONTRACTOR'S fee shall be fifteen percent;

10.6.2.2 for costs incurred under paragraph 10.4.3, the CONTRACTOR'S fee shall be five percent; and if a subcontract is on the basis of Cost of the Work Plus a fee, the maximum allowable to CONTRACTOR on account of overhead and profit of all Subcontractors shall be fifteen percent;

10.6.2.3 no fee shall be payable on the basis of costs itemized under paragraphs 10.4.4, 10.4.5 and 10.5;

10.6.2.4 the amount of credit to be allowed by CONTRACTOR to OWNER for any such change which results in a net decrease in cost will be the amount of the actual net decrease plus a deduction in CONTRACTOR'S Fee by an amount equal to ten percent of the net decrease; and

10.6.2.5 when both additions and credits are involved in any one change, the adjustment in CONTRACTOR'S fee shall be computed on the basis of the net change in accordance with paragraphs 10.6.2.1 through 10.6.2.4, inclusive.

10.7 Itemized Cost Breakdown

Whenever the cost of any Work is to be determined pursuant to paragraph 10.4 or 10.5, CONTRACTOR will submit in form acceptable to CONSULTANT an itemized cost breakdown together with supporting data.

10.8 Cash Allowances

It is understood that CONTRACTOR has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be done by such Subcontractors or Suppliers and for such sums within the limit of the allowances as may be acceptable to CONSULTANT, CONTRACTOR agrees that:

10.8.1 Materials and Equipment

The allowances include the cost to CONTRACTOR (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the site, and all applicable taxes; and

10.8.2 Other Costs

CONTRACTOR'S costs for unloading and handling on the site, labor, installation costs, overhead, profit and other expenses contemplated for the allowances have been included in the Contract Price and not in the allowances. No demand for additional payment on account of any thereof will be valid.

10.8.3 Change Order

Prior to final payment, an appropriate Change Order will be issued as recommended by CONSULTANT to reflect actual amounts due CONTRACTOR on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

10.9 Unit Price Work

10.9.1 General

Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the established unit prices for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by CONTRACTOR will be made by CONSULTANT in accordance with Paragraph 8.10.

10.9.2 Overhead and Profit

Each unit price will be deemed to include an amount considered by CONTRACTOR to be adequate to cover CONTRACTOR'S overhead and profit for each separately identified item.

10.9.3 Claim for Increase in Unit Price

Where the quantity of any item of Unit Price Work performed by CONTRACTOR differs materially and significantly from the estimated quantity of such item indicated in the Agreement and there is no corresponding adjustment with respect to any other item of Work and if CONTRACTOR believes that CONTRACTOR has incurred additional expense as a result thereof, CONTRACTOR may make a claim for an increase in the Contract Price in accordance with Article 10.

11. CHANGE OF CONTRACT TIME

11.1 Change Order

The Contract Time may only be changed by a Change Order. Any claim for an extension or shortening of the Contract Time shall be based on written notice delivered to CONSULTANT promptly (but in no event later than thirty days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the extent of the claim with supporting data shall be delivered within sixty days after such occurrence (unless CONSULTANT allows an additional period of time to ascertain more accurate data in support of the claim) and shall be accompanied by the claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant has reason to believe it is entitled as a result of the occurrence of said event. All claims for adjustment in the Contract Time shall be determined by CONSULTANT in accordance with paragraph 8.11. No claim for an adjustment in the Contract Time will be valid if not submitted in accordance with the requirements of this paragraph 11.1.

11.2 Justification for Time Extensions

The Contract Time will be extended in an amount equal to time lost due to delays beyond the control of CONTRACTOR if a claim is made therefore as provided in paragraph 11.1. Such delays shall include, but not be limited to, acts or neglect by OWNER or others performing additional work as contemplated by Article 6, or to fires, floods, labor disputes, epidemics, abnormal weather conditions or acts of God.

11.3 Time Limits

All time limits stated in the Contract Documents are of the essence of the Agreement. The provisions of this Article 11 shall not exclude recovery for damages (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court costs) for delay by either party.

12. WARRANTY AND GUARANTEE; TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

12.1 Warranty and Guarantee

CONTRACTOR warrants and guarantees to OWNER and CONSULTANT that all Work will be in accordance with the Contract Documents and will not be defective. All defective Work, whether or not in place, may be rejected, corrected or accepted as provided in this Article 12.

12.2 Access to Work

CONSULTANT and CONSULTANT'S representatives, other representatives of OWNER, testing agencies and governmental agencies with jurisdictional interests will have access to the Work at reasonable times for their observation, inspecting and testing. CONTRACTOR shall provide proper and safe conditions for such access.

12.3 Tests and Inspections

12.3.1 Timely Notice

CONTRACTOR shall give CONSULTANT timely notice of readiness of the Work for all required inspections, tests or approvals.

12.3.2 Requirements and Responsibilities

The CONSULTANT may require such inspection and testing during the course of the Work as he/she deems necessary to ascertain and assure the integrity and acceptable quality of the materials incorporated and the work performed. Inspection presence may be either full-time or intermittent, and neither the presence nor absence at any time of the CONSULTANT or the INSPECTOR shall relieve the CONTRACTOR of sole responsibility for the acceptability and integrity of the Work or any part thereof.

The costs of sampling, testing, and inspection on-site to ascertain acceptability of the Work and materials will be borne by the OWNER except as otherwise provided. The OWNER will select a testing laboratory to perform such sampling and testing. Sampling and/or testing required by the CONTRACTOR or necessitated by failure of Work or materials to meet the above acceptability test shall be at the expense of the CONTRACTOR.

Inspection services may be performed by the employees of the OWNER or by others selected or designated by the OWNER or the CONSULTANT.

Sampling and/or testing required for manufacturing quality and/or process control, for certification that raw mineral materials or manufactured products are the quality specified in the contract, or to assure the acceptability for incorporation into the Work shall be borne by the CONTRACTOR or the material supplier.

Cost for inspection, sampling, testing, and approvals required by the laws or regulations of any public body having competent jurisdiction shall be borne by the CONTRACTOR or the material supplier.

Sampling and testing will be in accord with pertinent codes and regulations and with appropriate standards of the American Society of Testing Materials or other specified standards.

12.3.3 On-Site Construction Test and Other Testing

All inspections, tests or approvals other than those required by Laws or Regulations of any public body having jurisdiction shall be performed by organizations acceptable to OWNER and CONTRACTOR (or by CONSULTANT if so specified).

12.3.4 Covered Work

If any Work (including the work of others) that is to be inspected, tested or approved is covered without written concurrence of CONSULTANT, it must, if requested by CONSULTANT, be uncovered for observation. Such uncovering shall be at CONTRACTOR'S expense unless CONTRACTOR has given CONSULTANT timely notice of CONTRACTOR'S intention to cover the same and CONSULTANT has not acted with reasonable promptness in response to such notice.

12.3.5 CONTRACTOR'S Obligation

Neither observations by CONSULTANT nor inspections, tests or approvals by others shall relieve CONTRACTOR from CONTRACTOR'S obligations to perform the Work in accordance with the Contract Documents.

12.4 OWNER May Stop the Work

If the Work is defective, or CONTRACTOR fails to supply sufficient skilled workers or suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, OWNER may order CONTRACTOR to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of OWNER to stop the Work shall not give rise to any duty on the part of OWNER to exercise this right for the benefit of CONTRACTOR or any other party.

12.5 Correction or Removal of Defective Work

If required by CONSULTANT, CONTRACTOR shall promptly, as directed, either correct all defective Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by CONSULTANT, remove it from the site and replace it with non-defective Work. CONTRACTOR shall bear all direct, indirect and consequential costs of such correction or removal (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) made necessary thereby.

12.6 One Year Correction Period

If within one year after the date of Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be defective, CONTRACTOR shall promptly, without cost to OWNER and in accordance with OWNER'S written instructions, either correct such defective Work, or, if it has been rejected by OWNER, remove it from the site and replace it with non-defective Work. If CONTRACTOR does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, OWNER may have the defective Work corrected or the rejected Work removed and replaced, and all direct, indirect and consequential costs of such removal and replacement

(including but not limited to fees and charges of engineers, architects, attorneys and other professionals) will be paid by CONTRACTOR. In special circumstances where a particular item of equipment is placed in continuous service before Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications or by Change Order.

12.7 Acceptance of Defective Work

If, instead of requiring correction or removal and replacement of defective Work, OWNER prefers to accept it, OWNER may do so. CONTRACTOR shall bear all direct, indirect and consequential costs attributable to OWNER'S evaluation of and determination to accept such defective Work (such costs to be approved by CONSULTANT as to reasonableness and to include but not be limited to fees and charges of engineers, architects, attorneys and other professionals).

12.8 OWNER May Correct Defective Work

If CONTRACTOR fails within a reasonable time after written notice of CONSULTANT to proceed to correct and to correct defective Work or to remove and replace rejected Work as required by CONSULTANT in accordance with paragraph 12.5, or if CONTRACTOR fails to perform the Work in accordance with the Contract Documents, or if CONTRACTOR fails to comply with any other provision of the Contract Documents, OWNER may, after seven days' written notice to CONTRACTOR, correct and remedy any such deficiency. In exercising the rights and remedies under this paragraph OWNER shall proceed expeditiously. To the extent necessary to complete corrective and remedial action, OWNER may exclude CONTRACTOR from all or part of the site, take possession of all or part of the Work, and suspend CONTRACTOR'S services related thereto, take possession of CONTRACTOR'S tools, appliances, construction equipment and machinery at the site and incorporate in the Work all materials and equipment stored at the site or for which OWNER has paid CONTRACTOR but which are stored elsewhere. CONTRACTOR shall allow OWNER, OWNER'S representatives, agents and employees such access to the site as may be necessary to enable OWNER to exercise the rights and remedies under this paragraph. All direct, indirect and consequential costs of OWNER in exercising such rights and remedies will be charged against CONTRACTOR in an amount approved as to reasonableness by CONSULTANT, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and OWNER shall be entitled to an appropriate decrease in the Contract Price. Such direct, indirect and consequential costs will include but not be limited to fees and charges of engineers, architects, attorneys and other professionals, all court costs and all costs of repair and replacement of work of others destroyed or damaged by correction, removal or replacement of CONTRACTOR'S defective Work. CONTRACTOR shall not be allowed an extension of the Contract Time because of any delay in performance of the Work attributable to the exercise by OWNER of OWNER'S rights and remedies hereunder.

13. PAYMENTS TO CONTRACTOR AND COMPLETION

13.1 Schedule of Values

The schedule of values established as provided in paragraph 2.8 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to CONSULTANT. Progress payments on account of Unit Price Work will be based on the number of units completed.

13.2 Application for Progress Payment

At least ten days before each progress payment is scheduled (but not more often than once a month), CONTRACTOR shall submit to CONSULTANT for review an Application for Payment filled out and signed by CONTRACTOR covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice or other documentation warranting that OWNER has received the materials and equipment free and clear of all liens, charges, security interests and encumbrances (which are hereinafter in these General Conditions referred to as "Liens") and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect OWNER'S interest therein, all of which will be satisfactory to OWNER. OWNER shall, within thirty (30) calendar days of presentation to him of an approved Application for Payment, pay CONTRACTOR the amount approved by CONSULTANT. Monthly progress payments shall be ninety (90) percent of the sum obtained by applying the respective bid unit prices to the approved estimated quantities of work completed by the Contractor during the preceding month. The remaining ten (10) percent will be held by the Owner, as retainage. At such time as the CONSULTANT deems appropriate - based on the quality of work performed, progress of cleanup, and other pertinent factors - the rate of retainage, or the total amount retained, may be reduced; although, any reduction in retainage, below the ten (10) percent level, is made solely at the CONSULTANT's discretion. All remaining retainage held will be included in the final payment to the Contractor.

13.2.1 Waivers of Mechanic's Lien

With each Application for Payment OWNER may require CONTRACTOR to submit waivers of mechanic's lien from entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.

13.2.1.1 Requirement for waivers of Mechanic's Lien on Partial Applications for Payment will be determined and communicated at the Preconstruction Conference.

13.2.1.2 Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.

13.2.1.3 When an application shows completion of an item, submit conditional final or full waivers.

13.2.1.4 Owner reserves the right to designate which entities involved in the Work must submit waivers.

13.2.1.5 Waiver Forms: Submit executed waivers of lien on forms acceptable to Owner.

13.3 CONTRACTOR'S Warranty of Title

CONTRACTOR warrants and guarantees that title to all Work, materials and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to OWNER no later than the time of payment free and clear of all Liens.

13.4 Review of Applications for Progress Payment

13.4.1 Submission of Application for Payment

CONSULTANT will, after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to OWNER, or return the Application to CONTRACTOR indicating in writing CONSULTANT'S reasons for refusing to recommend payment. In the latter case, CONTRACTOR may make the necessary corrections and resubmit the Application.

13.4.2 CONSULTANT'S Recommendation

CONSULTANT may refuse to recommend the whole or any part of any payment, if, in CONSULTANT'S opinion, it would be incorrect to make such representations to OWNER. CONSULTANT may also refuse to recommend any such payment, or, because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify any such payment previously recommended, to such extent as may be necessary in CONSULTANT'S opinion to protect OWNER from loss because:

13.4.2.1 the Work is defective, or completed Work has been damaged requiring correction or replacement;

13.4.2.2 the Contract Price has been reduced by Written Amendment or Change Order;

13.4.2.3 OWNER has been required to correct defective Work or complete Work in accordance with paragraph 12.8; or

13.4.2.4 of CONSULTANT's actual knowledge of the occurrence of any of the events enumerated in paragraphs 14.2.1 through 14.2.9 inclusive.

13.5 Partial Utilization

OWNER at any time may request CONTRACTOR in writing to permit OWNER to use any such part of the Work which OWNER believes to be ready for its intended use and has been completed. If CONTRACTOR agrees, CONTRACTOR will certify to OWNER that said part of the Work is complete and request that a Certificate of Completion be issued for that part of the Work.

13.6 Final Inspection

Upon written notice from CONTRACTOR that the entire Work or an agreed portion thereof is complete, CONSULTANT will make a final inspection with CONTRACTOR and will notify CONTRACTOR in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. CONTRACTOR shall immediately take such measures as are necessary to remedy such deficiencies.

13.7 Final Application for Payment

After CONTRACTOR has completed all such corrections to the satisfaction of CONSULTANT and delivered all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection, marked-up record documents (as provided in paragraph 5.14) and other documents - all as required by the Contract Documents, and after CONSULTANT has indicated that the Work is acceptable (subject to the provisions of paragraph 13.10), CONTRACTOR may make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by all documentation called for in the Contract Documents, together with complete and legally effective releases or waivers (satisfactory to OWNER) of all Liens arising out of or filed in connection with the Work. In lieu thereof and as approved by OWNER, CONTRACTOR may furnish receipts or releases in full; an affidavit of CONTRACTOR that the releases and receipts include all labor, services, material and equipment for which a Lien could be filed, and that all payrolls, material and equipment bills, and other indebtedness connected with the Work for which OWNER or OWNER'S property might in any way be responsible, have been paid or otherwise satisfied; and consent of the surety, if any, to final payment. If any Subcontractor or Supplier fails to

furnish a release or receipt in full, CONTRACTOR may furnish a Bond or other collateral satisfactory to OWNER to indemnify OWNER against any Lien.

13.8 Final Payment and Acceptance

13.8.1 CONSULTANT'S Approval

If, on the basis of CONSULTANT'S observation of the Work during construction and final inspection, and CONSULTANT'S review of the final Application for Payment and accompanying documentation - all as required by the Contract Documents, CONSULTANT is satisfied that the Work has been completed and CONTRACTOR'S other obligations under the Contract Documents have been fulfilled, CONSULTANT will, after receipt of the final Application for Payment, indicate in writing CONSULTANT'S recommendation of payment and present the Application to OWNER for payment. Thereupon CONSULTANT will give written notice to OWNER and CONTRACTOR that the Work is acceptable, subject to the provisions of paragraph 13.10. Otherwise, CONSULTANT will return the Application to CONTRACTOR, indicating in writing the reasons for refusing to recommend final payment, in which case CONTRACTOR shall make the necessary corrections and resubmit the Application.

13.8.2 Delay in Completion of Work

If, through no fault of CONTRACTOR, final completion of the Work is significantly delayed, OWNER shall, upon receipt of CONTRACTOR'S final Application for Payment and recommendation of CONSULTANT, and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by OWNER for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if Bonds have been furnished as required in paragraph 10 of Part II, Information for Bidders, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by CONTRACTOR to CONSULTANT with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

13.9 CONTRACTOR'S Continuing Obligation

CONTRACTOR'S obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. Neither recommendation of any progress or final payment by CONSULTANT, nor the issuance of a certificate of Completion, nor any payment by OWNER to CONTRACTOR under the Contract Documents, nor any use or occupancy of the Work or any part thereof by OWNER, nor any act of acceptance by OWNER nor any failure to do so, nor any review and approval of a Shop Drawing or sample submission, nor any correction of defective Work by OWNER will constitute an acceptance of Work not in accordance with the Contract Documents or a release of CONTRACTOR'S obligation to perform the

Work in accordance with the Contract Documents (except as provided in paragraph 13.10).

13.10 Waiver of Claims

The making and acceptance of final payment will constitute:

13.10.1 a waiver of all claims by OWNER against CONTRACTOR, except claims arising from unsettled Liens, from defective Work appearing after final inspection or from failure to comply with the Contract Documents or the terms of any special guarantees specified therein; however, it will not constitute a waiver by OWNER of any rights in respect of CONTRACTOR'S continuing obligations under the Contract Documents; and

13.10.2 a waiver of all claims by CONTRACTOR against OWNER other than those previously made in writing and still unsettled.

14. SUSPENSION OF WORK AND TERMINATION

14.1 OWNER May Suspend Work

OWNER may, at any time and without cause, suspend the Work or any portion thereof for a period of not more than ninety days by notice in writing to CONTRACTOR and CONSULTANT which will fix the date on which Work will be resumed. CONTRACTOR shall resume the Work on the date so fixed. CONTRACTOR shall be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension if CONTRACTOR makes an approved claim therefor as provided in Articles 10 and 11.

14.2 OWNER May Terminate

The OWNER may terminate the Work upon the occurrence of any one or more of the following events:

14.2.1 if CONTRACTOR commences a voluntary case under any chapter of the Bankruptcy Code (Title 11, United States Code), as now or hereafter in effect, or if CONTRACTOR takes any equivalent or similar action by filing a petition or otherwise under any other federal or state law in effect at such time relating to the bankruptcy or insolvency;

14.2.2 if a petition is filed against CONTRACTOR under any chapter of the Bankruptcy Code as now or hereafter in effect at the time of filing, or if a petition is filed seeking any such equivalent or similar relief against CONTRACTOR under any other federal or state law in effect at the time relating to bankruptcy or insolvency;

14.2.3 if CONTRACTOR makes a general assignment for the benefit of creditors;

14.2.4 if a trustee, receiver, custodian or agent of CONTRACTOR is appointed under applicable law or under contract, whose appointment or authority to take charge of property of CONTRACTOR is for the purpose of enforcing a Lien against such property or for the purpose of general administration of such property for the benefit of CONTRACTOR'S creditors;

14.2.5 if CONTRACTOR admits in writing an inability to pay its debts generally as they become due;

14.2.6 if CONTRACTOR persistently fails to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 2.8 as revised from time to time);

14.2.7 if CONTRACTOR disregards Laws or Regulations of any public body having jurisdiction;

14.2.8 if CONTRACTOR disregards the authority of CONSULTANT, or

14.2.9 if CONTRACTOR otherwise violates in any substantial way any provisions of the Contract Documents;

OWNER may, after giving CONTRACTOR (and the surety) seven days' written notice and to the extent permitted by Laws and Regulations, terminate the services of CONTRACTOR, exclude CONTRACTOR from the site and take possession of the Work and of all CONTRACTOR'S tools, appliances, construction equipment and machinery at the site and use the same to the full extent they could be used by CONTRACTOR (without liability to CONTRACTOR for trespass or conversion), incorporate in the Work all materials and equipment stored at the site or for which OWNER has paid CONTRACTOR but which are stored elsewhere, and finish the Work as OWNER may deem expedient. In such case CONTRACTOR shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct, indirect and consequential costs of completing the Work (including but not limited to fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs) such excess will be paid to CONTRACTOR. If such costs exceed such unpaid balance, CONTRACTOR shall pay the difference to OWNER. Such costs incurred by OWNER will be approved as to reasonableness by CONSULTANT and incorporated in a Change Order,

but when exercising any rights or remedies under this paragraph OWNER shall not be required to obtain the lowest price for the Work performed.

14.2.10 If safety violations are observed and brought to the Contractors attention and Contractor fails to take immediate corrective measures any repeat of similar safety violations, Owner will order an immediate termination of contract. Note: it is the Contractor's responsibility to know proper safety measures as they pertain to construction and OSHA.

14.2.11 This contract may be canceled by either party thirty (30) days after delivery by canceling party of written notice of intent to cancel to the other contracting party.

14.2.12 This contract may be canceled by the Lexington-Fayette Urban County Government if it is determined that the Bidder has failed to perform under the terms of this agreement, such cancellation to be effective upon receipt of written notice of cancellation by the Bidder.

14.3 CONTRACTOR'S Services Terminated

Where CONTRACTOR'S services have been so terminated by OWNER, the termination will not affect any rights or remedies of OWNER against CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of moneys due CONTRACTOR by OWNER will not release CONTRACTOR from liability.

14.4 Payment After Termination

Upon seven days' written notice to CONTRACTOR, OWNER may, without cause and without prejudice to any other right or remedy, elect to abandon the Work and terminate the Agreement. In such case, CONTRACTOR shall be paid for all Work executed and any expense sustained plus reasonable termination expenses, which will include, but not be limited to, direct, indirect and consequential costs (including, but not limited to, fees and charges of engineers, architects, attorneys and other professionals and court and arbitration costs).

14.5 CONTRACTOR May Stop Work or Terminate

If, through no act or fault of CONTRACTOR, the Work is suspended for a period of more than ninety days by OWNER or under an order of court or other public authority, or CONSULTANT fails to act on any Application for Payment within sixty days after it is submitted, or OWNER fails for sixty days to pay CONTRACTOR any sum finally determined to be due, then CONTRACTOR may, upon seven days' written notice to OWNER and CONSULTANT, terminate the Agreement and recover from OWNER payment for all Work executed and any expense sustained plus reasonable termination expenses. In addition and in lieu of terminating the Agreement, if CONSULTANT has failed to act on an Application for Payment or OWNER has failed to make any payment as aforesaid, CONTRACTOR may upon seven days' written notice to OWNER and

CONSULTANT stop the Work until payment of all amounts then due. The provisions of this paragraph shall not relieve CONTRACTOR of the obligations under paragraph 5.16 to carry on the Work in accordance with the progress schedule and without delay during disputes and disagreements with OWNER.

15. MISCELLANEOUS

15.1 Claims for Injury or Damage

Should OWNER or CONTRACTOR suffer injury or damage to person or property because of any error, omission or act of the other party or of any of the other party's employees or agents or others for whose acts the other party is legally liable, claim will be made in writing to the other party within a reasonable time of the first observance of such injury or damage. The provisions of this paragraph 15.1 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitations or repose.

15.2 Non-Discrimination in Employment

The CONTRACTOR shall comply with the following requirements prohibiting discrimination:

15.2.1 That no person (as defined in KRS 344.010) shall bid on Lexington-Fayette Urban County Government construction projects, or bid to furnish materials or supplies to the Lexington-Fayette Urban County Government, if, within six months prior to the time of opening of bids, said person shall have been found, by declamatory judgment action in Fayette Circuit Court, to be presently engaging in an unlawful practice, as hereinafter defined. Such declamatory judgment action may be brought by an aggrieved individual or upon an allegation that an effort at conciliation pursuant to KRS 344.200 has been attempted and failed, by the Lexington-Fayette County Human Rights Commission.

15.2.2 That it is an unlawful practice for an employer:

15.2.2.1 to fail or refuse to hire, or to discharge any individual or otherwise to discriminate against an individual, with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, sex, age, or national origin; or

15.2.2.2 to limit, segregate or classify his employees in any way which would deprive or tend to deprive an individual of employment opportunities or otherwise adversely affect his status as an employee because of such individual's sex, race, color, religion, age, or national origin.

15.2.3 That it is an unlawful practice for an employer, labor organization, or joint-labor management committee controlling apprenticeship or other training or retraining, including on-the-job training programs to discriminate against an individual because of his race, color, religion, sex, age, or national origin in admission to, or employment in, any program established to provide apprenticeship or other training.

15.2.4 That a copy of this Ordinance shall be furnished all suppliers and made a part of all bid specifications.

15.2.5 This Ordinance shall take effect after it is signed, published and recorded, as required by law.

15.3 Temporary Street Closing or Blockage

The CONTRACTOR will notify the CONSULTANT at least 72 hours prior to making any temporary street closing or blockage. This will permit orderly notification to all concerned public agencies. Specific details and restrictions on street closure or blockage are contained in the Special Conditions.

15.4 Percentage of Work Performed by prime CONTRACTOR

The CONTRACTOR shall perform on site, and with its own organization, Work equivalent to at least fifty (50%) percent of the total amount of Work to be performed under the Contract. This percentage may be reduced by a supplemental agreement to this Contract if, during performing the Work, the CONTRACTOR requests a reduction and the CONSULTANT determines that the reduction would be to the advantage of the OWNER.

15.5 Clean-up

Cleanup shall progress, to the greatest degree practicable, throughout the course of the Work. The Work will not be considered as completed, and final payment will not be made, until the right-of-way and all ground occupied or affected by the Contractor in connection with the Work has been cleared of all rubbish, equipment, excess materials, temporary structures, and weeds. Rubbish and all waste materials of whatever nature shall be disposed of, off of the project site, in an acceptable manner. All property, both public and private, which has been damaged in the prosecution of the Work, shall be restored in an acceptable manner. All areas shall be draining, and all drainage ways shall be left unobstructed, and in such a condition that drift will not collect or scour be induced.

15.6 General

The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon CONTRACTOR by paragraphs 12.1, 12.3.5, 13.3, and 15.2 and all of the rights and remedies available to OWNER and CONSULTANT thereunder, are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies

available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee or by other provisions of the Contract Documents, and the provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply. All representations, warranties and guarantees made in the Contract Documents will survive final payment and termination or completion of the Agreement.

15.7 Debris Disposal

For all LFUCG projects any trash, construction demolition debris, yard waste, dirt or debris of any kind that is removed from the project site must be disposed of in accordance with local, state, and federal regulations. The disposal site or facility must be approved in advance by the LFUCG and disposal documentation is required. The Contractor will be responsible for payment of any fines associated with improper disposal of material removed from the project site.

END OF SECTION

EXHIBIT C

PERFORMANCE AND PAYMENT BONDS

1. PERFORMANCE BOND
2. PAYMENT BOND

SAMPLE

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS, that

(Name of CONTRACTOR)

(Address of CONTRACTOR)

a _____,

hereinafter

(Corporation, Partnership, or Individual)

called Principal, and

(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
200 East Main Street, Third Floor
Lexington, Kentucky 40507

hereinafter called "OWNER" in the penal sum of _____ Dollars, (\$ _____), for the payment of whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal by written agreement is entering into a Contract with OWNER for the **Citation Trail – Phase I Project** in accordance with drawings and specifications prepared by: **Banks Engineering** which Contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if the Principal shall promptly and faithfully perform said Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the OWNER.

Whenever, Principal shall be, and declared by OWNER to be in default under the Contract, the OWNER having performed OWNER'S obligations thereunder, the Surety may promptly remedy the default, or shall promptly:

- (1) Complete the Contract in accordance with its terms and conditions or
- (2) Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible bidder, or if the OWNER elects, upon determination by the OWNER and Surety jointly of the lowest responsible bidder, arrange for a Contract between such bidder and OWNER, and make available as Work progresses (even though there may be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the Contract Price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of the Contract Price", as used in this paragraph shall mean the total amount payable by OWNER to Principal under the Contract and any amendments thereto, less the amount properly paid by OWNER to Principal.

Any suit under this bond must be instituted before the expiration of two (2) years from the date on which final payment under the Contract falls due.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the OWNER named herein or the heirs, executors, administrators or successors of OWNER.

IN WITNESS WHEREOF, this instrument is executed in _____ each one of which shall be

(number)
deemed an original, this the _____ day of _____, 20_____.

ATTEST:

(Principal) Secretary

Principal

BY: _____(s)

(Address)

Witness as to Principal

(Address)

ATTEST:

Surety

BY: _____

Attorney-in-Fact

(Surety) Secretary

(Address)

(SEAL)

Witness as to Surety

(Address)

TITLE: _____

Surety

BY: _____

TITLE: _____

NOTE: The number of executed counterparts of the bond shall coincide with the number of executed counterparts of the Contract.

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS, that

(Name of CONTRACTOR)

(Address of CONTRACTOR)

a _____,

hereinafter

(Corporation, Partnership, or Individual)

called Principal, and

(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto

LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
200 East Main Street, Third Floor
Lexington, Kentucky 40507

Obligee, hereinafter called OWNER, for the use and benefit of claimants as hereinafter defined, in the amount of _____ Dollars (\$ _____) the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal by written agreement is entering into a Contract with OWNER for the **Citation Trail – Phase I Project** in accordance with drawings and specifications prepared by: **Banks Engineering** which Contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Principal shall promptly make payment to all claimants as hereinafter defined for all labor and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions.

1. A claimant is defined as one having a direct contract with the Principal or with a Subcontractor of the Principal for labor, material, or both, used or reasonably required for use in the performance of the Contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Contract.
2. The above named Principal and Surety hereby jointly and severally agree with the OWNER that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The OWNER shall not be liable for the payment of any costs or expenses of any such suit.
3. No suit or action shall be commenced hereunder by any claimant:
 - (a) Unless claimant, other than one having a direct contract with the Principal, shall have given written notice to any two of the following: The Principal, the OWNER, or the Surety above named, within ninety (90) days after such claimant did or performed the last of the Work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the Work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, OWNER, or Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer.
 - (b) After the expiration of one (1) year following the date on which Principal ceased Work on said Contract, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.
 - (c) Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the project, or any part thereof, is situated, or in the United States District Court for the district in which the project, or any part thereof, is situated, and not elsewhere.
4. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against aid improvement, whether or not claim for the amount of such lien be presented under and against this bond.

IN WITNESS WHEREOF, this instrument is executed in _____ counterparts,
each one of

(number)

which shall be deemed an original, this the _____ day of _____, 20_____.

ATTEST:

(Principal) Secretary

(Principal)

(SEAL) BY: _____(s)

(Address)

(Witness to Principal)

(Address)

(Surety)

ATTEST:

BY: _____
(Attorney-in-Fact)

(Surety) Secretary

(SEAL)

Witness as to Surety

(Address)

(Address)

NOTE: The number of executed counterparts of the bond shall coincide with the number of executed counterparts of the Contract.

END OF SECTION

EXHIBIT D
SPECIAL CONDITIONS

- 1 RISK MANAGEMENT PROVISIONS –
INSURANCE AND INDEMNIFICATION
- 2 WAGE SCALE (if applicable)
- 3 WEATHER RELATED DELAYS

1. RISK MANAGEMENT PROVISIONS
INSURANCE AND INDEMNIFICATION

INDEMNIFICATION AND HOLD HARMLESS PROVISION

(1) It is understood and agreed by the parties that Contractor hereby assumes the entire responsibility and liability for any and all damages to persons or property caused by or resulting from or arising out of any act or omission on the part of Contractor or its employees, agents, servants, owners, principals, licensees, assigns or subcontractors of any tier (hereinafter "CONTRACTOR") under or in connection with this agreement and/or the provision of goods or services and the performance or failure to perform any work required thereby.

(2) CONTRACTOR shall indemnify, save, hold harmless and defend the Lexington-Fayette Urban County Government and its elected and appointed officials, employees, agents, volunteers, and successors in interest (hereinafter "LFUCG") from and against all liability, damages, and losses, including but not limited to, demands, claims, obligations, causes of action, judgments, penalties, fines, liens, costs, expenses, interest, defense costs and reasonable attorney's fees that are in any way incidental to or connected with, or that arise or are alleged to have arisen, directly or indirectly, from or by CONTRACTOR's performance or breach of the agreement and/or the provision of goods or services provided that: (a) it is attributable to personal injury, bodily injury, sickness, or death, or to injury to or destruction of property (including the loss of use resulting therefrom), or to or from the negligent acts, errors or omissions or willful misconduct of the CONTRACTOR; and (b) not caused solely by the active negligence or willful misconduct of LFUCG.

(3) In the event LFUCG is alleged to be liable based upon the above, CONTRACTOR shall defend such allegations and shall bear all costs, fees and expenses of such defense, including but not limited to, all reasonable attorneys' fees and expenses, court costs, and expert witness fees and expenses, using attorneys approved in writing by LFUCG, which approval shall not be unreasonably withheld.

(4) These provisions shall in no way be limited by any financial responsibility or insurance requirements, and shall survive the termination of this agreement.

(5) LFUCG is a political subdivision of the Commonwealth of Kentucky. CONTRACTOR acknowledges and agrees that LFUCG is unable to provide indemnity or otherwise save, hold harmless, or defend the CONTRACTOR in any manner.

FINANCIAL RESPONSIBILITY

BIDDER/CONTRACTOR understands and agrees that it shall, prior to final acceptance of its bid and the commencement of any work, demonstrate the ability to assure compliance with the above Indemnity provisions and these other risk management provisions.

INSURANCE REQUIREMENTS

YOUR ATTENTION IS DIRECTED TO THE INSURANCE REQUIREMENTS BELOW, AND YOU MAY NEED TO CONFER WITH YOUR INSURANCE AGENTS, BROKERS, OR CARRIERS TO DETERMINE IN ADVANCE OF SUBMISSION OF A RESPONSE THE AVAILABILITY OF THE INSURANCE COVERAGES AND ENDORSEMENTS REQUIRED HEREIN. IF YOU FAIL TO COMPLY WITH THE INSURANCE REQUIREMENTS BELOW, YOU MAY BE DISQUALIFIED FROM AWARD OF THE CONTRACT.

Required Insurance Coverage

BIDDER/CONTRACTOR shall procure and maintain for the duration of this contract the following or equivalent insurance policies at no less than the limits shown below and cause its subcontractors to maintain similar insurance with limits acceptable to LFUCG in order to protect LFUCG against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by CONTRACTOR. The cost of such insurance shall be included in any bid:

<u>Coverage</u>	<u>Limits</u>
General Liability aggregate (Insurance Services Office Form CG 00 01)	\$1 million per occurrence, \$2 million or \$2 million combined single limit
Commercial Automobile Liability occurrence (Insurance Services Office Form CA 0001)	combined single, \$1 million per
Worker’s Compensation	Statutory
Employer’s Liability	\$100,000.00
Excess/Umbrella Liability	\$5 million per occurrence

The policies above shall contain the following conditions:

- a. All Certificates of Insurance forms used by the insurance carrier shall be properly filed and approved by the Department of Insurance for the Commonwealth of Kentucky (DOI). LFUCG shall be named as an additional insured in the General Liability Policy and Commercial Automobile Liability Policy using the Kentucky DOI approved forms.
- b. The General Liability Policy shall be primary to any insurance or self-insurance retained by LFUCG.

- c. The General Liability Policy shall include a Products and Completed Operations endorsement or Premises and Operations Liability endorsement unless it is deemed not to apply by LFUCG.
- d. LFUCG shall be provided at least 30 days advance written notice via certified mail, return receipt requested, in the event any of the required policies are canceled or non-renewed.
- e. Said coverage shall be written by insurers acceptable to LFUCG and shall be in a form acceptable to LFUCG. Insurance placed with insurers with a rating classification of no less than Excellent (A or A-) and a financial size category of no less than VIII, as defined by the most current Best's Key Rating Guide shall be deemed automatically acceptable.

Renewals

After insurance has been approved by LFUCG, evidence of renewal of an expiring policy must be submitted to LFUCG, and may be submitted on a manually signed renewal endorsement form. If the policy or carrier has changed, however, new evidence of coverage must be submitted in accordance with these Insurance Requirements.

Deductibles and Self-Insured Programs

IF YOU INTEND TO SUBMIT A SELF-INSURANCE PLAN IT MUST BE FORWARDED TO LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT, DIVISION OF RISK MANAGEMENT, 200 EAST MAIN STREET, LEXINGTON, KENTUCKY 40507 NO LATER THAN A MINIMUM OF FIVE (5) WORKING DAYS PRIOR TO THE RESPONSE DATE. Self-insurance programs, deductibles, and self-insured retentions in insurance policies are subject to separate approval by Lexington-Fayette Urban County Government's Division of Risk Management, upon review of evidence of BIDDER/CONTRACTOR's financial capacity to respond to claims. Any such programs or retentions must provide LFUCG with at least the same protection from liability and defense of suits as would be afforded by first-dollar insurance coverage. If BIDDER/CONTRACTOR satisfies any portion of the insurance requirements through deductibles, self-insurance programs, or self-insured retentions, BIDDER/CONTRACTOR agrees to provide Lexington-Fayette Urban County Government, Division of Risk Management, the following data prior to the final acceptance of bid and the commencement of any work:

- a. Latest audited financial statement, including auditor's notes.
- b. Any records of any self-insured trust fund plan or policy and related accounting statements.
- c. Actuarial funding reports or retained losses.

- d. Risk Management Manual or a description of the self-insurance and risk management program.
- e. A claim loss run summary for the previous five (5) years.
- f. Self-Insured Associations will be considered.

Safety and Loss Control

CONTRACTOR shall comply with all applicable federal, state, and local safety standards related to the performance of its works or services under this Agreement and take necessary action to protect the life, health and safety and property of all of its personnel on the job site, the public, and LFUCG.

Verification of Coverage

BIDDER/CONTRACTOR agrees to furnish LFUCG with all applicable Certificates of Insurance signed by a person authorized by the insurer to bind coverage on its behalf prior to final award, and if requested, shall provide LFUCG copies of all insurance policies, including all endorsements.

Right to Review, Audit and Inspect

CONTRACTOR understands and agrees that LFUCG may review, audit and inspect any and all of its records and operations to insure compliance with these Insurance Requirements.

DEFAULT

BIDDER/CONTRACTOR understands and agrees that the failure to comply with any of these insurance, safety, or loss control provisions shall constitute default and that LFUCG may elect at its option any single remedy or penalty or any combination of remedies and penalties, as available, including but not limited to purchasing insurance and charging BIDDER/CONTRACTOR for any such insurance premiums purchased, or suspending or terminating the work.

00357187

2. **WAGE SCALES** – not applicable.

3. **WEATHER RELATED DELAYS**

- A. The Project Completion date shall be established with the understanding that no extension of time will be granted for weather related delays that are within the average temperature or number of rain or snow days within a particular month. The average weather conditions shall be established by referencing the records of the National Oceanic and Atmospheric Administration (NOAA) and as defined herein.
- B. Extensions of inclement weather shall be granted only when the work affected must be on schedule at the time of delay. No time will be granted for work which is behind schedule in excess of the actual delay caused by the weather, assuming the work had been on schedule.
- C. Time granted for weather delays shall be requested on a monthly basis.
- D. The weather experienced at the project site during the contract period must be found to be unusually severe, that is more severe than the adverse weather anticipated for the project location during any given month. The unusually severe weather must actually cause a delay to the completion of the project. The delay must be beyond the control and without the fault or negligence of the contractor.
- E. The anticipated adverse weather delays shall be based on the National Oceanic and Atmospheric Administration (NOAA) climatology ten year average for the Lexington Bluegrass Airport KY US location. The Mean Number of Days of daily precipitation using ≥ 0.10 will determine the base line for monthly anticipated adverse weather evaluations. The contractor's progress schedule must reflect these anticipated adverse weather delays in all weather dependent activities. Upon acknowledgement of the Notice to Proceed (NTP) and continuing throughout the contract, the contractor will record the occurrence of actual adverse weather and resultant impact to normally scheduled work. Actual adverse weather delay days must prevent work on critical path activities for 50 percent or more of the contractor's scheduled work date. The number of actual adverse weather delay days shall be calculated chronologically from the first to the last day of each month, and be recorded as full days. The number of actual adverse weather days greater than the number of anticipated adverse weather days, listed above, shall be the number of unusually severe weather days for the purposes of any contract extensions (actual adverse weather days - anticipated adverse weather days = unusually severe weather days.)
- F. Definitions:

1. "Unusually severe weather" - weather that is more severe than the adverse weather anticipated for the season or location involved.
2. "Adverse weather" - atmospheric conditions at a definite time and place that are unfavorable to construction activities.

END OF SECTION

**ROOFING SUPPLIES AND SERVICES,
WATERPROOFING, AND RELATED
PRODUCTS AND SERVICES CONTRACT 2019**

This Contract made and entered into this 27 day of September, 2019, by and between Racine County, Wisconsin, 730 Wisconsin Avenue, Racine, Wisconsin 53403 (hereinafter referred to as "COUNTY") and Garland/DBS, Inc., 3800 East 91st Street, Cleveland, Ohio 44105 (hereinafter referred to as "CONTRACTOR").

W I T N E S S E T H:

For good and valuable consideration, the parties agree as follows:

1. **WORK:** CONTRACTOR shall provide ROOFING SUPPLIES AND SERVICES, WATERPROOFING AND RELATED PRODUCTS AND SERVICES:

The undersigned parties understand and agree to comply with and be bound by the entire contents of Sealed Bid # PW1925: ROOFING SUPPLIES AND SERVICES, WATERPROOFING AND RELATED PRODUCTS AND SERVICES PROJECT MANUAL (aka, the Contractor's Bid Proposal submitted September 4, 2019) which is incorporated herein by reference. CONTRACTOR understands and agrees that the bonds and insurance required by the Project Manual are to be kept current at all times through the length of each term and for 90 Days following completion of each term. Bonds and insurance must be renewed and presented to the COUNTY at the time of each renewal term if COUNTY chooses to renew. Bonds and insurance shall be written by a firm acceptable to the COUNTY as specified in the Project Manual.

2. **TERM:** October 15, 2019, to October 14, 2024, with full renewal of one (1) additional five (5) year term per the Project Manual. COUNTY shall exercise renewal options by issuance and delivery to CONTRACTOR of a written notice to renew this Agreement.
3. **PROJECT:** ROOFING SUPPLIES AND SERVICES, WATERPROOFING AND RELATED PRODUCTS AND SERVICES in accordance with the Project Manual.
4. **PRICE:** Price as stated for all schedules included in the Project Manual.

5. **CANCELLATION:** This contract may be cancelled without penalty or obligation of any kind, by COUNTY by, for or on behalf of itself or its agencies, departments, officers, agents or employees immediately upon written notice to all parties that sufficient funds have not been budgeted by the County Board of Supervisors to pay the obligations under this agreement.

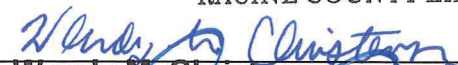
Either party may terminate the contract on the anniversary date in any subsequent year of the contract by providing the other party with written notice ninety (90) days prior to the anniversary date.

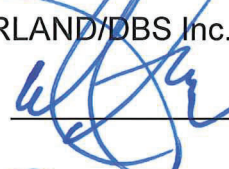
If the CONTRACTOR fails to maintain and keep in force required insurance, COUNTY shall have the right to cancel and terminate the contract without notice.

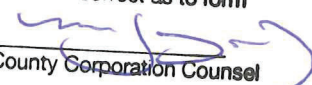
Notwithstanding any of the terms and conditions contained herein, the COUNTY and CONTRACTOR reserve the right to terminate the contract at any time for any reason by providing written notice of termination to the other party no less than ninety (90) days in advance of termination. In the event of said termination, CONTRACTOR shall not reduce its activities hereunder unless agreed in advance by COUNTY. The CONTRACTOR will pay according to the contract for services tendered through the date of termination.


RACINE COUNTY

BY: 
JONATHAN DELAGRAVE
RACINE COUNTY EXECUTIVE

BY: 
Wendy M. Christensen
Racine County Clerk 9/25/19

GARLAND/DBS Inc.
BY: 
David M. Sokol, President

Date 9-27-19
Certified to be correct as to form
By 
Racine County Corporation Counsel

REVIEWED BY FINANCE DIRECTOR
 9/27/19
Sign Date



Garland/DBS, Inc.
3800 East 91st Street
Cleveland, OH 44105
Phone: (800) 762-8225
Fax: (216) 883-2055



ROOFING MATERIAL AND SERVICES PROPOSAL

LFUCG Palmer Building
They City of Lexington
400 E Fifth St.
Lexington, KY 40508

Date Submitted: 07/28/2021
Proposal #: 25-KY-210718
MICPA # PW1925

Purchase orders to be made out to: Garland/DBS, Inc.

Please Note: The following budget/estimate is being provided according to the pricing established under the Master Intergovernmental Cooperative Purchasing Agreement (MICPA) with Racine County, WI and OMNIA Partners, Public Sector (U.S. Communities). The line item pricing breakdown from Attachment C: Bid Form should be viewed as the maximum price an agency will be charged under the agreement. Garland/DBS, Inc. administered an informal competitive process for obtaining quotes for the project with the hopes of providing a lower market-adjusted price whenever possible.

Scope of Work: Main Roof

1. Remove all existing roofing materials (insulation and membranes)
2. Remove existing edge metal and gutters. carefully remove fascia for owner review.
3. Inspect wood deck and replace as needed per unit cost (document daily with photos, provide to DBS)
4. Contractor shall include 500 sq. feet for wood deck replacement. Carefully record replaced deck. Adjustments to deck replacement allowance will be made using unit cost provided on bid form.
5. Replace all wood blocking with new 2x4 non-treated lumber to accommodate for specified insulation thicknesses around all perimeter edges. provide any additional blocking as required to complete the project.
6. Install nail base sheet
7. Install one way tapered polyisocyanurate insulation using mechanical fasteners (high side; Chestnut Street, low side; Hawkins Ave)
8. Finished slope to be 1/8:12 starting at a minimum of 1/2".
9. Install one layer of 1/2" densdeck prime roof board (4'x4') using Insulock HR insulation adhesive.

10. Install a new 2 ply sbs modified bitumen roof system using all required materials per provided specifications.
11. Install new .040 aluminum sheet metal details including; fascia metal to cover existing wood fascia boards, drip edge, gutters, downspouts, counter flashings, etc. new downspouts to be located in-line with the existing storm water boots. Contractor to salvage existing fascia for owner review. Potential reuse of fascia will be work of deduct CO.
12. Install one band of Garland's custom metal panel fascia to replicate the the existing fascia profile on the three sides of the building where gutters are not to be installed.
13. All work related to foamed in place insulation by foam contractor (Install R-38 Closed cell spray foam to roof deck. Install Thermal barrier paint (No Burn Plus ThB) over foam to separate from living space)

Scope of Work: Canopy

1. Provide and install the framing package per the structural framing plan provided. Slope to be built into the wood decking and to be 1/8:12 slope.
2. No insulation to be provided for the canopy roof assembly. Tapered perlite edge to be installed in mastic around all roof edges where no gutter is present.
3. Install a matching 2 ply mod bit roof system to match the main roof and associated trim details including, fascia metal, metal edge, gutters, downspouts, counterflashings, etc.
4. Slope to be provided in the new tapered structure.
5. Replace all wood blocking with new 2x4 non-treated lumber to accommodate for specified insulation thicknesses around all perimeter edges.
6. Install one layer of 1/2" densdeck prime roof board (4'x4') using Insulock HR insulation adhesive.
7. Install a new 2 ply sbs modified bitumen roof system using all required materials per provided specifications.
8. Install new .040 aluminum sheet metal details including; fascia metal to cover existing wood fascia boards, drip edge, gutters, downspouts, counter flashings, etc. new splash pads to be installed at new downspout locations.
9. Install one band of Garland's custom metal panel fascia to replicate the the existing fascia profile on the three sides of the building where gutters are not to be installed.

Garland/DBS Price Based Upon Local Market Competition:

The Bri-Den Co., Inc.	\$ 135,999
Tri-State Roofing & Sheet Metal Company	\$ 144,147
Pearce-Blackburn Roofing LLC	\$ 145,459
ABR Construction	Decline to Bid

Garland/DBS Price Based Upon Local Market Competition:

Epiphany Foam	\$ 18,215
Thermospray of Lexington	\$ 22,847

Garland/DBS Price Based Upon Local Market Competition: Combined

The Bri-Den Co., Inc.	\$ 154,214
Tri-State Roofing & Sheet Metal Company	\$ 162,362
Pearce-Blackburn Roofing LLC	\$ 163,674
ABR Construction	Decline to Bid

If contractor to reuse the metal around the perimeter of building, there will be a \$5,000 deduct from our price.

Unforeseen Site Conditions: (Bri-Den)

Wood Blocking (Nailer) Replacement	\$ 9.12 per Ln. Ft.
Additional Insulation Replacement	\$ 5.70 per Sq. Ft.
Decking Replacement	\$ 9.12 per Sq. Ft.

Potential issues that could arise during the construction phase of the project will be addressed via unit pricing for additional work beyond the scope of the specifications. This could range anywhere from wet insulation, to the replacement of deteriorated wood nailers. Please Note – The construction industry is experiencing unprecedented global pricing and availability pressures for many key building components. Specifically, the roofing industry is currently experiencing long lead times and significant price increases with roofing insulation and roofing fasteners. Therefore, this proposal can only be held for 30 days. Garland/DBS greatly values your business, and we are working diligently with our long-term suppliers to minimize price increases and project delays which could effect your project. Thank you for your understanding and cooperation.

Clarifications/Exclusions:

1. Sales and use taxes are excluded. Please issue a Tax Exempt Certificate.
2. Permits are excluded.
3. Bonds are included.
4. Plumbing, Mechanical, Electrical work is excluded.
5. Masonry work is excluded.
6. Interior Temporary protection is excluded.
7. Prevailing Wages are excluded.
8. Any work not exclusively described in the above proposal scope of work is excluded.

If you have any questions regarding this proposal, please do not hesitate to call me at my number listed below.

Respectfully Submitted,

Steve Rojek

Steve Rojek
Garland/DBS, Inc.
(216) 430-3613

EXHIBIT G

PALMER GARLAND/DBS INC. DESIGN BUILD ROOF REPLACEMENT			
ROOF PACKAGE			
Task	Duration	Start	Finish
Design Phase	22 Days	6/9/2021	7/1/2021
95% Design Review Meeting	1 Days	6/24/2021	6/24/2021
Advertisement	1 Days	7/1/2021	7/1/2021
Pre-Bid Meeting	1 Day	7/8/2021	7/8/2021
Advertisement	22 Days	7/1/2021	7/23/2021
Garland Receives Bids	1 Day	7/23/2021	7/23/2021
Garland Bid Evaluation	6 Day	7/23/2021	7/29/2021
Garland/LFUCG Bid Review Zoom Meeting	1 Day	7/29/2021	7/29/2021
LFUCG Bid Evaluation /Law & Purchasing Review	4 Days	7/29/2021	8/2/2021
Blue sheet	1 Days	8/2/2021	8/2/2021
Approved in Legistar Date	1 Day	8/2/2021	8/2/2021
Council WS	1 Day	8/10/2021	8/10/2021
Council 1st Reading	1 Day	8/12/2021	8/12/2021
Council 2nd Reading	1 Day	8/26/2021	8/26/2021
P.O. & NTP	7 Days	8/26/2021	9/2/2021
Construction Phase	120 Days	9/2/2021	12/31/2021
PreConstruction Meeting	1 Days	9/2/2021	9/2/2021
Construction Phase	120 Days	9/2/2021	12/31/2021
Substantial Completion/Punch Inspection	1 Day	12/17/2021	12/17/2021
Final Completion	1 Day	12/31/2021	12/31/2021