

ROANE COUNTY PURCHASING  
200 EAST RACE STREET, SUITE #3  
KINGSTON, TENNESSEE 37763  
PHONE 865-376-4317 ▪ FAX 865-376-4318

ADVERTISEMENT FOR BIDS

Sealed bids are invited for Roof Replacement at Central Service Building.

All bidders must be licensed Contractors as required by the Contractors Licensing Act of 1976, as currently amended if bid price exceeds \$25,000.

Project: Roof Replacement at Central Service Building  
3070 Roane State Highway  
Harriman, Tennessee 37748

Bids Received By: Lynn Farnham, Purchasing Agent  
Roane County Courthouse  
200 East Race Street, Suite #3  
Kingston, Tennessee 37763

Bids Received Until: 2:00 p.m. (EDT) on Tuesday, June 9, 2016

Specifications: May be obtained in the Roane County Purchasing Department or electronically by contacting the Purchasing Department at 865-376-4317 or going to the County's website [www.roanecountytn.gov](http://www.roanecountytn.gov).

## **ROANE COUNTY PURCHASING DEPARTMENT INVITATION TO BID**

Roane County is inviting sealed bids for the service(s) listed below, subject to the terms and conditions of the Invitation to Bid, the accompanying specifications, and the Roane County Purchasing Manual.

At the appointed time bids will be publicly opened in the office of the Roane County Purchasing Agent at the above address. Bids arriving in the Purchasing Department past the appointed date and time will be considered late and will not be opened.

**Deliver Bids To:**

ROANE COUNTY PURCHASING DEPARTMENT  
200 EAST RACE STREET, SUITE #3  
KINGSTON, TENNESSEE 37763

**Bid Number: 2016-21-131/171  
ROOF REPLACEMENT AT CENTRAL SERVICE BUILDING**

**Open Date & Time: June 9, 2016 at 2:00 p.m. (Eastern Time Zone)**

The Bid Envelope must show the Bid Number, Name & Opening Date.

### **PURCHASING CONTACT INFORMATION**

**Lynn Farnham, CPPO, CPPB  
Purchasing Agent  
Phone: 865-376-4317  
Fax: 865-376-4318  
Email: [lynn.farnham@roanecountytn.gov](mailto:lynn.farnham@roanecountytn.gov)**

### **GENERAL TERMS & CONDITIONS**

Attached are instructions and conditions for submitting a bid for Roane County Government. The objective of this bid is to select suppliers in such a manner as to provide for open and free competition and comparability.

## **BID PREPARATION & SUBMISSION**

1. Bidders are expected to examine specifications, terms and conditions, general or special conditions, schedules and all instructions for the purpose of this bid. Failure to do so will be at the bidder's risk.
2. All bids shall be in accordance with the instructions to bidders and specifications included in this ITB. Specifications are intended to be open and non-restrictive.
3. All pricing submitted in the bid document must be completed in ink or typewritten. The bottom line total must also be printed in ink or typewritten on the proposal form. No erasures shall be permitted. Errors may be crossed out and corrections printed in ink or typewritten and must be initialed in ink by the person signing the bid.
4. All bids must meet or exceed the enclosed specifications.
5. It shall be the sole responsibility of the bidder to make certain that all bids in proper form are submitted to the Purchasing Department as described below.
6. All original forms must be signed by a person with authority to bind the bid. The bid must be sealed in an envelope that is labeled according to the directions stated below.
7. On the outside of the envelope/package mark the bid as follows:
  - Vendor Name & Address
  - Bid Number
  - Bid Date & Time
8. The bid must then be in a sealed envelope/package mailed or delivered to the following address:

Roane County Purchasing Department  
200 East Race Street, Suite #3  
Kingston, Tennessee 37763

**Please note that Roane County does not receive a guaranteed delivery time for express mail and/or packages. Please mail accordingly.**

12. Sealed written bids will be received at the time and place specified on the Invitation to Bid. Postmark on the Bid by this date will not suffice. Bid must be received on or before the date and time stated. Faxed bid documents will not be accepted.

## **LATE RECEIPT OF THE BID**

1. The bid and modifications or withdrawals thereof received after the time set for opening will not be considered, unless they are received before the award is made and it is determined by Roane County that failure to arrive on time was due solely to a delay in delivery for which the bidder has no responsibility. Roane County does not receive a guaranteed delivery time for express mail and/or packages. Please mail accordingly.
2. Bids must be in the Purchasing Department prior to 2:00 p.m. on the appointed date. Time will be determined by the clock in the Roane County Purchasing Department and once Purchasing Agent/or their designee determines the time is 2:00 p.m., no other bids will be accepted.

## **RESTRICTIVE OR AMBIGUOUS SPECIFICATIONS**

1. It is the responsibility of the bidder to review the entire Invitation to Bid document and to notify the Purchasing Agent if the Invitation to Bid is formulated in a manner that would unnecessarily restrict competition or if it is ambiguous in what is being requested.
2. Pursuant to TCA §12-4-126, questions regarding the specifications or bid procedures must be received by the Purchasing Agent and/or designer no less than ninety-six (96) hours before the bid opening date. No addenda will be issued within less than forty-eight (48) hours of the bid opening day, excluding weekends and legal holidays designated in §15-1-101 unless the bid opening is extended for a reasonable time as determined by the purchasing agent, which shall not be less than forty-eight (48) hours excluding weekends and legal holidays designated in §15-1-101, to allow for any necessary changes to the Invitation to Bid documents and to allow responders to resubmit their responses accordingly.
3. Any questions concerning this Invitation to Bid are to be faxed to the Purchasing Department. Questions will be answered via addenda. Information obtained from any office other than the Purchasing Office is not to be considered binding.

## **BID OPENING & AWARD**

1. Only the bottom line figure will be read at the bid opening. Bids will also be examined for compliance with specification and conditions outlined in the bid document.
2. Consideration will be given to all bids properly submitted. Bids will receive appropriate confidentiality before awarding. Upon award, bid documents and tabulations will be available for review. Errors discovered after public opening may not be corrected, and the bidder may be bound to honor bid as submitted. After investigation of the nature of the mistake, the Purchasing Agent may allow the bid to be withdrawn.
3. The contract will be awarded in writing to the most responsive bidder whose bid conforms best to the Invitation to Bid will be most advantageous to Roane County. It is the intent of Roane County to involve and utilize the best product/services at the best prices and provide small and minority firms, women's business enterprises and labor surplus area firms with increased opportunity to do business with the county. However, currently there are no set asides for small or minority firms.
4. Roane County reserves the right to accept or reject any or all bids and to waive informalities and minor irregularities in the bids received.
5. Roane County reserves the right to award the bid in its entirety or to divide the award in any way that will be more advantageous to the county.
6. Bid results will be posted on the County's website along with the bid tabulation.

## **PROTEST PROCEDURE**

1. If a prospective vendor does not agree with the bid award, they have the right to protest. Disputes arising from the award of this bid must be submitted in writing to the Roane County Purchasing Department no later than seven (7) days from date of bid award. The steps for dispute resolution may include:
  - A meeting with the Purchasing Agent, the requisitioning department's manager and representatives from the disputing party to discuss and resolve the complaint.
  - Information from the aforementioned meeting will be forwarded to the County Attorney for review.
  - A written decision letter stating the reasons for the decision will be prepared by the Purchasing Agent and submitted in writing to the protestor and all parties involved.
  - Purchases will not be allowed under this procurement until a final decision is rendered.
  - In the event that purchases must be made before a final decision is rendered, the emergency purchase procedures will be used.

## **APPROPRIATION**

1. In the event no funds are appropriated by Roane County for the goods or services in any fiscal year or insufficient funds exist to purchase the goods or services, then the contract shall expire upon the expenditure of previously appropriated funds or the end of the current fiscal year, whichever occurs first, with no further obligations owed to or by either party.

## **INSURANCE**

1. The contractor will maintain, at their expense adequate insurance coverage to protect them from claims arising under the Worker's Compensation Act, from claims for damages resulting from bodily injuries and damage to their property, for Bodily Injury and Property Damage Liability in the amount of no less than \$1,000,000, for Products and Completed Operations Liability of no less than \$1,000,000 and from claims for damage to any Roane County property. Additional insurance requirements may be listed any Special Terms & Conditions or in the Bid Specifications. This insurance company shall have a Best's rating of A or better. Any deviations from the above requirements must be disclosed in the bid submission.
2. The successful bidder shall furnish a Certificate of Insurance issued by their insurance company showing that Roane County as an additional insured. Carrier will assume full common liability of all shipments.

## **COMPLIANCE WITH ALL LAWS**

1. Contractor is assumed to be familiar with and agrees to observe and comply with all federal, state, and local laws, statutes, ordinances, and regulations in any manner affecting the provision of goods and/or services, and all instructions and prohibitive orders issued regarding this work and shall obtain all necessary permits.

## **GOVERNING LAW**

1. This contract shall be governed by the laws of the State of Tennessee, and all obligations of the parties are performable in Roane County, Tennessee. The Courts in Roane County shall have exclusive and concurrent jurisdiction of any disputes which arise hereunder.

## **BUSINESS LICENSES**

1. Bidders located in Tennessee are required to have a current business license issued by the State of Tennessee at the time the bids are submitted. Vendors located outside Tennessee are required to obtain a business license issued by the State of Tennessee.
2. A Roane County Business License is required if a contractor is doing more than \$50,000 in business in the county.
3. A Business Tax & License Affidavit is required to be submitted with the bid.

## **INDEMNIFICATION/HOLD HARMLESS**

1. Contractor shall indemnify, defend, save and hold harmless all departments of Roane County Government and/or the Roane County Board of Education, its officers, agents and employees from all suits, claims, actions or damages of any nature brought because of, arising out of, or due to breach of the agreement by Contractor, its subcontractors, supplier, agents or employees or due to any negligent act or occurrence or any omission or commission of the contractor, its subcontractors, suppliers, agents or employees until the contract terminates.

## **VENDOR PERFORMANCE**

1. If the contractor fails in full or part to perform or comply with any provision of this Contract or the terms or conditions of any documents referenced and made a part hereof, Roane County may terminate this contract, in whole or in part, and may consider such failure or noncompliance a Breach of Contract. Contractors with poor performance will be notified at the time of such performance and be given opportunity to correct the problems. Documentation will be kept on file. Any contractor with continued poor performance will be removed from the potential vendor list for one year.
2. Roane County expressly retains all its rights and remedies provided by law in case of such breach, and no action by Roane County shall constitute a waiver of any such rights or remedies. In the event of termination for default, Roane County reserves the right to purchase its requirements elsewhere, with or without competitive bid.
3. Failure to deliver within the time specified or within a reasonable amount of time, or failure to make replacements of a rejected item immediately will constitute authority to purchase on the open market so as to replace the item(s) rejected and/or not received. On all such purchases, the Vendor agrees to promptly reimburse the county for excess costs incurred by such a purchase.

## **BREACH OF CONTRACT**

1. A party shall be deemed to have breached the contract if any of the following occurs:
  - Failure to provide the services that conform to contract requirements.
  - Failure to maintain/submit any report required hereunder.
  - Failure to perform in full or in part any of the other conditions of the contract.

## **CONTRACT TERMINATION FOR CAUSE**

1. If the contractor fails to properly perform its obligations under this contract in a timely or proper manner, or if the contractor violates any terms of this contract, the county shall have the right to terminate the contract and withhold payments in excess of fair compensation for completed services.
2. In the event the contract is terminated for due cause by the county, the county shall have the option of awarding the contact to the next lowest bidder or bidding again.

## **CONTRACT TERMINATION FOR CONVENIENCE**

1. The county may, by written notice to the contractor, terminate this contract without cause for any reason. Said termination shall not be deemed a Breach of Contract by the county. The county must give notice of termination to the vendor at least thirty (30) days prior to the effective date of termination. The contractor shall be entitled to receive compensation for satisfactory, authorized service completed as of the termination date, but in no event shall the county be liable to the contractor for compensation for any service which has not been rendered. Upon such termination, the vendor shall have no right to any actual general, special, incidental, consequential, or any other damages whatsoever of any description or amount.

## **BOOKS AND RECORDS**

1. The contractor shall maintain all books, documents, accounting records and other evidence pertaining to the goods and services provided under this contract and make such materials available at its offices at all reasonable times during the contract period and for three (3) years from the date of the final payment under this agreement for inspection by county or by any other governmental entity or agency participating in the funding of this agreement, or any authorized agents thereof; copies of said records to be furnished if requested.

## **INVOICES AND PAYMENTS**

1. Payment will be made within 30 days after receipt of invoice and/or delivery of items included in this Invitation to Bid, whichever is later.
2. Roane County Government is not subject to taxation. A tax exemption certificate will be provided upon request.

## **NONDISCRIMINATION AND NON-CONFLICT STATEMENT**

1. Contractor agrees that no person on the grounds of handicap, age, race, color, religion, sex or national origin, shall be excluded from participation in, or be denied benefits of, or be otherwise subjected to discrimination in the performance of this agreement, or in the employment practices of vendor. Contractor shall upon request show proof of such nondiscrimination, and shall post in conspicuous places available to all employees and applicants notices of non-discrimination. Contractor covenants that it complies with the Fair Wage and Hour Laws, the National Labor Relations Act, and other federal and state employment laws as applicable. Contractor covenants that it does not engage in any illegal employment practices.
2. Contractor covenants that it has no public or private interest, and shall not acquire directly or indirectly any interest; that would conflict in any manner with the provision of its goods or performance of its services. The contractor warrants that no part of the total contract amount provided herein shall be paid directly or indirectly to any officer or employee of Roane County as wages, compensation, or gifts in exchange for acting as officer, agent, employee, subcontractor or consultant to contractor in connection with any goods provided or work contemplated or performed relative to the agreement.
3. No employee or member of the Roane County's governing bodies shall participate in the selection or award of a contract if a conflict of interest, real or apparent, would be involved.
4. Officers, employees or officials of the Roane County Government shall neither solicit nor accept gratuities, favors or anything of more than nominal monetary value from vendors or parties to subcontracts.



**2016-21-131/171 – ROOF REPLACEMENT – CENTRAL SERVICE BUILDING  
VENDOR INFORMATION SHEET**

(Please fill out completely)

By completing and signing this form you certify that you are an authorized representative of the company for which you are submitting a bid/proposal and that you have the authority to legally bind your company. Further, by completing and signing this form you certify that you agree to all the terms and conditions of this bid/proposal.

1. Vendor Name \_\_\_\_\_

2. Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

3. Contact Person (Please Print) \_\_\_\_\_

4. Telephone Number \_\_\_\_\_ Fax Number \_\_\_\_\_

5. Vendor's e-mail address \_\_\_\_\_

6. Authorizing Signature \_\_\_\_\_

7. Title of Person Signing Bid \_\_\_\_\_

8. If addenda were issued, please acknowledge the receipt of: (please write "yes" if you received one)  
Addendum 1 \_\_\_\_\_ Addendum 2 \_\_\_\_\_ Addendum 3 \_\_\_\_\_ Addendum 4 \_\_\_\_\_

9. If applicable, please indicate below if discounts will be allowed for prompt payment or if there is not discount offered:  
\_\_\_\_\_ % Net 10 Days; \_\_\_\_\_ % Net 20 Days; \_\_\_\_\_ % Net 30 Days; \_\_\_\_\_ No Discount

**COOPERATIVE PURCHASING** - Vendors are to indicate if it is permissible for other governmental agencies in the State of Tennessee to purchase these items or services at the same price. Freight charges may be adjusted to reflect differences in delivery costs to other locations. Please indicate the approval of Cooperative Purchasing.

\_\_\_\_\_ Yes \_\_\_\_\_ No

**SCHOOL CONTRACTS ONLY**

**CRIMINAL HISTORY RECORDS CHECK** – Do you agree to comply with Public Chapter 587 of 2007 which requires all contractors to facilitate a criminal history check, including fingerprinting, conducted by the Tennessee Bureau of Investigation and the Federal Bureau of Investigation for each employee or subcontractor personnel before permitting the employee or subcontractor personnel to have contact with students or enter school grounds?

\_\_\_\_\_ Yes \_\_\_\_\_ No

**2016-21-131/171 – ROOF REPLACEMENT – CENTRAL SERVICE BUILDING  
NON –COLLUSION, INDEPENDENT PRICE DETERMINATION,  
NON-DISCRIMINATION, NON-DEBARMENT & LOBBYING AFFIDAVIT**

I do hereby certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, or person submitting a bid for the same materials, supplies, or equipment, and is in all respects fair and without collusion or fraud.

I understand that collusive pricing is a violation of State and Federal law and can result in fines, prison sentences, and civil damage awards and that no collusion with another firm was used in preparation of this bid.

I also certify that this firm does not discriminate against any employee or applicant for employment on the grounds of race, color, national origin or sex; and does not and will not maintain or provide for his employees any segregated facilities at any of its establishments, and further, that the firm does not and will not permit their employees to perform their services at any location under this contract where segregated facilities are maintained.

By submission of this bid, the bidder certifies that neither it or its principals is presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from participation in this transaction by any Federal or State department or agency.

I further certify that during the Invitation to Bid solicitation and/or during the performance of this contract that neither it nor its principals will participate in lobbying activities in conjunction with this project.

I agree to abide by all terms and conditions of this Invitation to Bid and certify that I am authorized to sign this affidavit for the vendor.

Please indicate which of the following apply to your company. This information is requested for information purposes only. Roane County currently has no policy that allows for set asides or preferences for woman owned or minority owned businesses.

African American Owned  
 Caucasian Owned  
 Native American Owned  
 Other Owned

Asian Owned  
 Hispanic Owned  
 Woman Owned

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

**2016-21-131/171 – ROOF REPLACEMENT – CENTRAL SERVICE BUILDING  
DRUG-FREE WORKPLACE AFFIDAVIT**

STATE OF \_\_\_\_\_

COUNTY OF \_\_\_\_\_

The undersigned, principal officer of \_\_\_\_\_, an employer of five (5) or more employees contracting with Roane County Government to provide construction services, hereby states under oath as follows:

1. The undersigned is a principal officer of \_\_\_\_\_ (hereinafter referred to as the "Company"), and is duly authorized to execute this Affidavit on behalf of the Company.
2. The Company submits this Affidavit pursuant to T.C.A. § 50-9-113, which requires each employer with no less than five (5) employees receiving pay who contracts with the state or any local government to provide construction services to submit an affidavit stating that such employer has a drug-free workplace program that complies with Title 50, Chapter 9, of the *Tennessee Code Annotated*.
3. The Company is in compliance with T.C.A. § 50-9-113.

Further affiant saith not.

\_\_\_\_\_  
Principal Officer

STATE OF \_\_\_\_\_

COUNTY OF \_\_\_\_\_

Before me personally appeared \_\_\_\_\_, with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence), and who acknowledged that such person executed the foregoing affidavit for the purposes therein contained.

Witness my hand and seal at office this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Notary Public

My commission expires \_\_\_\_\_.



**2016-21-131/171 – ROOF REPLACEMENT – CENTRAL SERVICE BUILDING  
BUSINESS TAX & LICENSE AFFIDAVIT**

The undersigned, ("Affiant"), states that he/she has legal authority to swear this on behalf of \_\_\_\_\_ ("Contractor"); that Contractor is not in any manner in violation of *Tennessee Code Annotated, §5-14-108(l)* which provides that "no purchase shall be made or purchase order or contract of purchase issued for tangible personal property or services by county officials or employees, acting in their official capacity, from any firm or individual whose business tax or license is delinquent".

Affiant affirms and warrants that Contractor's licenses are currently valid and all business taxes have been paid and are current as of the date of this affidavit. Contractor is licensed and pays business taxes in \_\_\_\_\_ County, Tennessee.

**AFFIANT**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Witness: \_\_\_\_\_

Date: \_\_\_\_\_

**Bid #2016-20/171**  
**BID FORM**

**BID RECIPIENT**

1. This Bid is submitted to:  
**Roof Replacement – Central Service Building**  
**Roane County Purchasing**  
**200 East Race Street, Suite #3**  
**Kingston, Tennessee 37763**
2. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with the Owner in the form included in the Bidding Documents to perform all the Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other Terms & Conditions of the Bidding Documents.

**BIDDER'S ACKNOWLEDGEMENTS**

1. The bidder accepts all of the Terms & Conditions of the Invitation to Bid, including and without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for sixty (60) days after the Bid opening, or for such longer period of time that the Bidder may agree to in writing upon written request of the Owner.
2. The Bidder examined and carefully studied the Bidding Documents, other related data identified in the Bidding Documents and the Addenda issued and has acknowledged the receipt of same.
3. The Bidder has visited the Site and has become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
4. The Bidder is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
5. The Bidder is aware of the general nature of the work to be performed in this project.
6. The Bidder has submitted written notice of all conflicts, errors, ambiguities, or discrepancies that the Bidder discovered in the Bidding Documents, and the written resolution thereof by the engineer or owner is acceptable to the Bidder.
7. The Bidding Documents are generally sufficient to indicate and convey understanding of all Terms & Conditions for the performance of the Work for which this Bid is submitted.

**BASIS OF BID**

1. The Bidder will complete the Work in accordance with the Contract Documents for the prices as shown in this submission.

**TIME OF COMPLETION**

1. It is the Owner's desire to have the project completed in as expeditiously as is possible. The Bidder submits that the project days required to complete this project after the Notice to Proceed is issued is \_\_\_\_\_ **days.**

**BID**

This Bid is submitted by:

Company Name \_\_\_\_\_

Company Address \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Email Address \_\_\_\_\_

Telephone Number \_\_\_\_\_

**LUMP SUM BID PRICE** \_\_\_\_\_

**SIGNED BY** \_\_\_\_\_

**2016-21-131/171 – ROOF REPLACEMENT – CENTRAL SERVICE BUILDING  
INVITATION TO BID  
SPECIFICATIONS**

Roane County is inviting bids to Paint the Roane County Courthouse exterior and three (3) Courtrooms inside the building as per the enclosed specifications.

Vendors are to provide one original and one copy of the bid being submitted. Any costs associated with the preparation or delivery of the bid is at the Vendor's cost with no cost to Roane County.

**REQUIRED DOCUMENTS**

Bidders must use the envelope cover sheet included herein.

The following documents must be returned in the bid envelope:

- Vendor Information Sheet
- Non-Collusion, Independent Price Determination, Non-Discrimination, Non-Debarment & Lobbying Affidavit
- Drug-Free Workplace Affidavit
- Statement of Compliance Certificate of Illegal Immigrants
- Business Tax & License Affidavit
- Certificate of Insurance issued by the Contractor's Insurance Company.

**CONTRACT**

The attached contract, Roane County's Purchase Order, and the Terms & Conditions and the Specifications of this Invitation to Bid will serve as the construction contract.

**QUESTIONS & ADDENDA**

The deadline for questions from bidders is promptly at 2:00 p.m. on Friday, June 3, 2016.

Addenda will not be sent out after 2:00 p.m. on Tuesday, June 7, 2016.



# BID ENVELOPE COVER SHEET

## Bid #2016-21-131/171

Project: **ROOF REPLACEMENT AT CENTRAL SERVICE BLDG  
3070 ROANE STATE HIGHWAY  
HARRIMAN, TN 37748**

Bid Date & Time: **Thursday, June 9, 2016  
2:00 p.m. (Eastern Time Zone)**

Bids must be delivered prior to the aforementioned date and time to:  
Roane County Purchasing  
200 East Race Street  
Suite #3  
Kingston, Tennessee 37763

Bidder Name & Address: _____	
_____	
_____	
TN License Number: _____	Limit: _____
Expiration Date: _____	Classification: _____

**SECTION 01 11 00 - SUMMARY OF THE WORK**

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

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

## 1.2 SUMMARY

- A. Furnish all labor, materials and equipment, and perform all work to complete re-roof at the Roane County High Dept. / Emergency Services Office Building as specified herein.
- B. Verbal Summary: Without force and effect on requirements of the contract documents the description of the work of the Contract can be summarized as follows:
  - 1. Project Name is Roane County Highway Dept. / Emergency Services Re-Roof, Harriman, Tennessee.
  - 2. The work consists of:
    - a. Apply new EPDM roofing membrane over existing low-slope, standing-seam metal roof at existing metal building structure, approximately 6,000 square feet.
    - b. Roofing system shall consist of 1 ½" EPS insulation as flute filler, placed over existing standing-seam metal roof panels, 1 ½" of R-10 polyisocyanurate insulation, and 45 mil, fully adhered EPDM roofing.
    - c. Install new pre-finished metal edge trim and associated blocking at perimeter.

## 1.3 CONTRACTOR'S USE OF PREMISES

- A. Before construction is started the Sub-Contractors shall confer with the Owner and arrange for available trucking and storage space for the delivery of materials, storage space for materials and equipment and parking space for his workmen.
- B. Construction operations and storage of materials and equipment shall be restricted to areas of the site mutually agreed upon and in such a manner as not to block access of fire fighting equipment to the building and facilities.

## PART 2 - PRODUCTS (Not Applicable)

## PART 3 - EXECUTION (Not Applicable)

END OF SECTION 01 11 00

**WSECTION 07 53 23 - ETHYLENE-PROPYLENE-DIENE-MONOMER (EPDM)  
ROOFING****PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY Membrane UL Surface Burning Characteristics > IBC 1505**

- A. This Section includes the following:
  - 1. Adhered, 45 mil black, non-reinforced, EPDM membrane roofing system.
  - 2. Roof insulation.
- B. Related Sections include the following:
  - 1. Division 07 Section "Sheet Metal Flashing and Trim" for metal roof penetration flashings, flashings, and counterflashings.
  - 2. Division 07 Section "Joint Sealants."

**1.3 DEFINITIONS**

- A. Roofing Terminology: Refer to ASTM D1079 and glossary of NRCA's "The NRCA Roofing and Waterproofing Manual" for definition of terms related to roofing work in this Section.

**1.4 PERFORMANCE REQUIREMENTS**

- A. General: Provide installed roofing membrane and base flashings that remain watertight; do not permit the passage of water; and resist specified uplift pressures, thermally induced movement, and exposure to weather without failure.
- B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by roofing membrane manufacturer based on testing and field experience.
- C. FMG Listing: Provide roofing membrane, base flashings, and component materials that comply with requirements in FMG 4450 and FMG 4470 as part of a membrane roofing system and that are listed in FMG's "Approval Guide" for Class 1 or noncombustible construction, as applicable. Identify materials with FMG markings.
  - 1. Fire/Windstorm Classification: Class 1A-60.

**1.5 SUBMITTALS**

- A. Product Data: For each type of product indicated.

- B. Installer Certificates: Signed by roofing system manufacturer certifying that Installer is approved, authorized, or licensed by manufacturer to install roofing system.
- C. Manufacturer Certificates: Signed by roofing manufacturer certifying that roofing system complies with requirements specified in "Performance Requirements" Article.
  - 1. Submit evidence of meeting performance requirements.
- D. Qualification Data: For Installer and manufacturer.
- E. Maintenance Data: For roofing system to include in maintenance manuals.
- F. Inspection Report: Copy of roofing system manufacturer's inspection report of completed roofing installation.

#### 1.6 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's warranty.
- B. Manufacturer Qualifications: A qualified manufacturer that has UL listing FMG approval for membrane roofing system identical to that used for this Project.
- C. Testing Agency Qualifications: An independent testing agency with the experience and capability to conduct the testing indicated, as documented according to ASTM E548.
- D. Source Limitations: Obtain components for membrane roofing system as manufactured or approved by roofing membrane manufacturer.
- E. Fire-Test-Response Characteristics: Provide membrane roofing materials with the fire-test-response characteristics indicated as determined by testing identical products per test method below by UL, FMG, or another testing and inspecting agency acceptable to authorities having jurisdiction. Materials shall be identified with appropriate markings of applicable testing and inspecting agency.
  - 1. Exterior Fire-Test Exposure: Class A; ASTM E108, for application and roof slopes indicated.
  - 2. Fire-Resistance Ratings: ASTM E119, for fire-resistance-rated roof assemblies of which roofing system is a part. Comply with UL Design numbers listed on drawings.
- F. Preliminary Roofing Conference: Before starting the project construction, conduct conference at Project site. Review methods and procedures related to roofing system including, but not limited to, the following:
  - 1. Meet with Installer; roofing system manufacturer's representative and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.

2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
3. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
4. Examine existing substrate conditions and finishes for compliance with requirements, including flatness and fastening.
5. Review governing regulations and requirements for insurance and certificates if applicable.
6. Review temporary protection requirements for roofing system during and after installation.
7. Review roof observation and repair procedures after roofing installation.

#### 1.7 DELIVERY, STORAGE, AND HANDLING

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

#### 1.8 PROJECT CONDITIONS

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

#### 1.9 WARRANTY

- A. Special Warranty: Manufacturer's standard form, without monetary limitation, in which manufacturer agrees to repair or replace components of membrane roofing system that fail in materials or workmanship within specified warranty period. Failure includes roof leaks.
  1. Special warranty includes roofing membrane, base flashings, and other components of membrane roofing system.
  2. Warranty Period: 15 years from date of Substantial Completion.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. In other PART 2 articles where subparagraph titles below introduce lists, the following requirements apply for product selection:
  - 1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the products specified.
  - 2. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the manufacturers specified.

### 2.2 EPDM ROOFING MEMBRANE

- A. EPDM Roofing Membrane: ASTM D4637, Type I, nonreinforced uniform, flexible sheet made from EPDM, and as follows:
  - 1. Available Manufacturers include:
    - a. Carlisle SynTec Incorporated.
    - b. Firestone Building Products Company.
    - c. GenFlex Roofing Systems.
    - d. Johns Manville International, Inc.
  - 2. Thickness: 45 mils, nominal.
  - 3. Exposed Face Color: White

### 2.3 AUXILIARY MATERIALS

- A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with membrane roofing.
  - 1. Liquid-type auxiliary materials shall meet VOC limits of authorities having jurisdiction.
- B. Sheet Flashing: 45-mil- thick EPDM, partially cured or cured, according to application and manufacturer's recommendations.
- C. Bonding Adhesive: Manufacturer's standard bonding adhesive.
- D. Seaming Material: Manufacturer's standard synthetic-rubber polymer primer and 3-inch- wide minimum, butyl splice tape with release film.
- E. Lap Sealant: Manufacturer's standard single-component sealant, color to match roofing membrane.
- F. Water Cutoff Mastic: Manufacturer's standard butyl mastic sealant.
- G. Metal Termination Bars: predrilled stainless-steel bars, approximately 1 by 1/8 inch thick; with anchors.
- H. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions in FMG 4470, designed for fastening membrane to substrate, and acceptable to membrane roofing system manufacturer.

- I. Miscellaneous Accessories: Provide preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, in-seam sealants, termination reglets, cover strips, and other accessories.

## 2.4 ROOF INSULATION

- A. General: Provide preformed roof insulation boards that comply with requirements and referenced standards, selected from manufacturer's standard sizes. Provide two (2) layer, 3 inches thick.
- B. Extruded polystyrene board insulation: ASTM C578, of Type IV, 1 1/2 inches thick, square edge with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively.
  1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers specified.
    - a. Dow Chemical Company.
    - b. Owens Corning.
    - c. DiversiFoam Products.
    - d. Pactiv Building Products Division.
- C. Polyisocyanurate Board Insulation: ASTM C1289, Type II, felt or glass-fiber mat facer on both major surfaces. Reference item E below.
  1. Available Manufacturers:
    - a. Dyplast Products (formerly Apache).
    - b. Carlisle SynTec Incorporated.
    - c. Celotex Corporation.
    - d. Firestone Building Products Company.
    - e. GenFlex Roofing Systems.
    - f. RMAX.

## 2.5 INSULATION ACCESSORIES

- A. General: Furnish roof insulation accessories recommended by insulation manufacturer for intended use and compatible with membrane roofing.
- B. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions in FMG 4470, designed for fastening roof insulation to substrate, and acceptable to roofing system manufacturer.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of roofing system:
  1. Verify that roof openings and penetrations are in place and set and braced and that roof drains are securely clamped in place.

2. Verify that wood blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thickness of insulation.
3. Proceed with installation only after errors, deficiencies, non-conforming work and other unsatisfactory conditions have been corrected.
4. Start of installation indicates acceptance of the substrate conditions by the roofing installer.

### 3.2 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecasted.
- C. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.

### 3.3 INSULATION INSTALLATION

- A. Coordinate installing membrane roofing system components so insulation is not exposed to precipitation or left exposed at the end of the workday.
- B. Comply with membrane roofing system manufacturer's written instructions for installing roof insulation.
- C. Install insulation with long joints of insulation in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 1/4 inch with insulation.
  1. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.
- D. Mechanically Fastened Insulation: Install each layer of insulation and secure to substrate using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to deck type.
  1. Fasten insulation according to requirements in FMG's "Approval Guide" for specified Windstorm Resistance Classification.

### 3.4 BASE FLASHING INSTALLATION

- A. Install sheet flashings and preformed flashing accessories and adhere to substrates according to membrane roofing system manufacturer's written instructions.



- B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate and allow to partially dry. Do not apply bonding adhesive to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.
- D. Clean splice areas, apply splicing cement, and firmly roll side and end laps of overlapping sheets to ensure a watertight seam installation. Apply lap sealant and seal exposed edges of sheet flashing terminations.
- E. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.

### 3.5 FIELD QUALITY CONTROL

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

### 3.6 PROTECTING AND CLEANING

- A. Protect membrane roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report to the Owner.
- B. Correct deficiencies in or remove membrane roofing system that does not comply with requirements, repair substrates and repair or reinstall membrane roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.

END OF SECTION 07 53 23

**SECTION 07 92 00 - JOINT SEALANTS**

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

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

## 1.2 SUMMARY

- A. This Section includes joint sealants as scheduled below.

## 1.3 PERFORMANCE REQUIREMENTS

- A. Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.
- B. Provide joint sealants for interior applications that establish and maintain airtight and water-resistant continuous joint seals without staining or deteriorating joint substrates.

## 1.4 SUBMITTALS

- A. Product Data: For each joint-sealant product indicated.
- B. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
- C. Samples for Verification: For each type and color of joint sealant required, provide Samples with joint sealants in 1/2-inch- wide joints formed between two 6-inch-long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.

## 1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized Installer who is approved or licensed for installation of elastomeric sealants required for this Project.
- B. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.

## 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 or are below 40 deg F.
  - 2. When joint substrates are wet.
  - 3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.

4. Contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  1. BASF Building Products, Sonneborn.
  2. Dow Corning Corporation.
  3. GE Advanced Materials.
  4. Pecora Corporation.
  5. Sika Corporation, Construction Products Division.
  6. Tremco Incorporated

### 2.2 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer, based on testing and field experience.
- B. Extreme Movement Sealants (+100% or -50% movement capability)
  1. Vertical/horizontal joint, such as expansion joints; use reference #S-6.
- C. Significant Movement Sealants (+25% or -25% movement capability)
  1. Vertical or inclined joints such as panel, coping, expansion, and sloped pavement; use reference #S-1, 3 or 6.
  2. Horizontal joints not exposed to fuel or gas spillage; use reference #S-1, 2, 3, 4, 6 or 7.
- D. Minimal Movement Sealants (+25% or -25% movement capability)
  1. Vertical or inclined joints such as perimeters of doors, windows, wall penetrations; use reference #S-1, 3, 4, or 6.
  2. Horizontal joints not exposed to fuel or gas spillage; use reference #S-2, or 5.

## 2.3 REFERENCE NUMBERS

REF #	ASTM SPEC	PRODUCT DESCRIPTION (minimum requirements)
S = Sealant		
S-1	C-920 Type M Class 25 Grade NS	Multi component, non-sag polyurethane or polysulfide sealant Shore A hardness of 20-40 Joint Movement range of $\pm 25\%$
S-2	C-920 Type M Class 25 Grade P	Multi component, self-leveling polyurethane or polysulfide sealant Shore A hardness of 25-40 Joint Movement range of $\pm 25\%$
S-3	C-920 Type S Class 50 Grade NS	Low modulus one component, non-sag polyurethane or polysulfide sealant Shore A hardness of 15-25 Joint Movement range of $\pm 50\%$ Minimum Elongation of 700%
S-4	C-920 Type S Class 25 Grade NS	One component, non-sag polyurethane or polysulfide sealant Shore A hardness of 25-40 Joint Movement range of $\pm 25\%$
S-5	C-920 Type S Class 25 Grade P	One component, self-leveling polyurethane or polysulfide sealant Shore A hardness of 15-45 Joint Movement range of $\pm 25\%$
S-6	C-920 Type S Class 100/50 Grade NS	Low modulus one component, non-sag neutral cure, silicone sealant Shore A hardness of 15-20 Joint Movement range of +100% to -50%
S-7	C-920 Type S Class 25 Grade NS	One component, neutral cure, non-sag, silicone sealant Shore A hardness of 25-30 Joint Movement range of $\pm 25\%$
S-8	C-920 Type S Class 25 Grade NS	One component, non-sag, mildew resistant silicone sealant Shore A hardness of 25-30
C = Caulk		
C-1	C834	One component acrylic latex caulking Minimum 75% recovery per ASTM C736 Maximum joint movement of $\pm 7.5\%$

## 2.4 ELASTOMERIC JOINT SEALANTS

- A. Elastomeric Sealants: Comply with ASTM C920 and other requirements indicated for each liquid-applied chemically curing sealant specified, including those referencing ASTM C920 classifications for type, grade, class, and uses related to exposure and joint substrates.
- B. Stain-Test-Response Characteristics: Where elastomeric sealants are specified to be nonstaining to porous substrates, provide products that have undergone

testing according to ASTM C1248 and have not stained porous joint substrates indicated for Project.

- C. Suitability for Contact with Food: Where elastomeric sealants are indicated for joints that will come in repeated contact with food, provide products that comply with 21 CFR 177.2600.

## 2.5 LATEX JOINT SEALANTS

- A. Latex Sealant: Comply with ASTM C834, Type P, Grade NF.

## 2.6 JOINT-SEALANT BACKING

- A. General: Provide sealant backings of material and type that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Cylindrical Sealant Backings: ASTM C1330, Type C (closed-cell material with a surface skin), O (open-cell material), B (bicellular material with a surface skin) or any of the preceding types, as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance:
- C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

## 2.7 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.
- C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

## PART 3 - EXECUTION

## 3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

## 3.2 PREPARATION

- A. 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, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
  - 2. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:
    - a. Concrete.
    - b. Masonry.
  - 3. Remove laitance and form-release agents from concrete.
  - 4. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include but are not limited to the following:
    - a. Metal.
    - b. Glass.
- B. Joint Priming: Prime joint substrates, where recommended in writing by joint-sealant manufacturer, based on 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.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

### 3.3 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 C1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Acoustical Sealant Application Standard: Comply with recommendations in ASTM C919 for use of joint sealants in acoustical applications as applicable to materials, applications, and conditions indicated.
- D. Install sealant backings of type indicated 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. Do not leave gaps between ends of sealant backings.
  - 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 materials.
- E. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- F. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
  - 1. Place sealants so they directly contact and fully wet joint substrates.
  - 2. Completely fill recesses in each joint configuration.
  - 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- G. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
  - 1. Remove excess sealant from surfaces adjacent to joints.
  - 2. Provide concave joint configuration unless otherwise indicated.

### 3.4 CLEANING

- A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

### 3.5 PROTECTION

- A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at

time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

END OF SECTION 07 92 00



**SECTION 07 62 00 - SHEET METAL FLASHING AND TRIM****PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. This Section includes the following:
  - 1. Flashing, Counterflashing and Sheet Metal.
  - 2. Stainless steel cavity closures.
- B. Related Sections include the following:
  - 1. Division 07 – EPDM Roofing
  - 2. Division 07 - Joint Sealants.

**1.3 SUBMITTALS**

- A. Product Data: For each type of roof hatch indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Samples; Flashing, Sheet Metal, Accessories: Submit 8 inch square samples of specified sheet materials to be exposed as finished surfaces. Submit full size samples, minimum of 2 feet wide, of each fascia and coping section for review by the Architect prior to installation.

**1.4 PERFORMANCE REQUIREMENTS**

- A. General: Manufacture and install manufactured roof edgings to resist thermally induced movement and exposure to weather without failing, rattling, leaking, and fastener disengagement.
  - 1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.
- B. Water Infiltration: Provide manufactured roof edgings that do not allow water infiltration to building interior.

**1.5 QUALITY ASSURANCE**

- A. Sheet Metal Standard: Comply with SMACNA's "Architectural Sheet Metal Manual" details for fabrication of units, including flanges and cap flashing to coordinate with type of roofing indicated.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Pack, handle, and ship materials properly labeled in heavy-duty packaging to prevent damage.
- B. Protect materials from physical damage and from deterioration by moisture, soiling, and other sources. Store inside and in a dry location. Comply with manufacturer's written instructions for handling, storing, and protecting during installation.
- C. Store materials off ground, under cover. Protect from damage and deterioration.
- D. Handle materials to prevent damage to surfaces, edges and ends of sheet metal items. Reject and remove damaged material from site.

1.7 PROJECT CONDITIONS

- A. Field Measurements: Verify field measurements before fabrication and indicate measurements on Shop Drawings.

1.8 COORDINATION

- A. Coordinate work of this section with interfacing and adjoining work for proper sequencing of each installation. Ensure best possible weather resistance and durability of work and protection of materials and finishes.
- B. Coordinate layout and installation with adjoining construction to provide a leak-proof, weathertight, secure, and noncorrosive installation.

1.9 WARRANTY

- A. Furnish written guarantee, countersigned by contractor and installing subcontractor, that work is unconditionally guaranteed to be watertight and free of defects and faulty workmanship for a period of two years from date of completion of the work.
- B. Special Warranty on Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace sheet metal flashing and trim that shows evidence of deterioration of factory-applied finishes within specified warranty period.
  - 1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
    - a. Color fading more than 5 Hunter units when tested according to ASTM D2244.
    - b. Chalking in excess of a No. 8 rating when tested according to ASTM D4214.
    - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
  - 2. Finish Warranty Period: 10 years from date of Substantial Completion.

## PART 2 - PRODUCTS

## 2.1 MATERIALS

- A. Aluminum: ASTM B209, alloy 3003, temper H14. Provide pre-finished Kynar 500/Hylar 5000 finish. Colors to be selected from manufacturer's full color selection, excluding metallic colors.
  - 1. Flashing: use minimum 0.050 inch thickness.
  - 2. Counterflashing: use minimum 0.040 inch thickness.
- B. Stainless Steel Sheet: ASTM A240 or ASTM A666, Type 304, dead soft, fully annealed.
  - 1. Finish: 2D (dull, cold rolled).
  - 2. Surface: Smooth, flat.
  - 3. Thickness:
    - a. Concealed (cavity closure): 0.012 inches minimum.
    - b. Exposed (receiver): 0.015 inches minimum.
- C. Fasteners: Same metal as flashing/sheet metal or compatible with flashing sheet metal. Where exposed, match finish of exposed heads with material being fastened.
- D. Elastomeric Sealant: ASTM C920, elastomeric medium modulus neutral cure silicone sealant to seal joints in sheet metal flashing and trim and remain watertight.
  - 1. Dow Corning 795 Building Sealant, or approved substitute.
- E. Adhesives: Type recommended by flashing sheet manufacturer for waterproof/weather-resistant seaming and adhesive application of flashing sheet.
- F. Reglets: Metal, compatible with flashing indicated, non-corrosive.
- G. Metal accessories: Provide sheet metal clips, straps, anchoring devices and all accessory units as required for installation of work, matching or compatible with material being installed, noncorrosive.
- H. Separations: Provide for separation of metal from non-compatible metal or corrosive substrates, with bituminous coating or other permanent separation.

## 2.2 METAL FINISHES

- A. General: Apply coatings either before or after forming and fabricating panels, as required by coating process and as required for maximum coating performance capabilities. Protect coating either by application of strippable film or by packing plastic film or other suitable material between panels in a manner to properly protect the finish. Furnish air-drying spray finish in matching color for touch-up.
- B. Fluoropolymer Coating: Manufacturer's standard two-coat, thermocured, full-strength 70 percent "Kynar 500" coating consisting of a primer and a minimum 0.75-mil dry film thickness with a total dry film thickness of 0.9 mil.

- C. Durability: Provide coating that has been field tested under normal range of weathering conditions for minimum of 20 years without significant peel, blister, flake, chip, crack, or check in finish; without chalking in excess of No. 8 in accordance with ASTM D659; and without fading in excess of 5 NBS units.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, to verify actual locations, dimensions, and other conditions affecting performance of work.
  - 1. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored and is ready to receive sheet metal work.
  - 2. Verify dimensions.
  - 3. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 INSTALLATION

- A. Comply with manufacturer's installation instructions and recommendations, and with SMACNA "Architectural Sheet Metal Manual". Anchor units as required to be secure and permanently watertight/weathertight.
- B. Provide for thermal expansion of all exposed sheet metal and flashing work exceeding 15 feet running length.
- C. Provide a concealed interlocking splice plate minimum 6 inch long and full splice depth of flashing at all joints. Bed exposed flashing in DOW 795 medium modulus silicone at each side of plate.
- D. Locate joints at least 2 feet from corners and intersections.
- E. Conceal fasteners and expansion provisions wherever possible. Fold back edges on concealed side of exposed edges to form a hem. If fasteners cannot be concealed they must match the color of the sheet metal.
- F. Insert flashing into reglet as shown. Anchor by mechanical means, including driven wedges of lead or other compatible metal, spaced 24 inches on center, maximum. Seal joint with sealant as indicated.

#### 3.3 CLEANING

- A. Clean exposed surfaces according to manufacturer's written instructions.

END OF SECTION 07 62 00

# BID ENVELOPE COVER SHEET

## Bid #2016-21-131/171

Project: **ROOF REPLACEMENT AT CENTRAL SERVICE BLDG  
3070 ROANE STATE HIGHWAY  
HARRIMAN, TN 37748**

Bid Date & Time: **Thursday, June 9, 2016  
2:00 p.m. (Eastern Time Zone)**

Bids must be delivered prior to the aforementioned date and time to:  
Roane County Purchasing  
200 East Race Street  
Suite #3  
Kingston, Tennessee 37763

Bidder Name & Address: _____	
_____	
_____	
TN License Number: _____	Limit: _____
Expiration Date: _____	Classification: _____