



## Robertson County Tennessee

*Jody Stewart, Finance Director*

*Finance Department*

*523 South Brown Street, Springfield, TN 37172*

*(615) 384-0202 Fax (615) 384-0237*

POST DATE: **December 6, 2017**

### **ADVERTISEMENT FOR BIDS: ARCHIVES BUILDING REROOF PROJECT**

Sealed bids must be received by: **JANUARY 4, 2018 at 10:00 A.M. CST**

Robertson County Finance Office  
523 South Brown Street  
Springfield, TN 37172

**THE OUTSIDE OF THE ENVELOPE MUST BE MARKED WITH THE BIDDER'S COMPANY NAME, ITEM BID, TIME OF BID OPENING, DATE OF BID OPENING, BID NO. 1377 AND MUST BE MARKED "SEALED BID, DO NOT OPEN."**

Bids shall be opened and read aloud to the public at the Robertson County Finance Office, 523 S. Brown Street, Springfield, TN 37172 immediately following the bid receipt deadline. Each bid must be submitted in a separate sealed envelope with the appropriate notation on the outside. All bids must be signed by an authorized agent and submitted on the prescribed forms. Submission of bids by telegraph, telephone, or other electronic means is strictly prohibited. Any proprietary items offered for bid must be equivalent as to function, basic design, type and quality of material, method of construction, and any required dimensions as required in plans with no restrictions or exclusions.

For assistance with technical / product information contact CSR Engineering, Inc., 1116 Main St., Pleasant View, TN 37146 (615-247-5381). For assistance with bid procedures contact Cheryl Moon, Robertson County Finance Office at (615) 384-0202 or by email: [cmoon@robcotn.org](mailto:cmoon@robcotn.org).

**Note: Robertson County reserves the right to reject any or all bids, to waive any technicalities or informalities, and to accept any bid deemed in the best interest of the County. All bids will be considered in accordance with Title VI and without regard to age, sex, color, race, creed, national origin, religious persuasion, marital status, political belief, or disability that does not prohibit the performance of duty.**

## **INFORMATION FOR BIDDERS**

BIDS will be received by The Robertson County Finance Department (herein after called the "OWNER"), at 523 South Brown Street, Springfield, TN 37172 until 10:00 A.M. (Central Standard Time) January 4, 2017, and then at said office will be publicly opened and read aloud.

Each BID must be submitted in a sealed envelope, addressed to the OWNER at Springfield, Tennessee. Each sealed envelope containing a BID must be plainly marked on the outside as BID for Archives Building Reroof Project and the envelope should bear on the outside the name of the BIDDER, his address and his contractor's license number, if applicable. If forwarded by mail, the sealed envelope containing the BID must be enclosed in another envelope addressed to the OWNER at Springfield, Tennessee. All BIDS must be made on the required BID form. All blank spaces for BID prices must be filled in, in ink or typewritten, and the BID form must be fully completed and executed when submitted. Only one copy of the BID form is required.

Should there be reasons why the contract cannot be awarded within the specified period; the time may be extended by mutual agreement between the OWNER and the BIDDER.

The BIDDER shall have been engaged, for at least five (5) years, and properly experienced in the business of performing the type work required on the PROJECT and hold a Tennessee contractor's license Type BC-B.

Bidder must be a manufacturer's certified installer, hold a current Robertson County Business License and must provide proof of automobile insurance, liability insurance and workers' compensation insurance. Robertson County assumes no liability for accidents incurred to bidder's employees while on the job site.

The BIDDER shall furnish to the OWNER all such information and data as the OWNER may request, to assist the OWNER in determining the ability of the BIDDER to perform the WORK.

BIDDERS must satisfy themselves of the accuracy of the estimated quantities of work in the Bid Schedule by examination of the site and a review of the drawings and specifications including any issued ADDENDA. After BIDS have been submitted, the BIDDER shall not assert that there was a misunderstanding concerning the quantities of WORK or of the nature of the WORK to be done.

The CONTRACT DOCUMENTS contain the provisions required for the construction of the PROJECT. Information obtained from an officer, agent, or employee of the OWNER or

any other person shall not affect the risks or obligations assumed by the CONTRACTOR or relieve him from fulfilling any of the conditions of the contract.

The party to whom the contract is awarded will be required to execute the Agreement and obtain the performance bond and labor and material payment bond within ten (10) calendar days from the date when NOTICE OF AWARD is delivered to the bidder. The NOTICE OF AWARD shall be accompanied by the necessary Agreement and project bond forms. In case of failure of the BIDDER to execute the Agreement, the OWNER may at his option consider the BIDDER in default, in which case the BID bond accompanying the proposal shall become the property of the OWNER.

The OWNER within ten (10) days of receipt of acceptable performance bond, labor and material payment bond, and Agreement signed by the party to whom the Agreement was awarded shall sign the Agreement and return to such party an executed duplicate of the Agreement. Should the OWNER not execute the Agreement within such period, the BIDDER may by written notice withdraw his signed Agreement. Such notice of withdrawal shall be effective upon receipt of the notice by the OWNER.

The NOTICE TO PROCEED shall be issued within ten (10) days of the execution of the Agreement by the OWNER. Should there be any reasons why the NOTICE TO PROCEED cannot be issued within such period; the time may be extended by mutual agreement between the OWNER and CONTRACTOR. If the NOTICE TO PROCEED has not been issued within the ten (10) day period mutually agreed upon, the CONTRACTOR may terminate the Agreement without further liability on the part of either party.

The OWNER reserves the right to reject any BID if the evidence submitted by, or investigation of, such BIDDER fails to satisfy the OWNER that such BIDDER is properly qualified to carry out the obligations of the Agreement and to complete the WORK contemplated herein.

A conditional or qualified BID will not be accepted.

Award will be made as a whole to one BIDDER.



**BID**

Proposal of \_\_\_\_\_ (hereinafter called "BIDDER"), organized and existing under the laws of the State of \_\_\_\_\_, doing business as \_\_\_\_\_\* to the County of Robertson (Springfield, TN) (hereinafter called "OWNER").

*\*Insert a corporation, a partnership, or an individual as applicable.*

In compliance with your Advertisement for Bids, BIDDER hereby proposes to perform all WORK for the construction of ARCHIVES BUILDING REROOF PROJECT in strict accordance with the CONTRACT DOCUMENTS, within the time set forth therein, and at the prices stated below.

By submission of the BID, BIDDER certifies, and in the case of a joint BID each party thereto certifies as to his own organization, that this BID has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this BID with any other BIDDER or with any competitor.

BIDDER hereby agrees to commence work under this contract on or before a date to be specified in the NOTICE TO PROCEED and to fully complete the PROJECT within 60 consecutive calendar days thereafter. BIDDER also agrees to complete all work in a manner so as not to adversely affect the daily operation of the existing archive facility.

BIDDER further agrees to pay as liquidated damages, the sum of \$200 for each calendar day in which he is in default of the 60 days stipulated above.

BIDDER acknowledges receipt of the following ADDENDUM (A):

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BIDDER agrees to perform all the work described in the CONTRACT DOCUMENTS for the following lump sum price:

for the **Project** total of

(\$\_\_\_\_\_)

\_\_\_\_\_ Dollars

(Amount shall be shown in both words and figures. In case of discrepancy, the amount shown in words will govern.)

The above lump sum, total price for the project shall include all labor, materials, shoring, removal, overhead, profit, insurance, etc. to cover the finished work of the several kinds called for.

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informality in the bidding. The Bidder agrees that this bid shall be good and may not be withdrawn for a period of 60 calendar days after the scheduled closing time for receiving bids. Upon receipt of written notice of the acceptance of this bid, Bidder will execute a formal Agreement and deliver a Surety Bond or Bonds and Insurance Certificates as defined in the attached bid documents.

will execute a formal Agreement and deliver a Surety Bond or Bonds and Insurance Certificates as defined in the attached bid documents.

The undersigned Bidder does hereby declare and stipulate that this bid is made in good faith, without collusion or connection with any other person or persons bidding for the same work, and that it is made in pursuance of and subject to all the terms and conditions of the Bid Documents and Specifications, and the Plans pertaining to the work to be done.

The bid security attached in the sum of (5% of bid, including both add alternatives):

\_\_\_\_\_ (\$ \_\_\_\_\_)  
shall become the property of the Owner in the event the Agreement, Bond and Insurance are not executed or delivered within the time above set forth as liquidated damages for the delay and additional expense to the Owner caused thereby.

Respectfully submitted:

\_\_\_\_\_  
Prime Contractor Signature

Name: \_\_\_\_\_

Company: \_\_\_\_\_

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

Business Address: \_\_\_\_\_  
\_\_\_\_\_

Contractor's License No: \_\_\_\_\_

License Expiration Date: \_\_\_\_\_

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

Email Contact: \_\_\_\_\_

**BID BOND**

**KNOW ALL MEN BY THESE PRESENTS**, that we, the undersigned, \_\_\_\_\_  
\_\_\_\_\_ as PRINCIPAL, and \_\_\_\_\_  
\_\_\_\_\_ as Surety, are hereby held and firmly  
bound unto The County of Robertson (Springfield, TN) as **OWNER** in the penal sum of  
\_\_\_\_\_ for the payment of which, well and  
truly to be made, we hereby jointly and severally bind ourselves, successor and assigns.

Signed, this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

The Condition of the above obligation is such that whereas the PRINCIPAL has submitted  
to Robertson County a certain Bid, attached hereto and hereby made a part hereof to  
enter into a contract in writing, for the Archives Building Reroof Project.

**NOW, THEREFORE,**

- a. If said BID shall be rejected, or in the alternate,
- b. If said BID shall be accepted and the PRINCIPAL shall execute and deliver a contract  
in the Form of Contract attached hereto (properly completed in accordance with  
said BID) and shall furnish a bond for his faithful performance of said contract, and  
for the payment of all persons performing labor or furnishing materials in  
connection therewith, and shall in all other respects perform the agreement created  
by the acceptance of said **BID**, then this obligation shall be void, otherwise the same



shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

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

**IN WITNESS WHEREOF**, the PRINCIPAL and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper offices, the day and year first set forth above.

\_\_\_\_\_  
Principal

\_\_\_\_\_  
Surety

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

**IMPORTANT** – Surety companies executing bonds must appear on the Treasury Department’s most current list (Circular 570 as amended) and be authorized to transact business in the State of Tennessee where the project is located.

DRUG-FREE WORKPLACE AFFIDAVIT

The undersigned, principal officer of \_\_\_\_\_, an employer of five (5) or more employees contracting with Robertson County, Tennessee 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.

\_\_\_\_\_  
**Authorized Signature, Title (Owner/ Corporate Officer)** **Date**

\_\_\_\_\_  
**Printed Name**

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

\_\_\_\_\_  
**Mailing Address**

\_\_\_\_\_  
**Telephone No.** **Fax No.**

\_\_\_\_\_  
**Witness Signature** **Date**

\_\_\_\_\_  
**Witness printed name**

Robertson County, Tennessee  
NON-COLLUSION AFFIDAVIT

The agent of the bidding firm hereby certifies to the best of his/her knowledge and belief that this bid proposal to Robertson County, Tennessee has not been prepared in collusion with any other seller of similar products. The agent also certifies that the prices, terms and conditions of said bid proposal have not been communicated by the undersigned, nor by any employee or agent of the bidding firm, to any other seller of similar products and will not be communicated to any such seller prior to the official opening of said bid. The agent further states that no official or employee of Robertson County Government has promised any personal financial or other beneficial interest, either directly or indirectly in order to influence award of this bid.

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**Authorized Signature, Title (Owner/ Corporate Officer)**

**Date**

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**Printed Name**

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**Company Name**

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**Mailing Address**

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**Telephone No.**

**Fax No.**

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**Contact preferred email address**

**AGREEMENT**

**THIS AGREEMENT**, made this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_, by and between The County of Robertson (Springfield, TN), hereinafter called "OWNER" and \_\_\_\_\_ doing business as (an individual,) or (a partnership,) or (a corporation) hereinafter called "CONTRACTOR".

**WITNESSETH:** that for an in consideration of the payments and agreements hereinafter mentioned:

1. The CONTRACTOR will commence and complete the construction of the Archives Building Reroof Project.
2. The CONTRACTOR will furnish all of the material, supplies, tools, equipment, labor and other services necessary for the construction and completion of the project described herein.
3. The CONTRACTOR will commence the work required by the CONTRACT DOCUMENTS on or before a date to be specified in the NOTICE TO PROCEED and shall complete the work within bid document requirements for consecutive calendar days and all stated requirements thereafter.
4. The CONTRACTOR agrees to perform all the WORK described in the CONTRACT DOCUMENTS for the sum of \$\_\_\_\_\_.
5. The term "CONTRACT DOCUMENTS" means and includes the following:
  - A. Advertisement For Bids
  - B. Information For Bidders

- C. Bid
- D. Bid Bond
- E. Agreement
- F. General Conditions
- G. Supplemental General Conditions
- H. Payment Bond
- I. Performance Bond
- J. Notice of Award
- K. Notice to Proceed
- L. Change Orders
- M. SPECIFICATIONS prepared or issued by CSR Engineering, Inc. dated  
November 2017.
- N. ADDENDA:
  - No. \_\_\_\_\_, dated \_\_\_\_\_, 20\_\_
  - No. \_\_\_\_\_, dated \_\_\_\_\_, 20\_\_
  - No. \_\_\_\_\_, dated \_\_\_\_\_, 20\_\_
  - No. \_\_\_\_\_, dated \_\_\_\_\_, 20\_\_

6. The OWNER will pay to the CONTRACTOR in the manner and at such times as set forth in the General Conditions such amounts as required by the CONTRACT DOCUMENTS.

7. This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

**IN WITNESS WHEREOF**, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement in two (2) (number of copies) each of which shall be deemed an original on the date first above written.

**OWNER:**

\_\_\_\_\_

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

Name: \_\_\_\_\_

(Please Type)

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

**ATTEST:**

\_\_\_\_\_

Name: \_\_\_\_\_

(Please Type)

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

**CONTRACTOR:**

\_\_\_\_\_

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

Name: \_\_\_\_\_

(Please Type)

Address: \_\_\_\_\_

**(SEAL)**

**ATTEST:**

\_\_\_\_\_

Name: \_\_\_\_\_

(Please Type)

Address: \_\_\_\_\_

**LABOR AND MATERIAL PAYMENT BOND**

**KNOW ALL MEN BY THESE PRESENTS:** that

\_\_\_\_\_ (Name of Contractor)

\_\_\_\_\_ (Address of Contractor)

a \_\_\_\_\_, hereinafter called  
(Corporation, Partnership, or Individual)

PRINCIPAL, and \_\_\_\_\_ (Name of Surety)

\_\_\_\_\_ (Address of Surety)

hereinafter called SURETY, are held and firmly bound unto **The County of Robertson (Springfield, TN) located at 523 Brown Street, Springfield, Tennessee 37172**

hereinafter called OWNER, in the penal sum of \_\_\_\_\_ Dollars, \$ ( \_\_\_\_\_ ) in lawful

money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successor and assigns, jointly and severally, firmly by these presents.

**THE CONDITION OF THIS OBLIGATION** is such that whereas, the PRINCIPAL entered into a certain contract with the OWNER, dated the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ a copy of which is hereto attached and made a part hereof for construction of: Archives Building Reroof Project.

**NOW THEREFORE**, if the PRINCIPAL, shall promptly make payment to all persons, firms, subcontractors, and corporations furnishing materials for or performing labor in the prosecution of the work provided for in such contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such work, and all insurance premiums on said work, and for all labor, performed in such work whether by subcontractor or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

**PROVIDED, FURTHER**, that the said SURETY, for value received hereby stipulates and agrees that no change, extension of time, alternation or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall in any wise affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alternation or addition to the terms of the contract or to the work or to the specifications.

**PROVIDED, FURTHER**, that no final settlement between the OWNER and the PRINCIPAL shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.



**IN WITNESS WHEREOF**, this instrument is executed in two (2) counterparts, each of which shall be deemed an original, this the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_

**ATTEST:**

\_\_\_\_\_  
Principal

\_\_\_\_\_  
(Principal) Secretary

**(SEAL)**

By: \_\_\_\_\_ (s)

\_\_\_\_\_  
(Address)

\_\_\_\_\_

\_\_\_\_\_  
Witness as to Principal

\_\_\_\_\_  
(Address)

\_\_\_\_\_

**ATTEST:**

\_\_\_\_\_  
Surety

\_\_\_\_\_  
(Surety) Secretary

**(SEAL)**

By: \_\_\_\_\_  
Attorney-in-Fact

\_\_\_\_\_  
Witness as to Surety

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
**NOTE:** Date of the Bond must not be prior to date of Contract. If Contractor is Partnership, all partners should execute the bond.

**IMPORTANT:** Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State of Tennessee where the project is located.

**PERFORMANCE BOND**

**KNOW ALL MEN BY THESE PRESENTS:** that

\_\_\_\_\_ (Name of Contractor)

\_\_\_\_\_ (Address of Contractor)

a \_\_\_\_\_, hereinafter called  
(Corporation, Partnership, or Individual)

PRINCIPAL, and \_\_\_\_\_ (Name of Surety)

\_\_\_\_\_ (Address of Surety)

hereinafter called SURETY, are held and firmly bound unto

The County of Robertson (Springfield, TN)

523 Brown Street, Springfield, Tennessee 37172

hereinafter called OWNER, in the penal sum of \_\_\_\_\_

\_\_\_\_\_ Dollars, \$ ( \_\_\_\_\_ ) in lawful money of

the United States, for the payment of which sum well and truly to be made, we bind

ourselves, successors, and assigns, jointly and severally, firmly by these presents.

**THE CONDITION OF THIS OBLIGATION** is such that whereas, the PRINCIPAL entered into a certain contract with the OWNER, dated the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, a copy of which is hereto attached and made a part hereof for the construction of: Archives Building Reroof Project.

**NOW, THEREFORE,** if the PRINCIPAL shall well, truly and faithfully perform its duties, all the undertaking, covenants, terms, conditions, and agreements of said contract during the original term thereof, and extensions thereof which may be granted by the OWNER, with or without notice to the SURETY and during the one year guaranty period, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

**PROVIDED, FURTHER,** that the said SURETY, for value received hereby stipulates and agrees that no change, extension of time, alternation or addition of the terms of the contract or to work to be performed thereunder or the specifications accompanying the same shall in any wise affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the work or to the specifications.

**PROVIDED, FURTHER,** that no final settlement between the OWNER and the PRINCIPAL shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

**IN WITNESS WHEREOF**, this instrument is executed in three (3) counterparts, each one of which shall be deemed an original, this \_\_\_ day of \_\_\_\_\_, 20\_\_.

**ATTEST:**

\_\_\_\_\_  
Principal

\_\_\_\_\_  
(Principal) Secretary

**(SEAL)**

By: \_\_\_\_\_ (s)

\_\_\_\_\_  
(Address)

\_\_\_\_\_

\_\_\_\_\_  
Witness as to Principal

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(Address)

\_\_\_\_\_

**ATTEST:**

\_\_\_\_\_  
Surety

\_\_\_\_\_  
(Surety) Secretary

**(SEAL)**

\_\_\_\_\_  
Witness to Surety

By: \_\_\_\_\_  
Attorney-in-Fact

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(Address)

\_\_\_\_\_

\_\_\_\_\_

**NOTE:** Date of bond must not be prior to date of Contract. If Contractor is Partnership, all partners should execute bond.

**IMPORTANT:** Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State of Tennessee where the project is located.

**NOTICE OF AWARD**

To: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

PROJECT Description:

Archives Building Reroof Project, The OWNER has considered the BID submitted by you for the above described WORK in response to its Advertisement for Bids dated \_\_\_\_\_, 20\_\_\_\_, and Information for Bidders. You are hereby notified that your BID has been accepted for the work in the amount of \$ \_\_\_\_\_.

You are required by the Information for Bidders to execute the Agreement and furnish the required Contractor’s Performance Bond and Payment Bond within ten (10) calendar days from the date of this Notice to you.

If you fail to execute said Agreement and to furnish said bonds within ten (10) days from the date of this Notice, said OWNER will be entitled to consider all your rights arising out of the OWNER’S acceptance of your BID as abandoned and as a forfeiture of your Bid Bond. The OWNER will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the OWNER.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_

Archives Building Reroof Project

Owner

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

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



**ACCEPTANCE OF NOTICE**

Receipt of the NOTICE OF AWARD is hereby acknowledged by \_\_\_\_\_  
\_\_\_\_\_, this the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_

Archives Building Reroof Project

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

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

Contractor should send one completed copy of this form to:

Ms. Cheryl Moon  
Purchasing Officer  
Robertson County  
523 South Brown Street  
Springfield, TN 37172

**NOTICE TO PROCEED**

To: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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

Project: Archives Building Reroof Project

You are hereby notified to commence work in accordance with the Agreement dated \_\_\_\_\_, 20\_\_\_\_, on or before \_\_\_\_\_, and you are to complete all WORK within 90 consecutive calendar days thereafter and further agrees to complete all work which requires shut-down of normal operation of the Incline within 7 calendar days. The shut-down period must occur within the dates between February 29th to March 6th or April 25th to May 5th.

The County of Robertson (Springfield, TN)  
Owner

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

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

**ACCEPTANCE OF NOTICE**

Receipt of the NOTICE TO PROCEED is hereby acknowledged by \_\_\_\_\_  
\_\_\_\_\_, this the \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_\_.

Archives Building Reroof Project

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

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

Contractor should send one completed copy of this form to:

Ms. Cheryl Moon  
Purchasing Officer  
Robertson County  
523 South Brown Street  
Springfield, TN 37172

**CHANGE ORDER**

Order No. \_\_\_\_\_

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

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

NAME OF PROJECT: Archives Building Reroof Project

OWNER: The County of Robertson (Springfield, TN)

CONTRACTOR: \_\_\_\_\_

The following changes are hereby made to the CONTRACT DOCUMENTS:

Justification:

Change to CONTRACT PRICE: \$ \_\_\_\_\_

Original CONTRACT PRICE: \$ \_\_\_\_\_

Current CONTRACT PRICE adjusted by previous CHANGE ORDER: \$ \_\_\_\_\_

The CONTRACT PRICE due to this CHANGE ORDER will be (increased) by: \$ \_\_\_\_\_

The CONTRACT PRICE including this CHANGE ORDER will be: \$ \_\_\_\_\_

Change to CONTRACT TIME:

The CONTRACT TIME will be (increased) (decreased) by \_\_\_\_\_ calendar days.

The date for completion of all work will be \_\_\_\_\_ (Date). Sketch should accompany Change Order when necessary for clarification.

Approvals Required:

To be effective this Order must be approved by the owner if it changes the scope or objective of the project, or if it will increase the budgeted amounts of funds needed to complete the project, or as may otherwise be required by the SUPPLEMENTAL GENERAL CONDITIONS.

Requested by: County of Robertson (Springfield, TN)

Recommended by: CSR Engineering, Inc.

Ordered by: County of Robertson (Springfield, TN)

Accepted by: (Contractor)

Federal Agency Approval (where applicable): \_\_\_\_\_

## **GENERAL CONDITIONS**

1. Definitions
2. Additional Instructions and Detail Drawings
3. Schedules, Reports and Records
4. Drawings and Specifications
5. Shop Drawings
6. Materials, Services and Facilities
7. Inspection and Testing
8. Substitutions
9. Patents
10. Surveys, Permits, Regulations
11. Protection of Work, Property, Persons
12. Supervision by Contractor
13. Changes in Quantities, Plans or Character of the Work
14. Extra Work
15. Time for Completion and Liquidated Damages
16. Correction of Work
17. Suspension of Work, Termination and Delay
18. Payments to Contractor
19. Acceptance of Final Payment as Release
20. Contract Security
21. Assignments

22. Separate Contracts

23. Subcontracting

24. Engineer's Authority

25. Land and Rights-of-Way

26. Guarantee

## 1. DEFINITIONS

- 1.1 Wherever used in the CONTRACT DOCUMENTS, the following terms shall have the meanings indicated which shall be applicable to both the singular and plural thereof:
- 1.2 **ADDENDA** – Written or graphic instruments issued prior to the execution of the Agreement which modify or interpret the CONTRACT DOCUMENTS, DRAWINGS, and SPECIFICATIONS, by additions, deletions, clarifications or corrections.
- 1.3 **BID** – The offer or proposal of the BIDDER submitted on the prescribed form setting forth the prices for the WORK to be performed.
- 1.4 **BIDDER** – Any person, firm or corporation submitting a BID for the WORK.
- 1.5 **BONDS** – Bid, Performance, and Payment Bonds and other instruments of security, furnished by the CONTRACTOR and his SURETY in accordance with the CONTRACT DOCUMENTS.
- 1.6 **GENERAL CONTRACT PROVISIONS** – Modifications to the General Conditions required by OWNER and/or a Federal Agency for participation in the Project.
- 1.7 **SPECIAL CONTRACT PROVISIONS** – Additional Modifications to the General Conditions and/or the OWNER General Contract Provisions required by OWNER and/or Federal Agency for participation in the Project.
- 1.8 **CHANGE ORDER** – A written order to the CONTRACTOR authorizing an addition, deletion or revision in the WORK within the general scope of the CONTRACT DOCUMENTS, or authorizing an adjustment in the CONTRACT PRICE or CONTRACT TIME.
- 1.9 **CONTRACT DOCUMENTS** – The contract, including Advertisement For Bids, Information For Bidders, BID, Bid Bond, Agreement, Payment Bond, Performance Bond, NOTICE OF AWARD, NOTICE TO PROCEED, CHANGE ORDER, DRAWINGS, SPECIFICATIONS, GENERAL PROVISIONS, SUPPLEMENTAL GENERAL CONDITIONS AND OWNER’S GENERAL AND SPECIAL CONTRACT PROVISIONS and ADDENDA.
- 1.10 **CONTRACT ITEM (PAY ITEM)** – A specifically described unit of work for which a price is provided in the CONTRACT DOCUMENTS.
- 1.11 **CONTRACT TIME** – The number of calendar days stated in the CONTRACT DOCUMENTS for the completion of the WORK.



- 1.13 **CONTRACTOR** – The person, firm or corporation with whom the OWNER has executed the Agreement.
- 1.14 **DRAWINGS** – The part of the CONTRACT DOCUMENTS which show the characteristics and scope of the WORK to be performed and which have been prepared or approved by the ENGINEER.
- 1.15 **ENGINEER** – The person, firm or corporation named as such in the CONTRACT DOCUMENTS.
- 1.16 **FIELD ORDER** – A written order effecting a change in the WORK not involving an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, issued by the ENGINEER to the CONTRACTOR during construction.
- 1.17 **NOTICE OF AWARD** – The written notice of the acceptance of the BID from the OWNER to the successful BIDDER.
- 1.18 **NOTICE TO PROCEED** – Written communication issued by the OWNER to the CONTRACTOR authorizing him to proceed with the WORK and establishing the date of commencement of the WORK.
- 1.19 **OWNER** – A public or quasi-public body or authority, corporation, association, partnership, or individual for whom the WORK is to be performed.
- 1.20 **PROJECT** – The undertaking to be performed as provided in the CONTRACT DOCUMENTS.
- 1.21 **RESIDENT PROJECT REPRESENTATIVE** – Authorized representative of the OWNER who is assigned to the PROJECT site or any part thereof.
- 1.22 **SHOP DRAWINGS** – All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the CONTRACTOR, a SUBCONTRACTOR, manufacturer, SUPPLIER or distributor, which illustrate how specific portions of the WORK shall be fabricated or installed.
- 1.23 **SUBCONTRACTOR** – An individual, firm or corporation having a direct contract with the CONTRACTOR or with any other SUBCONTRACTOR for the performance of a part of the WORK at the site.
- 1.25 **SUBSTANTIAL COMPLETION** – That date as certified by the ENGINEER when the construction of the PROJECT is sufficiently completed, in accordance with the CONTRACT

DOCUMENTS, so that the PROJECT can be utilized for the purposes for which it is intended.

- 1.26 **SUPERINTENDENT** – The CONTRACTOR’S authorized representative in responsible charge of the work.
- 1.27 **SUPPLIERS** – Any person, supplier or organization who supplies materials or equipment for the WORK, including that fabricated to a special design, but who does not perform labor at the site.
- 1.28 **WORK** – All labor necessary to produce the construction required by the CONTRACT DOCUMENTS, and all materials and equipment incorporated in the PROJECT.
- 1.29 **WRITTEN NOTICE** – Any notice to any part of the Agreement relative to any part of this Agreement in writing and considered delivered and the service thereof completed, when posted by certified or registered mail to the said party at his last given address, or delivered in person to said party or his authorized representative on the WORK.

## **2. ADDITIONAL INSTRUCTIONS AND DETAIL DRAWINGS**

- 2.1 The CONTRACTOR may be furnished additional instructions and detail drawings, by the ENGINEER, as necessary to carry out the WORK required by the **CONTRACT DOCUMENTS**.
- 2.2 The additional drawings and instruction thus supplied will become a part of the CONTRACT DOCUMENTS. The CONTRACTOR shall carry out the WORK in accordance with the additional detail drawings and instructions.

## **3. SCHEDULES, REPORTS AND RECORDS**

- 3.1 The CONTRACTOR shall submit to the OWNER such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data as the OWNER may request concerning WORK performed or to be performed.
- 3.2 Within 10 days after receipt of the NOTICE OF AWARD, the CONTRACTOR shall submit schedules showing the order in which he proposes to carry on the WORK, including dates at which he will start the various parts of the WORK, estimated date of completion of each part, and, as applicable:

- 3.2.1 The dates at which special detail drawings will be required, and
- 3.2.2 The respective dates for submission of SHOP DRAWINGS, the beginning of manufacture, the testing and the installation of materials, supplies and equipment.
- 3.3 The CONTRACTOR shall also submit a schedule of payments that he anticipates he will earn during the course of the WORK when requested by the OWNER.
- 3.4 If the **CONTRACTOR'S** operations are materially affected by changes in the plan or in the amount of the work or if he has failed to comply with submitted progress schedule, the **CONTRACTOR** shall submit a revised project schedule, if requested by the **ENGINEER**, which schedule will show how he proposes to prosecute the balance of the work. The **CONTRACTOR** shall incorporate into every progress schedule submitted, any contract requirements regarding the order of performance of portions of the work. The **CONTRACTOR** shall use all practical means to make the progress of the work conform to that shown on the progress schedule which is in effect. No payment will be made to the **CONTRACTOR** while he is delinquent in the submission of a progress schedule. Should the prosecution of the work, for any reason, be discontinued, the CONTRACTOR shall notify the ENGINEER at least 24 hours in advance of resuming operations.

#### **4. DRAWINGS AND SPECIFICATIONS**

- 4.1 The intent of the DRAWINGS and SPECIFICATIONS is that the **CONTRACTOR** shall furnish all labor, materials, tools, equipment, and transportation necessary for the proper execution of the WORK in accordance with the CONTRACT DOCUMENTS and all incidental work necessary to complete the PROJECT in an acceptable manner, ready for use, occupancy or operation by the OWNER.
- 4.2 In case of conflict between the DRAWINGS and SPECIFICATIONS, the SPECIFICATIONS shall govern. Figure dimensions on DRAWINGS shall govern over scale dimensions, and detailed DRAWINGS shall govern over general DRAWINGS.
- 4.3 Any discrepancies found between the DRAWINGS and SPECIFICATIONS and site conditions or any inconsistencies or ambiguities in the DRAWINGS or SPECIFICATIONS shall be immediately reported to the ENGINEER, in writing, who shall promptly correct such inconsistencies or ambiguities in writing. WORK done by the CONTRACTOR after his

discovery of such discrepancies, inconsistencies or ambiguities shall be done at the CONTRACTOR'S risk.

## **5. SHOP DRAWINGS**

- 5.1 The CONTRACTOR shall prepare and submit SHOP DRAWINGS as may be necessary for the prosecution of the WORK as required by the CONTRACT DOCUMENTS, showing all details of fabrication for all parts of the structure. The ENGINEER shall promptly review all SHOP DRAWINGS. The ENGINEER'S review and acceptance of any SHOP DRAWINGS shall not release the CONTRACTOR from responsibility for deviations from the CONTRACT DOCUMENTS and shall require a CHANGE ORDER.
- 5.2 When submitted for the ENGINEER'S review, SHOP DRAWINGS shall bear the CONTRACTOR'S certification that he has reviewed, checked and approved the SHOP DRAWINGS and that they are in conformance with the requirements of the CONTRACT DOCUMENTS.
- 5.3 SHOP DRAWINGS prepared by the CONTRACTOR and accepted by the ENGINEER shall be deemed the correct interpretation of the work to be done, but they do not relieve the CONTRACTOR of the responsibility for the accuracy of details and dimensions. Fabrication tolerances shall be shown on the shop drawings. Where necessary to assure proper fit-up members, closer tolerances than those required herein shall be shown.
- 5.4 Portions of the WORK requiring a SHOP DRAWING or sample submission shall not begin until the SHOP DRAWING or submission has been approved by the ENGINEER. A copy of each approved SHOP DRAWING and each approved sample shall be kept in good order by the CONTRACTOR at the site and shall be available to the ENGINEER.

## **6. MATERIALS, SERVICES AND FACILITIES**

- 6.1 It is understood that, except as otherwise specifically stated in the CONTRACT DOCUMENTS, the CONTRACTOR shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, supervision, temporary construction of

any nature, and all other services and facilities of any nature whatsoever necessary to execute, complete, and deliver the WORK within the specified time.

- 6.2 Materials and equipment shall be so stored as to insure the preservation of their quality and fitness for the WORK. Stored materials and equipment to be incorporated in the WORK shall be located so as to facilitate prompt inspection.
- 6.3 Manufactured articles, materials and equipment shall be applied, installed, connected, erected, used, cleaned and continued as directed by the manufacture.
- 6.4 Materials, supplies and equipment shall be in accordance with samples submitted by the CONTRACTOR and approved by the ENGINEER.
- 6.5 Materials, supplies or equipment to be incorporated into the WORK shall not be purchased by the CONTRACTOR or the SUBCONTRACTOR subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.

## **7. INSPECTION AND TESTING**

- 7.1 All materials and equipment used in the construction of the PROJECT shall be subject to adequate inspection and testing in accordance with generally accepted standards.
- 7.2 The CONTRACTOR shall provide at his expense the necessary testing and inspection services required by the CONTRACT DOCUMENTS, unless otherwise provided.
- 7.3 The ENGINEER shall provide all other inspection and testing services not required by the CONTRACT DOCUMENTS. Any damage to existing facilities will be the responsibility of the CONTRACTOR and the CONTRACTOR shall reimburse the OWNER prior to final payment.
- 7.4 If the CONTRACT DOCUMENTS, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require and WORK to specifically be inspected, tested, or approved by someone other than the CONTRACTOR, the CONTRACTOR will give the ENGINEER timely notice of readiness. The CONTRACTOR will then furnish the ENGINEER the required certificates of inspection, testing or approval.

- 7.5 Neither observations by the ENGINEER nor inspections, test or approvals by persons other than the CONTRACTOR shall relieve the CONTRACTOR from his obligations to perform the WORK in accordance with the requirements of the CONTRACT DOCUMENTS.
- 7.6 The ENGINEER and his representatives will at all times have access to the WORK. In addition, authorized representatives and agents of any participating Federal or State agency shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records. The CONTRACTOR will provide proper facilities for such access and observation of the WORK and also for any inspection, or testing thereof.
- 7.7 If any WORK is covered contrary to the written request of the ENGINEER it must, if requested by the ENGINEER, be uncovered for his observation and replaced at the CONTRACTOR'S expense.
- 7.8 If any WORK has been covered which the ENGINEER has not specifically requested to observe prior to its being covered, or if the ENGINEER considers it necessary or advisable that covered WORK be inspected or tested by others, the CONTRACTOR at the ENGINEER'S request, will uncover, expose or otherwise make available for observation, inspection or testing as the ENGINEER may require, that portion of the WORK in question, furnishing all necessary labor, materials, tools, and equipment. If it is found that such WORK is defective, the CONTRACTOR will bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction. If, however, such WORK is not found to be defective, the CONTRACTOR will be allowed an increase in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction and an appropriate CHANGE ORDER shall be issued.

## **8. SUBSTITUTIONS**

- 8.1 Whenever a material, article or piece of equipment is identified on the DRAWINGS or SPECIFICATIONS by reference to brand name or catalogue number, it shall be understood that this is referenced for the purpose of defining the performance or other salient

requirements and that other products of equal capacities, quality and function shall be considered. The CONTRACTOR may recommend the substitution of a material, article, or piece of equipment or equal substance and function for those referred to in the CONTRACT DOCUMENTS by reference to brand name or catalogue number, and if, in the opinion of the ENGINEER, such material, article, or piece of equipment is of equal substance and function to the specified, the ENGINEER may approve, with the OWNER'S approval, its substitution and use by the CONTRACTOR. Any cost differential shall be deductible from the CONTRACT PRICE and the CONTRACT DOCUMENTS shall be appropriately modified by CHANGE ORDER. The CONTRACTOR warrants that if substitutes are approved, no major changes in the function or general design of the PROJECT will result. Incidental changes or extra component parts required to accommodate the substitution will be made by the CONTRACTOR without a change in the CONTRACT PRICE or CONTRACT TIME.

## **9. PATENTS**

9.1 The CONTRACTOR shall pay all applicable royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and save the OWNER harmless from loss on account thereof, except that the OWNER shall be responsible for any such loss when a particular process, design, or the product of a particular manufacturer or manufacturers is specified, but if the CONTRACTOR has reason to believe that the design, process or product specified in an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the ENGINEER.

## **10. SURVEYS, PERMITS, REGULATIONS**

10.1 The OWNER shall furnish all land surveys and establish all base lines for locating the principal component parts of the WORK together with a suitable number of bench marks adjacent to the WORK as shown in the CONTRACT DOCUMENTS. From the information provided by the OWNER, unless otherwise specified in the CONTRACT DOCUMENTS, the CONTRACTOR shall develop and make all detail surveys needed for constructing such as

slope stakes, batter boards, stakes for pile locations and other working points, lines, elevations, and cut sheets.

10.2 The CONTRACTOR shall carefully preserve bench marks, reference points and stakes and, in case of willful or careless destruction, he shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their unnecessary loss or dues.

10.3 Permits and licenses of a temporary nature necessary for the prosecution of the WORK shall be secured and paid for by the CONTRACTOR. Permits, licenses and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the OWNER, unless otherwise specified. The CONTRACTOR shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the WORK as drawn and specified. If the CONTRACTOR observes that the CONTRACT DOCUMENTS are at variance therewith, he shall promptly notify the ENGINEER in writing, and any necessary changes shall be adjusted as provided in Section 13, CHANGES IN THE WORK.

## **11. PROTECTION OF WORK, PROPERTY AND PERSONS**

11.1 The CONTRACTOR will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the WORK. He will take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury or loss to all employees on the WORK and other persons who may be affected thereby, all the WORK and all materials or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including trees, shrubs, laws, walks, pavements, roadways, structures, and utilities not designated for removal, relocation or replacement in the course of construction.

11.2 The CONTRACTOR will comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction. He will erect and maintain, as required by the conditions and progress of the WORK, all necessary safeguards for safety and protection. He will notify owners of adjacent utilities when prosecution of the WORK may



affect them. The CONTRACTOR will remedy all damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by the CONTRACTOR, any SUBCONTRACTOR or anyone directly or indirectly employed by any of them or anyone for whose acts any of them be liable, except damage or loss attributable to the fault of the CONTRACT DOCUMENTS or to the acts or omissions of the OWNER or the ENGINEER or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of the CONTRACTOR.

11.3 In emergencies affecting the safety of persons or the WORK or property at the site or adjacent thereto, the CONTRACTOR, without special instruction or authorization from the ENGINEER or OWNER, shall act to prevent threatened damage, injury or loss. He will give the ENGINEER prompt WRITTEN NOTICE of any significant changes in the WORK or deviations from the CONTRACT DOCUMENTS caused thereby, and a CHANGE ORDER shall thereupon be issued covering the changes and deviations involved.

11.4 Until final acceptance of the project, the CONTRACTOR shall have the charge and care thereof and shall take every precaution against injury or damage to any part thereof by the action of the elements or from any other cause arising from the execution or from the non-execution of the work. The CONTRACTOR shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof except damage to the work due to unforeseeable causes beyond the control of and without the fault or negligence of the CONTRACTOR, including but not limited to acts of God, or the public enemy or governmental authorities.

## **12. SUPERVISION BY CONTRACTOR**

12.1 The CONTRACTOR will supervise and direct the WORK. He will be solely responsible for the means, methods, techniques, sequences and procedures of construction. The CONTRACTOR will employ and maintain on the WORK a qualified supervisor or superintendent who shall have been designated in writing by the CONTRACTOR as the

CONTRACTOR'S representative at the site. The supervisor shall have full authority to act on behalf of the CONTRACTOR and all communications given to the supervisor shall be as binding as if given to the CONTRACTOR. The supervisor shall be present on the site at all times as required to perform adequate supervision and coordination of the WORK.

### **13. CHANGES IN QUANTITIES, PLANS OR CHARACTER OF THE WORK**

13.1 The ENGINEER reserves the right to make, by CHANGE ORDER, at any time during the work, such changes in quantities and such alterations in the work as are necessary to satisfactorily complete the project. Such changes in quantities and alternations shall not invalidate the contract nor release the surety, and by signing a CHANGE ORDER, the CONTRACTOR agrees to perform the work as altered and agrees to accept, as payment in full for such work, the monetary amounts set forth in such CHANGE ORDER, as balanced by the ENGINEER. In addition, by signing the CHANGE ORDER, the CONTRACTOR releases the OWNER from any and all claims for compensation with regard to the items of work specified in the CHANGE ORDER, including but not limited to, any and all claims for delay and overhead, unless the ENGINEER is notified in writing at the time of signing the CHANGE ORDER that the CONTRACTOR refuses to release the OWNER from such claims. All increases in quantities which appear in the CONTRACT as PAY ITEMS shall be paid for at the contract unit prices. Decreases in quantities shall be deducted from the contract at the contract unit price.

13.1a If the alterations or changes in quantities significantly change the character of the work under the Contract, whether or not changed by any such different quantities or alterations, an adjustment will be made to the contract. The basis for the adjustment shall be agreed upon prior to the performance of the work. If the alterations or changes in quantities do not significantly change the character of the work to be performed under the contract, the altered work will be paid for on the basis of the actual quantity completed at the unit price for such named in the Contract. The term "significant change" shall be construed to apply only to the following circumstances:

1. When the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction or
2. When an item or work, whose total cost is determined by multiplying the contract quantity by the contract unit price and is greater than 5 percent of the original contract price, is increased in excess of 125 percent or decreased below 75 percent of the original contract quantity. Any allowance for an increase in quantity shall apply only to that portion in excess of 125 percent of original contract item quantity, or in case of a decrease below 75 percent, to the actual amount of work performed, or
3. When such changes or alterations are sufficient in magnitude to affect the unit cost by 10 percent or more, considering all of the estimated quantity used for bidding purposes, or considering the altered portion of the item, the change in cost shall equal 25,000 dollars or more whichever is the lesser.

13.1b During the progress of the work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the contract or if unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the contract, are encountered at the site, the party discovering such conditions shall promptly notify the other party in writing of the specific differing conditions before they are disturbed and before the affected work is performed. Upon written notification, the ENGINEER will investigate the conditions, and if the ENGINEER determines that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the CONTRACT, an adjustment will be made and the CONTRACT modified in writing accordingly. The ENGINEER will notify the CONTRACTOR of the determination whether or not an adjustment of the CONTRACT is warranted.

No contract adjustment which results in a benefit to the CONTRACTOR will be allowed unless the CONTRACTOR has provided the required written notice.

No contract adjustment will be allowed under this clause for any effects caused on unchanged work.

No contract adjustment will be allowed unless such changes or alterations are sufficient in magnitude to affect the unit cost by 10 percent or more, considering all of the estimated quantity used for bidding purposes, or considering the altered portion of the item, the change in cost shall equal 25,000 dollars or more, whichever is lesser.

In no event shall a differing site condition invalidate the contract or release Surety.

#### **14. EXTRA WORK**

14.1 In connection with the work covered by the contract, the ENGINEER may, at any time during the progress of the work, order extra work, including materials incidental thereto. The CONTRACTOR shall perform this work whenever it is deemed necessary by the ENGINEER to fully complete the project as contemplated, and such work shall be done in accordance with the intent of the SPECIFICATIONS under the direction of the ENGINEER. Prior to ordering any extra work, the ENGINEER shall furnish written notification stating the location, kind and estimated quantity of the extra work to be done. The CONTRACTOR shall indicate in writing to the Engineer the compensation (unit price or lump sum) for which the extra work will be performed. This proposal shall be submitted to the ENGINEER for approval. If the ENGINEER considers the unit price or lump sum price excessive, the proposal may be disapproved and the work ordered done by force account in accordance with Subsection 14.2.

14.2 When extra work is required, it shall be performed in accordance with the requirements and provisions of Subsection 14.1. Payment for such work will be on the unit price or lump sum basis agreed upon in accordance with Subsection 14.1. When such agreement cannot be reached, the ENGINEER may order such work, including any off-site work, to be done by force account. The compensation as herein provided shall be accepted by the CONTRACTOR as payment in full for extra work done by force account, and the said percentages shall cover profit, superintendence, general expense, overhead, miscellaneous tools and equipment. For approved subcontract work, the CONTRACTOR will be paid an amount equal to 6 percent of the total cost of the subcontract work, as reimbursement for administrative costs incurred in connection with the subcontract work.

When it is necessary for the CONTRACTOR to hire a firm to perform a specialized type of work or service for which the CONTRACTOR or SUBCONTRACTORS are not qualified to do, payment will be made at the invoice cost. The CONTRACTOR will be paid an amount equal to 6 percent of invoice cost, as reimbursement for administrative costs. Prior approval by the ENGINEER is required.

- 14.2a The CONTRACTOR shall furnish to the ENGINEER, itemized reports of the costs of all force account work. The reports shall be furnished each week and shall include a certified copy of the weekly payroll and copies of bills for the materials used and the freight charges paid on same. Discount for prompt payment or penalty for late payment will not be considered in determining the net amount of the bill. The net amount of the bill shall be charged to the force account work. Where materials used are not specifically purchased for use on extra work but are taken from the CONTRACTOR'S stock, the CONTRACTOR shall submit a certification of the quantity, price, and freight on such materials in lieu of original bills and invoices.

The CONTRACTOR shall prepare itemized statements containing the following detailed information:

- Name, class, dates, number of hours worked each day, total hours computed to nearest half hour, rate, and extension for each laborer and foreman engaged.
- Designation, number of hours computed to nearest half hour worked each day, total hours and rental rate for each unit of equipment engaged.
- Quantities of materials and prices.
- Freight on materials.

The CONTRACTOR and the ENGINEER shall compare records of force account work and bring them into agreement at the end of each day.

- 14.2b For all labor and all craft foremen directly engaged in the specific work, the CONTRACTOR shall be paid the actual rate of wages and the number of hours paid said labor and foremen in accordance with approved labor agreements, computed to the nearest half hour, to which the sum of 26 percent will be added. Project Foremen will be classified as

Superintendents and their compensation will not be included in the payment provided herein.

Bond premium; Workmen's Compensation Insurance; Personal Injury Public Liability and Property Damage Public Liability Insurance; Unemployment Compensation; Federal Social Security; and payments required to be made to Employer and Employee Trusteships, the proceeds from which accrue exclusively to the benefit of the employee; will be paid for at actual cost, to which sum 20 percent will be added to the taxable fringe benefits. The CONTRACTOR shall furnish satisfactory evidence of the amounts paid for each of these required costs as related to force account work.

- 14.2c For materials, the CONTRACTOR will receive the actual cost delivered on the work including freight charges, as shown by copies of bills, to which the sum of 20 percent will be added.

If a change in the amount or type of force account work results in a surplus of the material ordered and delivered to the project site, the OWNER will reimburse the CONTRACTOR for the costs incurred returning the surplus material to the supplier.

- 14.2d No payment will be allowed for small hand and power tools which are not listed in the Rental Rate Blue Book for Construction Equipment as published by the Equipment Guide-Book Company. All small hand and power tools listed in the Rental Rate Blue Book at a rate of less than one dollar per hour will be considered as part of overhead and will not be paid for separately.

- 14.2e For any machinery and equipment, including the foreman's transportation unit, which the ENGINEER approves for use on extra work done by force account, the CONTRACTOR will be paid as follows:

The time paid for shall be the period that the equipment is required at the site of the extra work and, in addition, shall include traveling time to the location of the extra work when the equipment is moved under its own power, the actual operating time during periods of loading and unloading will be paid at the regular rental rate and transportation costs will be allowed. When the periods of work are not consecutive and the interval between termination of a period of work and the commencement of the subsequent

period does not exceed 30 days, the rates allowed will be the same as if the periods of work were consecutive.

The rental rate established for each piece of CONTRACTOR owned equipment, including appurtenances and attachments to equipment, used will be determined by use of the Rental Rate Blue Book for Construction Equipment Volume 1, 2, or 3 as applicable; the edition which is current at the time the force account work was started will apply. The established rental rate will be equal to the "Monthly" rate divided by 176; modified by the rate adjustment factor and the applicable map adjustment factor, plus the "Estimated Operating Costs per Hour", to which the sum of 10 percent will be added.

For equipment not listed in the Rental Rate Blue Book, Volume 1, 2, or 3, the rental rate will be determined by using the rate listed for a similar piece of equipment or by proportioning a rate listed so that the capacity, size, horsepower, and age are properly considered.

For equipment for which there are no comparable in the Rental Rate Blue Book, Volume 1, 2, or 3, the monthly rate shall be reasonable, but not more than 5 percent of the current list price, or invoice, of the equipment. The base hourly rate shall then be determined by dividing the monthly rate by 176 to which the sum of 20 percent will be added. The 20 percent includes adjustments and operating costs.

The rental rate for the foreman's transportation unit will be 7 dollars per hour, to which the sum of 20 percent will be added.

When leased or rented equipment is used on force account work, the hourly rate used in computation of payment will be the leased or rented rate, except that if the leased or rented rate exceeds the rental rate established by the Rental Rate Blue Book, the established rate determined from the Blue Book will apply. In either case, the Estimated Operating Cost per Hour will be added to the appropriate hourly rate to which the sum of 10 percent will be added.

In all cases the "Estimated Operating Cost per Hour" includes all fuel, oil, lubricants, tires, parts, and other operating expendables such as truck and labor assigned to the truck for servicing the equipment.

The rental rates allowed herein include the cost of insurance covering usual insurable risks, including fire and theft. The OWNER will not be liable for losses which can be covered by insurance.

In no instance, however, will the OWNER pay, on a total project basis, equipment costs in excess of the equipment's original invoice cost plus any documented improvements to the piece of equipment. The CONTRACTOR shall furnish to the ENGINEER either original bills and invoices or a certification documenting the equipment's original invoice price plus improvements in any instance which equipment costs are being sought under this Subsection for a period in excess of 30 days.

## **15. TIME FOR COMPLETION AND LIQUIDATED DAMAGES**

- 15.1 The date of beginning and the time for completion of the work are essential conditions of the CONTRACT DOCUMENTS and the WORK embraced shall be commenced on a date specified in the NOTICE TO PROCEED.
- 15.2 The CONTRACTOR will proceed with the WORK at such rate of progress to insure full completion within the CONTRACT TIME. The CONTRACTOR shall have completed the work on or before the calendar date specified in the CONTRACT DOCUMENTS, or on or before a later date as extended by CHANGE ORDER. It is expressly understood and agreed, by and between the CONTRACTOR and the OWNER, that the CONTRACT TIME for the completion of the WORK described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the WORK.
- 15.3 If the CONTRACTOR finds it impossible for reasons beyond his control to complete the WORK by the date as specified in the CONTRACT DOCUMENTS or as extended by CHANGE ORDER, he may make a written request to the ENGINEER for an extension of time setting forth therein the reasons he believes will justify the granting of his request. Requests for extensions of time shall be filed in writing by the CONTRACTOR with the ENGINEER. The CONTRACTOR'S plea that insufficient time was specified is not a valid reason for extension of time. If the OWNER and ENGINEER find that the WORK was delayed because of



conditions beyond the control and without the fault of the CONTRACTOR, the OWNER may extend the time for completion in such amount as the conditions justify. An appropriate CHANGE ORDER will be issued for the granting of any time extensions and the extended time for completion shall then be in full force and effect the same as though it were the original time for completion.

15.4 Delays caused by weather or season conditions should be anticipated and will be considered as the basis for an extension of time only when the actual number of work days lost exceeds the number of workdays lost each month due to inclement weather as determined by the following schedule:

<b>MONTH</b>	<b>NUMBER OF WORK DAYS LOST DUE TO WEATHER</b>
January	9
February	8
March	8
April	8
May	5
June	5
July	4
August	4
September	5
October	6
November	6
December	8

A work day will be counted as lost if the CONTRACTOR'S efficiency is reduced by more than 50 percent on the critical item under construction at that time. Weekends and Holidays will not be counted as lost work days.

- 15.5 If the CONTRACTOR shall fail to complete the WORK within the CONTRACT TIME, or extension of time granted through CHANGE ORDER by the OWNER, then the CONTRACTOR will pay to the OWNER the amount for liquidated damages as specified in the BID for each calendar day that the CONTRACTOR shall be in default after the time stipulated in the CONTRACT DOCUMENTS.
- 15.5.1 If the CONTRACTOR fails to complete the work within the CONTRACT TIME or extension of time granted by CHANGE ORDER, the OWNER, if satisfied that the CONTRACTOR is carrying the work forward with reasonable progress, may allow him to continue in control of the work. It shall be necessary for the CONTRACTOR to make written application to the OWNER to warrant such continuance. Payments to the CONTRACTOR for work performed and material furnished will be made.
- 15.5.2 For each calendar day that the CONTRACTOR shall be in default after the time stipulated in the CONTRACT DOCUMENTS, the amount for liquidated damages as specified in the BID will be deducted from any money due to the CONTRACTOR; provided, however, that the due amount shall be taken of any adjustment of completion dates granted.
- 15.5.3 Permitting the CONTRACTOR to continue and furnish WORK or any part of it after the date or dates of completion fixed for its completion or after which the date or dates to which completion may have been extended will in no way operate as a waiver on the part of the OWNER of any of its rights under the CONTRACT.
- 15.6 The CONTRACTOR shall not be charged with liquidated damages or any excess cost when the delay in completion of the WORK is due to the following, and the CONTRACTOR has promptly given WRITTEN NOTICE of such delay to the OWNER or ENGINEER.
- 15.6.1 To any preference, priority or allocation order duly issued by the OWNER.
- 15.6.2 To unforeseeable causes beyond the control and without the fault or negligence of the CONTRACTOR, including but not restricted to, acts of God, or of the public enemy, acts of the OWNER, acts of another CONTRACTOR in the performance of a contract with the OWNER, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and abnormal and unforeseeable weather as defined in Section 15.4; and

15.6.3 To any delays of SUBCONTRACTORS occasioned by any of the causes specified in paragraphs 15.4.1 and 15.4.2 of this article.

## **16. CORRECTION OF WORK**

16.1 The CONTRACTOR shall promptly remove from the premises all WORK rejected by the ENGINEER for failure to comply with the CONTRACT DOCUMENTS, whether incorporated in the construction or not, and the CONTRACTOR shall promptly replace and re-execute the WORK in accordance with the CONTRACT DOCUMENTS and without expense to the OWNER and shall bear the expense of making good all WORK of other CONTRACTORS destroyed or damaged by such removal or replacement.

16.2 All removal and replacement WORK shall be done at the CONTRACTOR'S expense. If the CONTRACTOR does not take action to remove such rejected WORK within ten (10) days after receipt of WRITTEN NOTICE, the OWNER may remove such WORK and store the materials at the expense of the CONTRACTOR.

## **17. SUSPENSION OF WORK, TERMINATED AND DELAY**

17.1 The OWNER may at any time and without cause, suspend the WORK or any portion thereof for a period of not more than ninety (90) days of such further time as agrees upon by the CONTRACTOR, by WRITTEN NOTICE to the CONTRACTOR and the ENGINEER which notice shall fix the date on which WORK shall be resumed. The CONTRACTOR will resume that WORK on the date so fixed. The CONTRACTOR will be allowed an increase in the CONTRACT PRICE or an extension of the CONTRACT RIME, or both, directly attributable to any suspension.

17.2 If the CONTRACTOR is adjudged as bankrupt or insolvent, or if he makes a general assignment for the benefit of his creditors, or if a trustee or receiver is appointed for the CONTRACTOR or for any of his property, or if he files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or if he repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment, or if he repeatedly fails to make prompt payments to SUBCONTRACTORS or for labor, materials or

equipment or if he disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction the WORK or if he disregards the authority of the ENGINEER, or if he otherwise violates any provision of the CONTRACT DOCUMENTS, then the OWNER may, without prejudice to any other right or remedy and after giving the CONTRACTOR and his SURETY a minimum of ten (10) days from delivery of a WRITTEN NOTICE, terminate the services of the CONTRACTOR and take possession of the PROJECT and of all materials, equipment, tools, construction equipment and machinery thereon owned by the CONTRACTOR, and finish the WORK by whatever method he may deem expedient. In such case the 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 and indirect costs of completing the PROJECT, including compensation for additional professional services, such excess shall be paid to the CONTRACTOR. If such costs exceed such unpaid balance, the CONTRACTOR will pay the difference to the OWNER. Such costs incurred by the OWNER will be determined by the ENGINEER and incorporated in a CHANGE ORDER.

17.3 Where the CONTRACTOR'S services have been so terminated by the OWNER, said termination shall not affect any right of the OWNER against the CONTRACTOR then existing or which may thereafter accrue. Any retention or payment of monies by the OWNER due the CONTRACTOR will not release the CONTRACTOR from compliance with the CONTRACT DOCUMENTS.

17.4 Upon delivery of a WRITTEN NOTICE to the CONTRACTOR and the ENGINEER, the OWNER may, without cause and without prejudice to any other right or remedy, elect to abandon the PROJECT and terminate the contract. In such case, the CONTRACTOR shall be paid for all WORK executed and any expense sustained plus a prorated share of their profit based on an independent audit of their records. The OWNER shall select and pay the auditor and all parties shall make their records available.

17.5 If, through no act or fault of the CONTRACTOR, the WORK is suspended for a period of more than ninety (90) days by the OWNER or under an order of court or other public authority, or the ENGINEER fails to act on any request for payment within thirty (30) days

after it is submitted, or the OWNER fails to pay the CONTRACTOR substantially the sum approved by the ENGINEER or awarded by the arbitrators within sixty (60) days of its approval and presentation, then the CONTRACTOR may, after ten (10) days from delivery of a WRITTEN NOTICE to the OWNER and the ENGINEER, terminate the CONTRACT and recover from the OWNER payment for all work executed and all expenses sustained. In addition and in lieu of terminating the CONTRACT, if the ENGINEER has failed to act on a request for payment or if the OWNER has failed to make any payment as aforesaid, the CONTRACTOR may upon ten (10) days notice to the OWNER and the ENGINEER stop the work until he has been paid all amounts then due, in which event and upon resumption of the WORK, CHANGE ORDERS shall be issued for adjusting the CONTRACT PRICE or extending the CONTRACT TIME or both to compensate for the costs and delays attributable to the stoppage of WORK.

- 17.6 If the performance of all or any portion of the WORK is suspended, delayed, or interrupted as a result of a failure of the OWNER or ENGINEER to act within the time specified in the CONTRACT DOCUMENTS, or if no time is specified, within a reasonable time, an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, or both, shall be made by CHANGE ORDER to compensate the CONTRACTOR for the costs and delays necessary caused by the failure of the OWNER or ENGINEER.

## **18. PAYMENTS TO CONTRACTOR**

- 18.1 At least ten (10) days before each progress payment falls due (but not more often than once a month), the CONTRACTOR will submit to the ENGINEER a partial payment estimate filled out and signed by the CONTRACTOR covering the WORK performed during the period covered by the partial payment estimate and supported by such data as the ENGINEER may reasonably require. If payment is requested on the basis of materials and equipment not incorporated in the WORK but delivered and suitably stored at or near the site, the partial payment estimate shall also be accompanied by such supporting data, satisfactory to the OWNER, as will establish the OWNER'S title to the material and equipment and protect his interest therein, including applicable insurance. The ENGINEER

will, within ten (10) days after receipt of each partial payment estimate either indicate in writing his approval of payment and present the partial payment estimate to the OWNER, or return the partial payment estimate to the CONTRACTOR indicating in writing his reasons for refusing to approve payment. In the latter case, the CONTRACTOR may make the necessary corrections and resubmit the partial payment estimate. The OWNER will, within thirty (30) days of presentation to him of an approved partial payment estimate, pay the CONTRACTOR a progress payment on the basis of the approved partial payment estimated. The OWNER shall retain ten percent (10%) of the amount of each payment until final completion and acceptance of all WORK covered by the CONTRACT DOCUMENTS. The OWNER at any time, however, after fifty percent (50%) of the WORK has been completed, if he finds that satisfactory progress is being made, shall reduce retainage to five percent (5%) on the current and remaining estimates. On completion and acceptance of a part of the WORK on which the price is stated separately in the CONTRACT DOCUMENTS, payment may be made in full, including retained percentages, less authorized deductions.

18.2 The request for payment may also include an allowance for the cost of such major materials and equipment which are suitably stored either at or near the site. This shall be verified by paid invoices.

18.3 Payment for materials stored offsite will be allowed in the following manner:

- Receipted bills or paid invoices must be presented with the partial pay estimate.
- Certificates of compliance with the specifications and plan details shall be provided with each pay estimate for the material which is paid for.
- Off-site storage area shall be identified and accessible for inspection.
- The price allowed for the stored materials shall not exceed 80% of the price of the delivered materials.
- Payment for unpaid bills will be limited to 40% of the total cost of the material. Upon proof of payment to the supplier for the materials, an additional 40% shall be paid. When the partial payment is made for the materials, such materials shall become the property of the OWNER but this does not relieve the CONTRACTOR of the

responsibility for any loss or damage to such materials until they are incorporated into the work and the work is accepted.

- 18.4 All WORK covered by partial payment made shall thereupon become the sole property of the OWNER, but this provision shall not be construed as relieving the CONTRACTOR of the sole responsibility for the care and protection of the WORK upon which payments have been made or the restoration of any damaged WORK, or as a waiver of the right of the OWNER to require the fulfillment of all terms of the CONTRACT DOCUMENTS.
- 18.5 Upon completion and acceptance of the WORK, the ENGINEER shall issue a certificate attached to the final payment request that the WORK has been accepted by him under the conditions of the CONTRACT DOCUMENTS. The entire balance found to be due the CONTRACTOR, including the retained percentages, but except such sums as may be lawfully retained by the OWNER, shall be paid to the CONTRACTOR within thirty (30) days of completion and acceptance of the WORK.
- 18.6 The CONTRACTOR will indemnify and save the OWNER or the OWNER'S agents harmless from all claims growing out of the lawful demands of SUBCONTRACTORS, laborers, workmen, mechanics, material men, and furnishes or machinery and parts thereof, equipment, tools, and all supplies, incurred in the furtherance of the performance of the WORK. The CONTRACTOR shall, at the OWNER'S request, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged, or waived. If the CONTRACTOR fails to do so the OWNER may, after having notified the CONTRACTOR, either pay unpaid bills or withhold from the CONTRACTOR'S unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the CONTRACTOR shall be resumed, in accordance with the terms of the CONTRACT DOCUMENTS, but in no event shall the provisions of this sentence be construed to impose any obligations upon the OWNER to either the CONTRACTOR, his SURETY, or any third party. In paying an unpaid bill of the CONTRACTOR, any payment so made by the OWNER shall be considered as a payment

made under the CONTRACT DOCUMENTS by the OWNER to the CONTRACTOR and the OWNER shall not be liable to the CONTRACTOR for any such payments made in good faith.

18.7 Sales tax on all material shall be paid for by the Contractor. The cost of the tax shall be passed on to OWNER in the appropriate bid items. No separate compensation or waiver will be given for sales tax on this project.

## **19. ACCEPTANCE OF FINAL PAYMENT AS RELEASE**

19.1 The acceptance by the CONTRACTOR of final payment shall be and shall operate as a release to the OWNER of all claims and all liability to the CONTRACTOR other than claims in stated amounts as may be specifically excepted by the CONTRACTOR for all things done or furnished in connection with this WORK and for every act and neglect of the OWNER and others relating to or arising out of this WORK. Any payment, however, final or otherwise, shall not release the CONTRACTOR or his sureties from any obligations under the CONTRACT DOCUMENTS or the Performance Bond and Payment Bonds.

## **20. CONTRACT SECURITY**

20.1 The CONTRACTOR shall within ten (10) days after the receipt of the NOTICE OF AWARD furnish the OWNERS with a Performance Bond and a Labor and Material Payment Bond in penal sums equal to the amount of the CONTRACT PRICE, conditioned upon the performance by the CONTRACTOR of all undertakings, covenants, terms, conditions and agreements of the CONTRACT DOCUMENTS, and upon the prompt payment by the CONTRACTOR to all persons supplying labor and materials in the prosecution of the WORK provided by the CONTRACT DOCUMENTS. Such BONDS shall be executed by the CONTRACTOR and a corporate bonding company licensed to transact such business in the State of Tennessee in which the WORK is to be performed and named on the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Treasury Department Circular Number 570. The expense of these BONDS shall be borne by the CONTRACTOR. If at any time a surety on any such BOND is declared a bankrupt or loses its right to do business in the State of Tennessee in which the WORK is to be performed or is removed



from the list of Surety Companies accepted on Federal Bonds, CONTRACTOR shall within ten (10) days after notice from the OWNER to do so, substitute an acceptable BOND (or BONDS) in such form and sum and signed by such other surety or sureties as may be satisfactory to the OWNER. The premiums of such BOND shall be paid by the CONTRACTOR. No further payments shall be deemed due not shall be made until the new surety or sureties shall have furnished an acceptable BOND to the OWNER.

## **21. ASSIGNMENTS**

21.1 Neither the CONTRACTOR nor the OWNER shall sell, transfer, assign or otherwise dispose of the Contract or any portion thereof, or of his right, title or interest therein, or his obligations thereunder, without written consent of the other party.

## **22. SEPARATE CONTRACTS**

22.1 The OWNER reserves the right to let other contracts in connection with this PROJECT. The CONTRACTOR shall afford other CONTRACTORS reasonable opportunity for the introduction and storage of their materials and the execution of their WORK, and shall properly connect and coordinate his WORK with theirs. If the proper execution or results of any part of the CONTRACTOR'S WORK depends upon the WORK with theirs. If the proper execution or results of any part of the CONTRACTOR'S WORK depends upon the WORK of any other CONTRACTOR, the CONTRACTOR shall inspect and promptly report to the ENGINEER any defects in such WORK that render it unsuitable for such proper execution and results.

22.2 The OWNER may perform additional WORK related to the PROJECT by himself, or he may let other contracts containing provisions similar to these. The CONTRACTOR will afford the other CONTRACTORS who are parties to such Contracts (or the OWNER, if he is performing the additional WORK himself), reasonable opportunity for the introduction and storage of materials and equipment and the execution of WORK, and shall properly connect and coordinate his WORK with theirs.

22.3 If the performance of additional WORK by other CONTRACTORS or the OWNERS is not noted in the CONTRACT DOCUMENTS prior to the execution of the CONTRACT, written

notice thereof shall be given to the CONTRACTOR prior to starting any such additional WORK. If the CONTRACTOR believes that the performance of such additional WORK by the OWNER or others involves him in additional expense or entitles him to an extension of the CONTRACT TIME, he may make a claim therefore as provided in Sections 14 and 15.

### **23. SUBCONTRACTING**

23.1 The CONTRACTOR may utilize the services of specialty SUBCONTRACTORS on those parts of the WORK which, under normal contracting practices, are performed by specialty CONTRACTORS.

23.2 The CONTRACTOR shall not award WORK to SUBCONTRACTOR(S), in excess of fifty percent (50%) of the CONTRACT PRICE, without prior written approval of the OWNER. Assignment of any portion of the work by subcontract must be approved in advance by the OWNER.

23.3 The CONTRACTOR shall be fully responsible to the OWNER for the acts and omissions of his SUBCONTRACTORS, and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.

23.4 The CONTRACTOR shall cause appropriate provisions to be inserted in all subcontracts relative to the WORK to bind SUBCONTRACTORS to the CONTRACTOR by the terms of the CONTRACT DOCUMENTS insofar as applicable to the WORK of SUBCONTRACTORS and to give the CONTRACTOR the same power as regards terminating any subcontract that the OWNER may exercise over the CONTRACTOR under any provision of the CONTRACT DOCUMENTS.

23.5 Nothing contained in this CONTRACT shall create any contractual relation between any SUBCONTRACTOR and the OWNER.

### **24. ENGINEER'S AUTHORITY**

24.1 The ENGINEER shall act as the OWNER'S representative during the construction period. He shall decide questions which may arise as to quality and acceptability of materials furnished and WORK performed. He shall interpret the intent of the CONTRACT

DOCUMENTS in a fair and unbiased manner. The ENGINEER will make visits to the site and determine if the WORK is proceeding in accordance with the CONTRACT DOCUMENTS.

24.2 The CONTRACTOR will be held strictly to the intent of the CONTRACT DOCUMENTS in regard to the quality of materials, workmanship and execution of the WORK. Inspection may be made at the factory or fabrication plant of the source of material supply.

24.3 The ENGINEER will not be responsible for the construction means, controls, techniques, sequences, procedures, or construction safety.

24.4 The ENGINEER shall promptly make decisions relative to interpretation of the CONTRACT DOCUMENTS.

## **25. LAND AND RIGHTS-OF-WAYS**

25.1 Prior to insurance of NOTICE TO PROCEED, the OWNER shall obtain all land and rights-of-way necessary for carrying out and for the completion of the WORK to be performed pursuant to the CONTRACT DOCUMENTS, unless otherwise mutually agreed.

25.2 The OWNER shall provide to the CONTRACTOR information which delineates and describes the lands owned and rights-of-way acquired.

25.3 The CONTRACTOR shall provide at his own expense and without liability to the OWNER any additional land and access thereto that the CONTRACTOR may desire for temporary construction facilities, or for storage of materials.

## **26. GUARANTEE**

26.1 The CONTRACTOR shall guarantee all materials and equipment furnished and WORK performed for a period of one (1) year from the date of SUBSTANTIAL COMPLETION. The CONTRACTOR warrants and guarantees for a period of one (1) year from the date of SUBSTANTIAL COMPLETION of the system that the completed system is free from all defects due to faulty materials or workmanship and the CONTRACTOR shall promptly make such corrections as may be necessary by reason of such defects including the repairs of any damage to other parts of the system resulting from such defects. The OWNER will

give notice of observed defects with reasonable promptness. In the event that the CONTRACTOR shall fail to make such repairs, adjustments, or other WORK that may be made necessary by such defects, the OWNER may do so and charge the CONTRACTOR the cost thereby incurred. The Performance Bond shall remain in full force and effect through the guarantee period.

26.2 Nothing in the above intends or implies that this guarantee shall apply to work which has been abused or neglected by the OWNER.

## SUPPLEMENTAL GENERAL CONDITIONS

### 1. CONTRACT CHANGES

Any proposed change in this contract shall be submitted to the County of Robertson (Springfield, TN) for its prior approval.

### 2. GOVERNMENT INSPECTION

The government shall have access to the site of construction and shall have the right to inspect all project works.

### ~~3. WAGE RATES~~

~~Minimum wages to be paid on the construction project have been established by the U.S. Department of Labor and are shown on pages D1-4 to D1-5. These wage rates must be prominently posted at the construction site by the CONTRACTOR.~~

### 4. NOTICE TO ROBERTSON COUNTY OF LABOR DISPUTES

Whenever the contractor has knowledge that any actual or potential labor dispute is delaying or threatens to delay the timely performance of this contract, the contractor shall immediately give notice thereof, including all relevant information with respect thereto, to THE COUNTY.

### 5. DISPUTES CLAUSE

~~a) All disputes concerning the payment of prevailing wage rates or classifications shall be promptly reported to ROBERTSON COUNTY for its referral to U.S. Department of Transportation (DOT) for decision or, at the option of ROBERTSON COUNTY, DOT referral to the Secretary of Labor. The decision of DOT or the Secretary of Labor as the case may be, shall be final.~~

~~b) All questions relating to the application or interpretation of the Copeland Act, the Contract Work Hours Standards Act, the Davis-Bacon Act, or Section 13 of the Act shall be sent to FTA for referral to the Secretary of Labor for ruling or interpretation, and such ruling or interpretation shall be final.~~

### 6. CONVICT LABOR

In connection with the performance of work under this contract the contractor agrees not to employ any person undergoing sentence of imprisonment at hard labor. This does not include convicts who are on parole or probation.

## 7. OWNERSHIP OF DOCUMENTS

ROBERTSON COUNTY will retain ownership of all plans, specifications, and related documents.

## 8. PROTEST PROCEDURES

Protests concerning these instructions, the contract requirements, the specifications, the bidding procedures or the contract award, or any other request for explanation or clarification shall be submitted in writing and will include the following information:

1. The name of the protester;
2. The name and telephone number of the protester's contract person having responsibility; and
3. A complete statement of the ground of the protest with full documentation of the protester's claim.

Protests regarding the bid documents, specifications, instructions, or bidding procedure must be received by ROBERTSON COUNTY not less than ten (10) working days before the scheduled bid opening. Protest involving the award of the bid must be received by ROBERTSON COUNTY no later than five (5) working days after notification of the award of the bid.

## 9. REQUESTS

Requests for approved equals, clarification of specifications and protest of specifications must be received by ROBERTSON COUNTY, in writing, not less than ten (10) days before the scheduled bid opening. Any request for an approved equal or protest of the specifications must be fully supported with all necessary technical data, test results, or other pertinent information. ROBERTSON COUNTY's replies to requests will be postmarked at least five (5) days before the scheduled bid opening. The supplier must demonstrate the equality of his product to ROBERTSON COUNTY in order that ROBERTSON COUNTY may determine whether the supplier's product is or is not equal to that specified.

# DETAILED SPECIFICATIONS

## STANDING-SEAM METAL ROOF PANELS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes standing-seam metal roof panels.
- B. Related Sections:
  - 1. Section 074293 "Soffit Panels" for metal panels used in horizontal soffit applications.
  - 2. Section 077253 "Snow Guards" for prefabricated devices designed to hold snow on the roof surface, allowing it to melt and drain off slowly.

#### 1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Archives Building Reroof Project Site, Springfield, TN.
  - 1. Meet with Owner, Engineer, Owner's insurer if applicable, metal panel Installer, metal panel manufacturer's representative, structural-support Installer, and installers whose work interfaces with or affects metal panels, including installers of roof accessories and roof-mounted equipment.
  - 2. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
  - 3. Review methods and procedures related to metal panel installation, including manufacturer's written instructions.
  - 4. Examine support conditions for compliance with requirements, including alignment between and attachment to structural members.
  - 5. Review structural loading limitations of purlins and rafters during and after roofing.
  - 6. Review flashings, special details, drainage, penetrations, equipment curbs, and condition of other construction that affect metal panels.
  - 7. Review governing regulations and requirements for insurance, certificates, and tests and inspections if applicable.
  - 8. Review temporary protection requirements for metal panel systems during and after installation.

9. Review procedures for repair of metal panels damaged after installation.
10. Document proceedings, including corrective measures and actions required, and furnish copy of record to each participant.

#### 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
  1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of panel and accessory.
- B. Sustainable Design Submittals:
  1. Product Test Reports: For roof materials, documentation indicating that roof materials comply with Solar Reflectance Index requirements.
  2. Product Data: For recycled content, indicating postconsumer and preconsumer recycled content and cost.
- C. Shop Drawings:
  1. Include fabrication and installation layouts of metal panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details.
  2. Accessories: Include details of the flashing, trim, and anchorage systems, at a scale of not less than **3 inches per 12 inches (1:5)**.
- D. Calculations:
  1. Include calculations with registered engineer seal, verifying roof panel and attachment method to resist wind pressures imposed on it pursuant to applicable building codes. Alternatively, may submit manufacturer's testing results and recommended installation tables revealing project conditions and required specification loading vs. proposed product are in compliance and acceptable.
- E. Samples for Initial Selection: For each type of metal panel indicated with factory-applied color finishes.
  1. Include similar Samples of trim and accessories involving color selection.
- F. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below.
  1. Metal Panels: **12 inches** long by actual panel width. Include clips, fasteners, closures, and other metal panel accessories.

#### 1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Manufacturer and Installer.



- B. Product Test Reports: For each product, for tests performed by a qualified testing agency.
- C. Field quality-control reports.
- D. Sample Warranties: For special warranties.

#### 1.6 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For metal panels to include in maintenance manuals.

#### 1.7 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in structural sheet metal products.
- B. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

#### 1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver components, metal panels, and other manufactured items so as not to be damaged or deformed. Package metal panels for protection during transportation and handling.
- B. Unload, store, and erect metal panels in a manner to prevent bending, warping, twisting, and surface damage.
- C. Stack metal panels horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal panels to ensure dryness, with positive slope for drainage of water. Do not store metal panels in contact with other materials that might cause staining, denting, or other surface damage.
- D. Retain strippable protective covering on metal panels until installation. Remove as panels are being installed. Verify film is not left on installed panels.

#### 1.9 FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of metal panels to be performed according to manufacturers' written instructions and warranty requirements.

#### 1.10 COORDINATION

- A. Coordinate sizes and locations of roof curbs, equipment supports, and roof penetrations with actual equipment provided.

- B. Coordinate metal panel installation with rain drainage work, flashing, trim, construction of soffits, and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

#### 1.11 WARRANTY

- A. Special Galvalume Substrate Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of metal panel systems that fail in materials or workmanship within specified warranty period.

- 1. Failures include, but are not limited to, the following:
  - a. Structural failures including rupturing, or perforating.
  - b. Deterioration of metals and other materials beyond normal weathering.
- 2. Warranty Period: 20 years and 6 months from date of Substantial Completion.

- B. Special Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal panels that show 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 D 2244.
  - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
  - c. Cracking, chipping, peeling, or failure of paint to adhere to bare metal.
- 2. Finish Warranty Period: 20 years from date of Substantial Completion.

- C. Special Watertightness Warranty: Manufacturer's **standard form** in which manufacturer agrees to repair or replace standing-seam metal roof panel assemblies that fail to remain watertight, including leaks, within specified warranty period.

- 1. Warranty Period: **20** years from date of Substantial Completion.
- 2. Shop drawings must be provided to, reviewed, and approved by panel manufacturer prior to panel system installation.
- 3. Inspections by panel system manufacturer technical representative are required. Perform first inspection when underlayment and flashing are in place and second inspection when the roof is complete.

- D. Special Installer Warranty: Furnish a written warranty signed by the Panel Applicator guaranteeing materials and workmanship for watertightness of the roofing system, flashings, penetrations, and against all leaks.

- 1. Warranty Period: One year from date of Substantial Completion, covered by the contract required performance bond dated accordingly.

## PART 2 - PRODUCTS

### 2.1 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Provide metal panel systems capable of withstanding the effects of the following loads, based on testing according to **ASTM E 1592 or UL 580**:

All loading per 2012 International Building Code

1. Ultimate Design Wind Speed of 115mph for Risk Category II Buildings.
  2. Roof live load: Uniform load of 20psf, Concentrated load of 300 lbs.
  3. Ground snow load of 10psf.
  4. Seismic and other misc. loading per 2012 IBC.
  5. Deflection Limits: Per Table 1604.3 deflection is limited as follows:
    - a. Live Load =  $L/180$
    - b. Snow or Wind =  $L/180$
    - c. Dead + Live =  $L/120$
- B. Air Infiltration: Air leakage of not more than **0.06 cfm/sq. ft.** when tested according to ASTM E 1680 and ASTM E 283 at the following test-pressure difference:
1. Test-Pressure Difference: **6.24 lbf/sq. ft.**
- C. Water Penetration under Static Pressure: No water penetration when tested according to ASTM E 1646 and ASTM E 331 at the following test-pressure difference:
1. Test-Pressure Difference: **15 lbf/sq. ft.**
- D. Wind-Uplift Resistance: Provide metal roof panel assemblies that comply with UL 580 for wind-uplift-resistance class indicated.
1. Uplift Rating: UL 90.
- E. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
1. Temperature Change (Range): **120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces**

## 2.2 STANDING-SEAM METAL ROOF PANELS

- A. General: Provide factory-formed metal roof panels designed to be installed by lapping and interconnecting raised side edges of adjacent panels with joint type indicated and mechanically attaching panels to supports using concealed clips in side laps. Include clips, cleats, pressure plates, and accessories required for weathertight installation.
  - 1. Steel Panel Systems: Unless more stringent requirements are indicated, comply with ASTM E 1514.
  - 2. Aluminum Panel Systems: Unless more stringent requirements are indicated, comply with ASTM E 1637.
  
- B. Vertical-Rib, Seam Cap Seamed Joint, Standing-Seam Metal Roof Panels: Formed with vertical ribs at panel edges and a flat pan between ribs; designed for sequential installation by mechanically attaching panels to supports using concealed clips located under one side of the panels, aligning vertical ribs and seaming on seam cap.
  - 1. Basis-of-Design Product: Subject to compliance with requirements
  - 2. Metallic-Coated Steel Sheet: Aluminum-zinc alloy-coated steel sheet complying with ASTM A 792/A 792M, **Class AZ50** coating designation; structural quality. Prepainted by the coil-coating process to comply with ASTM A 755/A 755M.
    - a. Nominal Thickness: in accordance with loading requirements and manufacturer's tested recommendations
    - b. Surface: Smooth, flat finish.
    - c. Length: Full length of roof slope, without lapped horizontal joints.
    - d. Painted materials shall have a removable plastic film to protect the paint during roll forming, shipping and handling.
    - e. Color: to match existing roof structure color, sample must be submitted and approved by Owner and may be chosen from manufacturer's full range.
  - 3. Aluminum Sheet: Coil-coated sheet, **ASTM B 209**, 3105 alloy with H14 temper as required to suit forming operations and structural performance required.
    - a. Thickness: in accordance with loading requirements and manufacturer's tested recommendations
    - b. Surface: Smooth, flat finish.
    - c. Length: Full length of roof slope, without lapped horizontal joints.
    - d. Painted materials shall have a removable plastic film to protect the paint during roll forming, shipping and handling.
    - e. Color: to match existing roof structure color, sample must be submitted and approved by Owner and may be chosen from manufacturer's full range..

## 2.3 UNDERLAYMENT MATERIALS (as abrasive protection between purlins and panels)

- A. Self-Adhering, High-Temperature Underlayment: Provide self-adhering, cold-applied, sheet underlayment, a minimum of **40 mils (1.02 mm)** thick, consisting of slip-

resistant, polyethylene-film top surface laminated to a layer of butyl or SBS-modified asphalt adhesive, with release-paper backing. Provide primer when recommended by underlayment manufacturer.

1. Thermal Stability: Stable after testing at 240 deg F; ASTM D 1970.
  2. Low-Temperature Flexibility: Passes after testing at minus 20 deg F; ASTM D 1970.
- B. Felt Underlayment: ASTM D 226/D 22M, Type II (No. 30), asphalt-saturated organic felts.

## 2.4 MISCELLANEOUS MATERIALS

- A. Miscellaneous Metal Subframing and Furring: ASTM C 645; cold-formed, metallic-coated steel sheet, ASTM A 653/A 653M, G90 coating designation or ASTM A 792/A 792M, Class AZ50 coating designation unless otherwise indicated. Provide manufacturer's standard sections as required for support and alignment of metal panel system.
- B. Panel Accessories: Provide components required for a complete, weathertight panel system including trim, copings, fasciae, mullions, sills, corner units, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal panels unless otherwise indicated.
1. Closures: Provide closures at eaves and ridges, fabricated of same metal as metal panels.
  2. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.
- C. Flashing and Trim: Provide flashing and trim formed from same material as metal panels as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, eaves, rakes, corners, bases, framed openings, ridges, fasciae, and fillers. Finish flashing and trim with same finish system as adjacent metal panels.
- D. Roof Curbs: Fabricated from same material as roof panels, with required nominal thickness; galvalume or stainless steel; supply an integral full-length cricket for curbs wider than 24 inches supported by a structural metal deck. Fabricate curb flashing at same required thickness. On open framing, provide roof underlayment and decking at and about roof curb per roofing manufacturer's requirements. Maintain a minimum of 1/2 of roofing panel width on each side of roof curb, and start panels a minimum of 9 inches up slope of roof curb, flashing roofing panels to roof curb per roofing manufacturer's requirements. Fabricate curb and subframing to withstand indicated loads of size and height of roof top equipment. Where required insulate roof curbs with rigid insulation.
- E. Panel Fasteners: Zinc-coated steel, corrosion resisting steel, zinc cast head, or nylon capped steel, type and size as approved for the applicable loading requirements.

- F. Panel Sealants: Provide sealant type recommended by manufacturer that are compatible with panel materials, are nonstaining, and do not damage panel finish.
  - 1. Joint Sealant: Silicone sealant; of type, grade, class, and use classifications required to seal joints in metal panels and remain weathertight; and as recommended in writing by metal panel manufacturer.

## 2.5 FABRICATION

- A. General: Fabricate and finish metal panels and accessories at the factory, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.
- B. On-Site Fabrication: Subject to compliance with requirements of this Section, metal panels may be fabricated on-site using factory set, non-adjustable, portable roll-forming equipment if panels are of same profile and warranted by manufacturer to be equal to factory-formed panels. Fabricate according to equipment manufacturer's written instructions and to comply with details shown.
- C. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.
- D. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's recommendations and recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated.
  - 1. Form exposed sheet metal accessories that are without excessive oil canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.
  - 2. Sealed Joints: Form nonexpansion, but movable, joints in metal to accommodate sealant and to comply with SMACNA standards.
  - 3. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal recommended in writing by metal panel manufacturer.
    - a. Size: As recommended by SMACNA's "Architectural Sheet Metal Manual" or metal panel manufacturer for application, but not less than thickness of metal being secured.

## 2.6 FINISHES

- A. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- B. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in same piece are unacceptable. Variations in appearance of

other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

C. Steel Panels and Accessories (as applicable):

1. Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat applied by panel manufacturer on a continuous coil coating line, with a top side dry film thickness of  $0.75 \pm 0.05$  mil (0.0013 mm) over  $0.2 \pm 0.05$  mil (0.0013 mm) primer coat, to provide a total dry film thickness of  $0.95 \pm 0.10$  mil (0.024 mm). Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
2. Mica Fluoropolymer: AAMA 621. Two-coat fluoropolymer finish with suspended mica flakes containing not less than 70 percent PVDF resin by weight in color coat applied by panel manufacturer on a continuous coil coating line, with a top side dry film thickness of  $0.75 \pm 0.05$  mil (0.0013 mm) over  $0.2 \pm 0.05$  mil (0.0013 mm) primer coat, to provide a total dry film thickness of  $0.95 \pm 0.10$  mil (0.024 mm). Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
3. Metallic Fluoropolymer: AAMA 621. Two-coat fluoropolymer finish with suspended metallic flakes containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat applied by panel manufacturer on a continuous coil coating line, with a top side dry film thickness of  $0.75 \pm 0.05$  mil (0.0013 mm) over  $0.2 \pm 0.05$  mil (0.0013 mm) primer coat, to provide a total dry film thickness of  $0.95 \pm 0.10$  mil (0.024 mm). Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
4. Concealed Finish: Apply pretreatment and manufacturer's standard white or light-colored acrylic or polyester backer finish consisting of prime coat and wash coat with a minimum total dry film thickness of  $0.35$  mil (0.009 mm).

D. Aluminum Panels and Accessories (as applicable)::

1. Two-Coat Fluoropolymer: AAMA 2605. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat applied by panel manufacturer on a continuous coil coating line, with a top side dry film thickness of  $0.75 \pm 0.05$  mil (0.0013 mm) over  $0.2 \pm 0.05$  mil (0.0013 mm) primer coat, to provide a total dry film thickness of  $0.95 \pm 0.10$  mil (0.024 mm). Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
2. Mica Fluoropolymer: AAMA 2605. Two-coat fluoropolymer finish with suspended mica flakes containing not less than 70 percent PVDF resin by weight in color coat applied by panel manufacturer on a continuous coil coating line, with a top side dry film thickness of  $0.75 \pm 0.05$  mil (0.0013 mm) over  $0.2 \pm 0.05$  mil (0.0013 mm) primer coat, to provide a total dry film thickness of  $0.95 \pm 0.10$  mil (0.024 mm). Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
3. Metallic Fluoropolymer: AAMA 2605. Two-coat fluoropolymer finish with suspended metallic flakes containing not less than 70 percent PVDF resin by weight in both color coat and clear topcoat applied by panel manufacturer on a continuous coil coating line, with a top side dry film thickness of  $0.75 \pm 0.05$  mil

(0.0013 mm) over 0.2± 0.05 mil (0.0013 mm) primer coat, to provide a total dry film thickness of 0.95± 0.10 mil (0.024 mm). Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, metal panel supports, and other conditions affecting performance of the Work.
  - 1. Examine primary and secondary roof framing to verify that rafters, purlins, angles, channels, and other structural panel support members and anchorages have been installed within alignment tolerances required by metal roof panel manufacturer.
  - 2. Examine solid roof sheathing to verify that sheathing joints are supported by framing or blocking and that installation is within flatness tolerances required by metal roof panel manufacturer.
    - a. Verify that air- or water-resistive barriers have been installed over sheathing or backing substrate to prevent air infiltration or water penetration.
- B. Examine roughing-in for components and systems penetrating metal panels to verify actual locations of penetrations relative to seam locations of metal panels before installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Miscellaneous Supports: Install subframing, furring, and other miscellaneous panel support members and anchorages according to ASTM C 754 and metal panel manufacturer's written recommendations.

### 3.3 UNDERLAYMENT INSTALLATION

- A. Self-Adhering Sheet Underlayment: Apply primer if required by manufacturer. Comply with temperature restrictions of underlayment manufacturer for installation. Apply at locations required for abrasive protection, wrinkle free, in shingle fashion to shed water, and with end laps of not less than 6 inches (152 mm) staggered 24 inches (610 mm) between courses. Overlap side edges not less than 36 inches (914.4 mm). [**Extend underlayment into gutter trough.**] Roll laps with roller. Cover underlayment within 14 days or as directed by the underlayment product manufacturer.



1. Verify the abrasive protection and limits (as applicable) required at the following areas and approved by the engineer:
  - a. Roof perimeter
  - b. Valleys.
  - c. Rake edges for a distance
  - d. Hips and ridges
  - e. Roof-to-wall intersections
  - f. Around dormers, chimneys, skylights, and other penetrating elements
- B. Flashings: Install flashings to cover underlayment to comply with requirements specified.

### 3.4 METAL PANEL INSTALLATION

- A. General: Install metal panels according to manufacturer's written instructions in orientation, sizes, and locations indicated. Install panels perpendicular to supports unless otherwise indicated. Anchor metal panels and other components of the Work securely in place, with provisions for thermal and structural movement.
  1. Shim or otherwise plumb substrates receiving metal panels to be level to **1/4 inch in 20 ft.**
  2. Flash and seal metal panels at perimeter of all openings. Do not begin installation until air- or water-resistive barriers and flashings that will be concealed by metal panels are installed.
  3. Locate and space fastenings in uniform vertical and horizontal alignment.
  4. Install flashing and trim as metal panel work proceeds.
  5. Panels should be continuous without end laps.
  6. Align bottoms of metal panels and fasten.
  7. Provide weathertight escutcheons for pipe- and conduit-penetrating panels.
- B. Fasteners:
  1. Steel Panels: Use stainless-steel fasteners for surfaces exposed to the exterior; use galvanized-steel fasteners for surfaces exposed to the interior.
  2. Aluminum Panels: Use stainless-steel fasteners for surfaces exposed to the exterior; use stainless-steel fasteners for surfaces exposed to the interior.
- C. Anchor Clips: Anchor metal roof panels and other components of the Work securely in place, using manufacturer's approved fasteners according to manufacturers' written instructions.
- D. Metal Protection: Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action as recommended in writing by metal panel manufacturer.
- E. Standing-Seam Metal Roof Panel Installation: Fasten metal roof panels to supports with concealed clips at each standing-seam joint at location, spacing, and with fasteners recommended in writing by manufacturer.

1. Install clips to supports with self-tapping fasteners.
  2. Install pressure plates, if required, at locations indicated in manufacturer's written installation instructions.
  3. Seamed Joint: Crimp standing seams with manufacturer-approved, motorized seamer tool so clip, metal roof panel, and factory-applied vinyl weatherseal are completely engaged.
- F. Accessory Installation: Install accessories with positive anchorage to building and weathertight mounting, and provide for thermal expansion. Coordinate installation with flashings and other components.
1. Install components required for a complete metal panel system including trim, copings, corners, seam covers, flashings, sealants, gaskets, fillers, and similar items. Provide types indicated by metal roof panel manufacturers; or, if not indicated, types recommended by metal roof panel manufacturer.
- G. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.
1. Install exposed flashing and trim that is without buckling and tool marks, and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and achieve waterproof and weather-resistant performance.
  2. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim.
- H. Roof Curbs: Install flashing around bases where they meet metal roof panels.
- I. Pipe Flashing: Form flashing around pipe penetration and metal roof panels. Fasten and seal to metal roof panels as recommended by manufacturer.

### 3.5 ERECTION TOLERANCES

- A. Installation Tolerances: Shim and align metal panel units within installed tolerance of **1/4 inch in 20 feet** on slope and location lines as indicated and within **1/8-inch** offset of adjoining faces and of alignment of matching profiles.

### 3.6 FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Engage a factory-authorized service representative to test and inspect metal roof panel installation, including accessories. Report results in writing.
- B. Remove and replace applications of metal roof panels where tests and inspections indicate that they do not comply with specified requirements.

- C. Additional tests and inspections, at Contractor's expense, are performed to determine compliance of replaced or additional work with specified requirements.
- D. Prepare test and inspection reports.

### 3.7 CLEANING AND PROTECTION

- A. Remove temporary protective coverings and strippable films, if any, as metal panels are installed, unless otherwise indicated in manufacturer's written installation instructions. On completion of metal panel installation, clean finished surfaces as recommended by metal panel manufacturer. Maintain in a clean condition during construction.
- B. Replace metal panels that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION

The Garland Company, Inc.

Roof Asset Management Program



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TRANE Robertson County Government 2014

Prepared By  
Mike Ford

Prepared For  
Glen Yearwood

October 20, 2014

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# Facility Summary

Client: TRANE

Facility: Robertson County Government

## Facility Data

Address 1	523 South Brown Street
Address 2	-
City	Springfield
State	Tennessee
ZIP	37172
Type of Facility	Municipal
Contact Person	Joe Fort

## Asset Information

Name	Date Installed	Square Footage	Roof Access
Archives	2000	8,000	Ladder Needed



# Construction Details

Client: TRANE

Facility: Robertson County Government

Roof Section: Archives

## Information

<b>Year Installed</b>	2000	<b>Square Footage</b>	8,000
<b>Slope Dimension</b>	1 1/2:12	<b>Roof Height</b>	Varies
<b>Roof Access</b>	Ladder Needed	<b>System Type</b>	Metal

## Assembly

Roof #	Layer Type	Description	Attachment	R-Value	Insulation Thickness
1	Metal Standing Seam	Galvalume	Mechanically attached	-	-





Roof Section Photo





# Inspection Report

Client: TRANE

Facility: Robertson County Government

Report Date: 10/20/2014

Roof Section: Archives

## Inspection Information

<b>Inspection Date</b>	10/20/2014	<b>Core Data</b>	No
<b>Inspection Type</b>	Visual Inspection	<b>Leakage</b>	Yes
<b>Deck Conditions</b>	Good		

## Flashing Conditions

<b>Perimeter</b>	Poor	<b>Wall</b>	Fair
<b>Projections</b>	Poor	<b>Counterflashing</b>	Poor

## Miscellaneous Details

<b>Reglets</b>	N/A	<b>Debris</b>	No
<b>Control Expansion Joints</b>	N/A	<b>Ponding Water</b>	Minor
<b>Parapet Wall</b>	N/A	<b>Coping Joints</b>	N/A

## Perimeter

<b>Rating</b>	Poor
<b>Condition</b>	The panels are short which causes leaks at the edge of the roof and the rake trim details are also poorly done. The ridge cap changes in design and there doesn't appear to be any head closures. When we went into the attic area you could plainly see daylight pouring into the structure at all locations around the perimeter.

## Field

<b>Rating</b>	Fair
<b>Condition</b>	The field of the roof is in fair to poor shape due to the fact that the panel that was used in considered an "Architectural" panel and not "Structural". This means that it wasn't designed to be used without a deck structure. The panels are spanning 5' when it wasn't design for this purpose. This is why there is a break down in the leg of the standing seam panel.



## Penetrations

**Rating** Poor

**Condition** None of the penetrations were done correctly and the pipes that do penetrate the field of the roof don't have a pipe boot. They are relying on caulk to be the primary waterproofer.

## Drainage

**Rating** Fair

**Condition** For the most part the water flows off of the roof within 24 hours, but there are spots at the high side of the HVAC unit and the projections that hold water.

## Overall

**Rating** Poor

**Condition** Overall the installation details are done so poorly that the best recommendation is to completely replace the roof before important information is destroyed and/or the roof blows off in a heavy wind event. The framing appears to be secured well enough to be re-used, but I will want a structural engineer to sign off on this prior to bidding. The panels that were used are not structural and can't handle the weight load of a grown man walking on the roof. That is why there is buckling and cracking at the leg of the standing seam.

There are steps that could be taken to stop the water entry for the short term, but a plan of action needs to be taken to replace the roof and wall panels.



**Photo 1**

Front view of the Archive Building



**Photo 2**

Overview of the one section of ridge cap that transitions to a head detail



**Photo 3**

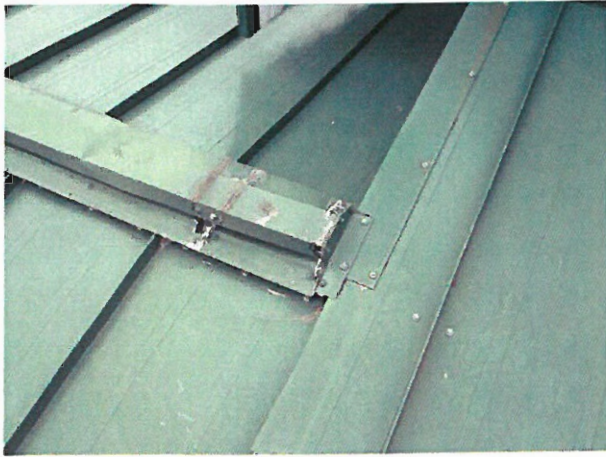
Close up of the ridge cap



**Photo 4**

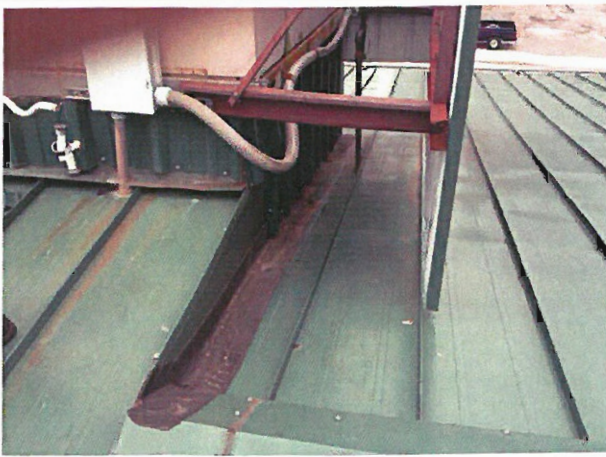
Poor detailing at the ridge cap. None of the panels have correct closures and most appear to be field fabricated out of scrap metal w/ no foam closures





**Photo 5**

Poor detailing at a transitional detail



**Photo 6**

Sloppy flashing on the HVAC unit with pipe boot on either of the two pipe penetrations.



**Photo 7**

Eave metal should overhang into the gutter, but this system is short which puts extra pressure on the screws



**Photo 8**

Second ridge cap detail which is different from the other side of the mechanical unit. This system doesn't have the correct flashing or head closures



**Photo 9**

Fastener back out and lap seam relying on the caulk joint



**Photo 10**

Poor detailing leading to the wall panels





**Photo 11**

For some reason they turned the gutter up the rake trim instead of installing a correct rake detail. The rake trim should have the rake clip, but as it is installed could create a weak point on a heavy wind event



**Photo 12**

Another view of the panels being short at the eave detail



**Photo 13**

Close up of the pipe penetration that doesn't have a pipe boot. These two details are relying on caulk as the water proofing



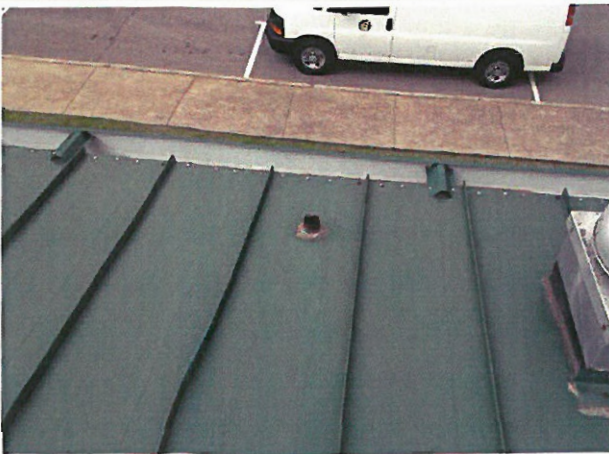
**Photo 14**

Poor flashing detail and relying on an EPDM membrane instead of correct metal trim



**Photo 15**

More poor flashing on the penetrations



**Photo 16**

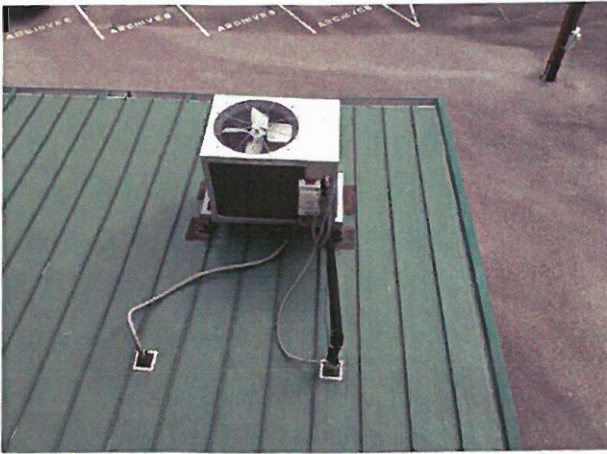
Soil pipe that doesn't have a pipe boot and is relying on caulk as the water proofing





**Photo 17**

More poor flashing on a vent



**Photo 18**

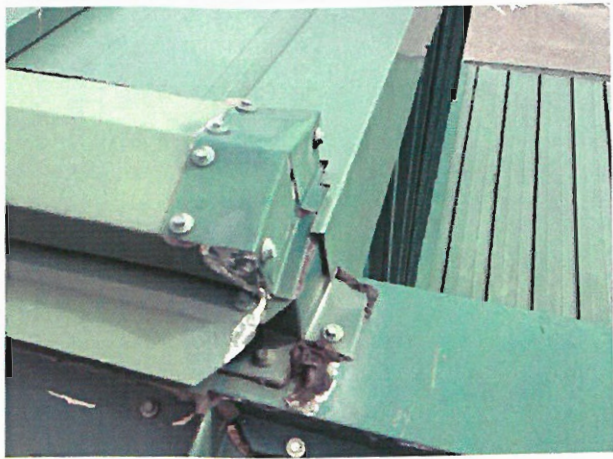
Small mechanical unit with poor flashing details



**Photo 19**

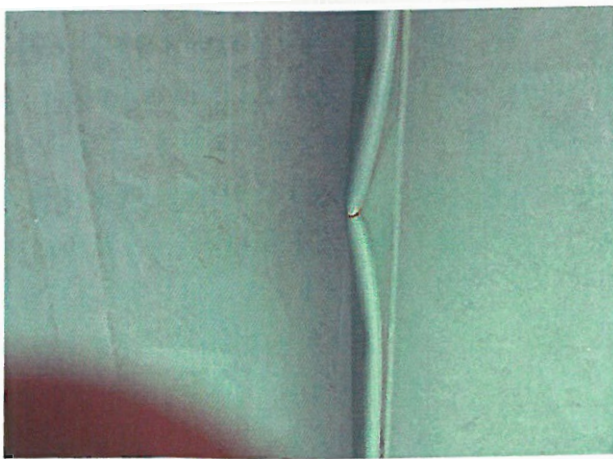
Close up of a head detail that isn't done correctly and is relying on caulk as the primary water proofing





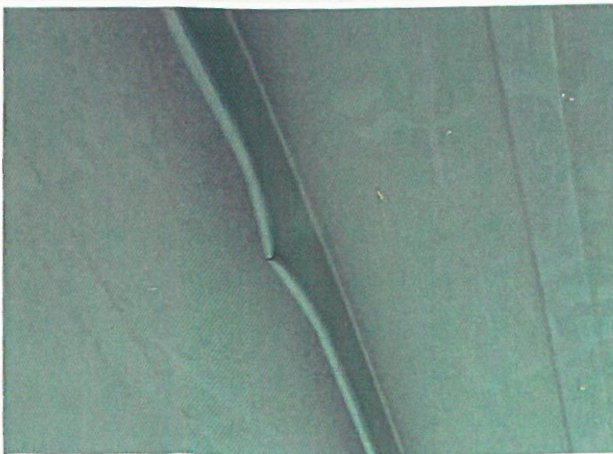
**Photo 20**

Jumbled details at a tough transition detail, poorly done



**Photo 21**

Bend and break in the leg of the standing seam panel. This is due to the wrong panel being installed on the framing system.



**Photo 22**

Another panel that is bent and broken



# Solution Options

Client: TRANE

Facility: Robertson County Government

Roof Section: Archives

## Replace Options

<b>Solution Option:</b>	Replace	<b>Action Year:</b>	2015
<b>Square Footage:</b>	8,000	<b>Expected Life Years:</b>	30

**Scope of Work:** The existing roof doesn't meet any type of acceptable standard or code requirements.

The budget is based on the following scope of work:

- Remove existing roof down to the sub-framing
- Ensure all framing attachments meet code standards
- Install new metal roof that is structural and meets code requirements
- Install all new metal details around projections, rakes, ridge and eaves