

Project Manual and Specifications

Historic Stearns Downtown Revitalization Project – Buildings 1 & 3 Phase I

for the

McCreary County Heritage Foundation, Inc.

Stearns, McCreary County, Kentucky

EDA Project Number: 04-79-07710

September 2025

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SECTION 00020 - INVITATION TO BID

Separate sealed bids for Historic Stearns Downtown Revitalization Project – Buildings 1 & 3 Phase I, will be received by Ray Moncrief, Chairman, McCreary County Heritage Foundation, until 11:00 a.m. EST (local time) on Wednesday, September 24, 2025, and then publicly opened and read aloud at the Big South Fork Railway Depot Lobby, 66 Henderson St., Stearns, KY 42647. If forwarded by courier, the sealed envelope containing the Bid must be enclosed in another envelope addressed to the OWNER at Outdoor Venture Corporation, Attn: Ray Moncrief, 30 Venture Dr., Stearns, KY 42647 and marked “Sealed Bid-Do Not Open”. Mailed bids must be received by 9:00 a.m. local time, September 24, 2025 or they will not be considered. Buildings 1 & 3 will be available for inspection September 15, 2025, between 11:00 a.m. and 3:00 p.m.

The CONTRACT DOCUMENTS may be reviewed at the following locations: MSE Web Site: mselex.com under Bid Opportunities.

All Contract Documents and Addenda will be posted on our web page, mselex.com under Bid Opportunities and will be distributed via email to all plan holders from Lynn Imaging.

Copies of the Contract Documents may be obtained at the office of Lynn Imaging, 328 E. Vine St., Lexington, KY 40507, (859) 226-5850 upon receipt of a check made payable to Lynn Imaging in the amount of \$250.00 (non-refundable). All orders must be prepaid. There will be a 24-hour turn-around on all orders.

Each bidder must deposit with his bid, security in the amount, form, and subject to the conditions provided in the Information for Bidders.

The Owner may consider informal any bid not prepared and submitted in accordance with the provisions of this advertisement and/or the specifications and may waive any informalities or reject any and all Bids. Any proposal received after the time and date specified shall not be considered and will be returned unopened to the proposer. The owner reserves the right to waive any informalities or to reject any or all bids.

Sealed bid should be labeled "Stearns Buildings 1 and 3 Phase I".

This project is funded by an Economic Development Administration (EDA) Grant, EDA AWARD NO. 04-79-07710.

Each Bidder must sign and submit a notarized Campaign Finance Law Compliance Affidavit with his bid.

Davis-Bacon Wage Rates **do** apply to this project.

No Bidder may withdraw his Bid for a period of sixty (60) days after the actual date of the opening thereof.

Award will be made to the lowest responsive, responsible Bidder.

The McCreary County Heritage Foundation is an Equal Opportunity Employer.

End of Section

SECTION 00200 - INFORMATION FOR BIDDERS

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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.

The OWNER may waive any informalities or minor defects or reject any and all Bids. Any Bid may be withdrawn prior to the above scheduled time for the opening of Bids or authorized postponement thereof. Any Bid received after the time and date specified shall not be considered. No BIDDER may withdraw a Bid within sixty (60) days after the actual date of the opening thereof. 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.

BIDDERS must satisfy themselves of the accuracy of the estimated quantities in the Bid Schedule by examination of the site and a review of the drawings and specifications including 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 OWNER shall provide to BIDDERS prior to bidding, all information which is pertinent to, and delineates and describes, the land owned and rights-of-way acquired or to be acquired.

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 the CONTRACTOR from fulfilling any of the conditions of the contract.

Each Bid must be accompanied by a Bid bond payable to the OWNER for five percent of the total amount of the Bid. As soon as the Bid prices have been compared, the OWNER will return the bonds of all except the three lowest responsible BIDDERS. When the Agreement is executed the bonds of the two remaining unsuccessful BIDDERS will be returned. The Bid Bond of the successful BIDDER will be retained until the Payment Bond and Performance Bond have been executed and approved, after which it will be returned. A certified check may be used in lieu of a Bid Bond. Bid must be accompanied by a notarized Campaign Finance Law Compliance

Affidavit and a non-collusion affidavit.

A Performance Bond and a Payment Bond each in the amount of 100 percent of the Contract Price, with a corporate surety approved by the OWNER, will be required for the faithful performance of the contract.

Attorneys-in-fact who sign Bid Bonds or Payment Bonds and Performance Bonds must file with each Bond a certified and effective dated copy of their power of attorney.

The party to whom the contract is awarded will be required to execute the Agreement and obtain the Performance Bond and 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 Bond forms. In case of failure of the BIDDER to execute the Agreement, the OWNER may 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, 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 the 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 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 or within the period mutually agreed upon, the CONTRACTOR may terminate the Agreement without further liability on the part of either party.

The OWNER may make such investigations as deemed necessary to determine the ability of the BIDDER to perform the Work, and the BIDDER shall furnish to the OWNER all such information and data for this purpose as the OWNER may request. 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 therein.

A conditional or qualified Bid will not be accepted.

All applicable laws, ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the PROJECT shall apply to the contract throughout.

Each BIDDER is responsible for inspecting the site and for reading and being thoroughly

familiar with the Contract Documents. The failure or omission of any BIDDER to do any of the foregoing shall in no way relieve any BIDDER from any obligation in respect to its Bid.

The low BIDDER shall supply the names and addresses of major material suppliers and subcontractors when required to do so by the OWNER.

This project will be partially funded with Federal funds from the United State Department of Commerce, Economic Development Administration and therefore is subject to the Federal laws and regulations associated with that program.

End of Section

SECTION 00310 - BID SCHEDULE

Proposal of _____ (hereinafter called "BIDDER"), organized and existing under the laws of the State of _____ doing business as _____ *

to the McCreary County Heritage Foundation, Inc. (hereinafter called "OWNER").

In compliance with your Advertisement for Bids, BIDDER hereby proposes to perform all WORK for the Historic Stearns Downtown Revitalization Project – Buildings 1 & 3 Phase I in strict accordance with the Contract Documents, within the time set forth and the prices stated below.

By submission of this BID, each BIDDER certifies, and in the case of a joint BID, each party thereto certifies as to its 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 complete the Project within two hundred, forty (240) consecutive calendar days following the Notice to Proceed. BIDDER further agrees to pay as liquidated damages, the sum of \$500.00 for each consecutive calendar day thereafter as provided in the General Conditions and the Special Conditions.

BIDDER agrees to perform all the WORK described in the CONTRACT DOCUMENTS for the lump sum contained in the following Bid Schedule.

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

Item	Description	Unit	Cost of Item
1.	Architectural	LS	\$ _____
2.	Mechanical/Electrical	LS	\$ _____
3.	Structural	LS	\$ _____
4.	Asbestos Removal/Abatement Allowance. See Section 00900. Any part of the allowance not used will be credited back to the Owner.	LS	\$ _____ 52,000
5.	All Other Miscellaneous Costs	LS	\$ _____
TOTAL COST OF ITEMS 1 - 5			\$ _____

The bid prices shall include all labor, materials, overhead, profit, insurance, and other costs necessary to install the finished work of the several items called for. Changes shall be processed in accordance with the General Conditions. Contract will be awarded based on the total cost of items 1-5.

This is an invitation for offer to bid, not an offer to enter into a contract.

Accompanying this Proposal is a certified check or standard Bid Bond in the sum of _____ Dollars (\$ _____), in accordance with the Information for Bidders. The BIDDER, by submittal of this Bid, agrees with the OWNER that the amount of the bid security deposited with this Bid fairly and reasonably represents the amount of damages the OWNER will suffer due to the failure of the BIDDER to fulfill his agreements as provided in this Proposal.

Addenda to the Drawings and Specifications issued heretofore are hereby acknowledged by the undersigned as being:

No. _____ Date: _____ No. _____ Date: _____
No. _____ Date: _____ No. _____ Date: _____

BIDDER understands that the OWNER reserves the right to reject any or all Bids and to waive any informalities in the Bidding.

BIDDER agrees that this Bid shall be good and may not be withdrawn for a period of sixty (60) calendar days after the actual date of bid opening.

Within ten (10) calendar days after receiving written notice of the acceptance of this Bid by the OWNER, the Bidder will execute and deliver to the OWNER one (1) copies of the Agreement and such other required Contract Documents.

BIDDER: _____
(Name of Company or Partnership)

By: _____
(Signature) (Date)

(Print Name) (Title)

(Street Address/P.O. Box) (Phone Number)

(City, State, Zip)

(Email Address)

Attested By: _____
(Signature) (Date)

Seal (If bid is by a corporation)

END OF SECTION

SECTION 00320 - BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned, _____ as Principal, hereinafter called the Principal, and _____ as Surety, hereinafter called the Surety, are held and firmly bound unto _____, as Obligee, hereinafter called the Obligee, in the sum of _____ Dollars for the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents. The Condition of the above obligation is such that whereas the Principal has submitted to _____, a certain BID, attached hereto and hereby made a part hereof to enter into a contract in writing, for the construction of _____.

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or contract documents with good and sufficient surety for the faithful performance of said contract, and for the prompt payment of labor and materials furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this _____ day of _____ 2025.

Principal

Witness

By: _____

Surety

Witness

By: _____
Attorney-in-fact

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 where the PROJECT is located.

End of Section

SECTION 00480 - NON-COLLUSION AFFIDAVIT

PART 1 - GENERAL

1.01 DESCRIPTION

- A. The Non-Collusion Affidavit for the project shall be submitted with the bid proposal, and a copy of this document is bound herewith.
 - 1. When properly executed, this Document shall become a part of the successful bidder's Contract Document.

END OF SECTION

NON-COLLUSION AFFIDAVIT

The undersigned bidder, on behalf of its officers and agents or representatives being duly sworn, states that it has not in any way, directly or indirectly, entered into any arrangement or agreement with any other bidder, or with any other person or public officer whereby bidder has paid or is to pay to such other bidder or other person or public officer any sum or money, or has given or is to give to such other bidder or other person or public officer anything of value whatever, or such affidavit or either of them has not, directly or indirectly, entered into any arrangement or agreement with any other bidder or bidders, which tends to or does lessen or destroy free competition in the letting of the contract sought for by the attached bids; that no inducement of any form or character other than that which appears upon the face of the bid will be suggested, offered, paid or delivered to any person whomsoever to influence the acceptance of the said bid or awarding of the contract, nor has this bidder any agreement or understanding of any kind whatsoever, with any person whomsoever to pay, deliver to, or share with any other person in any way or manner, any of the proceeds of the contract sought by this bid.

Subscribed and sworn to before me by _____ this
_____ day of _____, 20____.

My Commission expires:

Notary Public

END OF AFFIDAVIT

SECTION 00490 - NOTICE OF AWARD

To: _____

Project Description: Historic Stearns Downtown Revitalization Project - Buildings 1 and 3 Phase I

The Owner has considered the Bid submitted by you for the above, described Work in response to its Advertisement for Bids dated _____, 2025 and Information for Bidders.

You are hereby notified that your Bid has been accepted for items in the amount of \$_____.

You are required by the Information for Bidders to execute the Agreement and furnish the Required Contractor's Performance Bond, Payment Bond and certificates of insurance 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 _____, 2025.

McCreary County Heritage Foundation, Inc.
Owner

By: _____
Ray Moncrief, Chairman
(Name/Title)

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged by _____ this the _____ day of _____, 2025.

By: _____
(Name/Title)

DRAFT AIA® Document A101® – 2017

Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum

AGREEMENT made as of the « » day of « » in the year «2025 »
(In words, indicate day, month and year.)

BETWEEN the Owner:
(Name, legal status, address and other information)

«McCreary County Heritage Foundation, Inc.»
«100 Henderson St.»
«Stearns, Kentucky 42647»
«606-375-5330»

and the Contractor:
(Name, legal status, address and other information)

«»
«»
«»
«»

for the following Project:
(Name, location and detailed description)

«»
«»
«»

The Architect:
(Name, legal status, address and other information)

«MSE of Kentucky, Inc.»
«624 Wellington Way »
«Lexington, KY 40503 »
«859-223-5694 »

The Owner and Contractor agree as follows.

ADDITIONS AND DELETIONS:
The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An Additions and Deletions Report that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

The parties should complete A101®-2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement. AIA Document A201®-2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

ELECTRONIC COPYING of any portion of this AIA® Document to another electronic file is prohibited and constitutes a violation of copyright laws as set forth in the footer of this document.

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EXHIBIT A INSURANCE AND BONDS

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be:

(Check one of the following boxes.)

☐ [« »] The date of this Agreement.

☒ [« X »] A date set forth in a notice to proceed issued by the Owner.

☐ [« »] Established as follows:

(Insert a date or a means to determine the date of commencement of the Work.)

« »

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

§ 3.2 The Contract Time shall be measured from the date of commencement of the Work.

§ 3.3 Substantial Completion

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:

(Check one of the following boxes and complete the necessary information.)

[«X»] Not later than «Two Hundred, Forty» («240») calendar days from the date of commencement of the Work.

[« »] By the following date: « »

§ 3.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work are to be completed prior to Substantial Completion of the entire Work, the Contractor shall achieve Substantial Completion of such portions by the following dates:

Portion of Work	Substantial Completion Date

§ 3.3.3 If the Contractor fails to achieve Substantial Completion as provided in this Section 3.3, liquidated damages, if any, shall be assessed as set forth in Section 4.5.

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be « » (\$ «-»), subject to additions and deductions as provided in the Contract Documents.

§ 4.2 Alternates

§ 4.2.1 Alternates, if any, included in the Contract Sum:

Item	Price

§ 4.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement. (Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)

Item	Price	Conditions for Acceptance

§ 4.3 Allowances, if any, included in the Contract Sum:
(Identify each allowance.)

Item	Price

§ 4.4 Unit prices, if any:
(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit (\$0.00)

§ 4.5 Liquidated damages, if any:
(Insert terms and conditions for liquidated damages, if any.)

«\$500 per Day »

§ 4.6 Other:
(Insert provisions for bonus or other incentives, if any, that might result in a change to the Contract Sum.)

« »

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

§ 5.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

« »

§ 5.1.3 Provided that an Application for Payment is received by the Architect not later than the « » day of a month, the Owner shall make payment of the amount certified to the Contractor not later than the « » day of the « » month. If an Application for Payment is received by the Architect after the application date fixed above, payment of the amount certified shall be made by the Owner not later than « » (« ») days after the Architect receives the Application for Payment.

(Federal, state or local laws may require payment within a certain period of time.)

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Architect may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

§ 5.1.6 In accordance with AIA Document A201™–2017, General Conditions of the Contract for Construction, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.6.1 The amount of each progress payment shall first include:

- .1 That portion of the Contract Sum properly allocable to completed Work;
- .2 That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing; and
- .3 That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified.

§ 5.1.6.2 The amount of each progress payment shall then be reduced by:

- .1 The aggregate of any amounts previously paid by the Owner;
- .2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201–2017;
- .3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;
- .4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201–2017; and
- .5 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold the following amount, as retainage, from the payment otherwise due:

(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)

« »

§ 5.1.7.1.1 The following items are not subject to retainage:
(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)

« »

§ 5.1.7.2 Reduction or limitation of retainage, if any, shall be as follows:
(If the retainage established in Section 5.1.7.1 is to be modified prior to Substantial Completion of the entire Work, including modifications for Substantial Completion of portions of the Work as provided in Section 3.3.2, insert provisions for such modifications.)

« »

§ 5.1.7.3 Except as set forth in this Section 5.1.7.3, upon Substantial Completion of the Work, the Contractor may submit an Application for Payment that includes the retainage withheld from prior Applications for Payment pursuant to this Section 5.1.7. The Application for Payment submitted at Substantial Completion shall not include retainage as follows:
(Insert any other conditions for release of retainage upon Substantial Completion.)

« »

§ 5.1.8 If final completion of the Work is materially delayed through no fault of the Contractor, the Owner shall pay the Contractor any additional amounts in accordance with Article 9 of AIA Document A201–2017.

§ 5.1.9 Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.2 Final Payment

§ 5.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

- .1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Article 12 of AIA Document A201–2017, and to satisfy other requirements, if any, which extend beyond final payment; and
- .2 a final Certificate for Payment has been issued by the Architect.

§ 5.2.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect's final Certificate for Payment, or as follows:

« »

§ 5.3 Interest

Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

(Insert rate of interest agreed upon, if any.)

« 1 » % «per annum »

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker

The Architect will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document A201–2017, unless the parties appoint below another individual, not a party to this Agreement, to serve as the Initial Decision Maker.
(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

« »

« »

<< >>
<< >>

§ 6.2 Binding Dispute Resolution

For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A201–2017, the method of binding dispute resolution shall be as follows:

(Check the appropriate box.)

[☒] Arbitration pursuant to Section 15.4 of AIA Document A201–2017

[☐] Litigation in a court of competent jurisdiction

[☐] Other (Specify)

<< >>

If the Owner and Contractor do not select a method of binding dispute resolution, or do not subsequently agree in writing to a binding dispute resolution method other than litigation, Claims will be resolved by litigation in a court of competent jurisdiction.

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2017.

§ 7.1.1 If the Contract is terminated for the Owner's convenience in accordance with Article 14 of AIA Document A201–2017, then the Owner shall pay the Contractor a termination fee as follows:

(Insert the amount of, or method for determining, the fee, if any, payable to the Contractor following a termination for the Owner's convenience.)

«Compensation for cost of work completed plus 15%. »

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2017.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2017 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 The Owner's representative:

(Name, address, email address, and other information)

«Ray Moncrief, Chairman→
«100 Henderson Street→
«Stearns, Kentucky, 42647→
«606-375-5330- »

<< >>
<< >>

§ 8.3 The Contractor's representative:

(Name, address, email address, and other information)

«→
«→
«→
«→
«→
«→

§ 8.4 Neither the Owner's nor the Contractor's representative shall be changed without ten days' prior notice to the other party.

§ 8.5 Insurance and Bonds

§ 8.5.1 The Owner and the Contractor shall purchase and maintain insurance as set forth in AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum, Exhibit A, Insurance and Bonds, and elsewhere in the Contract Documents.

§ 8.5.2 The Contractor shall provide bonds as set forth in AIA Document A101™–2017 Exhibit A, and elsewhere in the Contract Documents.

§ 8.6 Notice in electronic format, pursuant to Article 1 of AIA Document A201–2017, may be given in accordance with a building information modeling exhibit, if completed, or as otherwise set forth below:

(If other than in accordance with a building information modeling exhibit, insert requirements for delivering notice in electronic format such as name, title, and email address of the recipient and whether and how the system will be required to generate a read receipt for the transmission.)

« »

§ 8.7 Other provisions:

« »

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

- .1 AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor
- .2 AIA Document A101™–2017, Exhibit A, Insurance and Bonds
- .3 AIA Document A201™–2017, General Conditions of the Contract for Construction
- .4 Building information modeling exhibit, dated as indicated below:
(Insert the date of the building information modeling exhibit incorporated into this Agreement.)

« »

- .5 Drawings

Number	Title	Date
See attached schedule of drawings.		

- .6 Specifications

Section	Title	Date	Pages
See attached Table of Contents.			

- .7 Addenda, if any:

Number	Date	Pages

Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are also enumerated in this Article 9.

- .8 Other Exhibits:
(Check all boxes that apply and include appropriate information identifying the exhibit where required.)

[« »] AIA Document E204™–2017, Sustainable Projects Exhibit, dated as indicated below:

(Insert the date of the E204-2017 incorporated into this Agreement.)

« »

[« »] The Sustainability Plan:

Title	Date	Pages

[« »] Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages

.9 Other documents, if any, listed below:

(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201™-2017 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)

« »

This Agreement entered into as of the day and year first written above.

OWNER (Signature)

«Ray Moncrief, Chairman»« »

(Printed name and title)

CONTRACTOR (Signature)

« »« »

(Printed name and title)

SECTION 00610 - PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND

PART 1 - GENERAL

1.01 DESCRIPTION

- A. A performance bond for 100% of the final contract amount shall be executed in favor of the Owner; the forms for this bond shall be AIA Document A 312, "Performance Bond", 2010 edition.
- B. A Payment Bond on part of the contractor for 100% of the contract price as it may be increased, the forms for this bond shall be, AIA Document A312, "Payment Bond", 2010 edition.
- C. Consent of Surety to Reduction in or Partial Release of Retainage: AIA Document G707A, 1994 Edition.
- D. Consent of Surety to Final Payment: AIA Document G707, 1994 Edition.
- E. Furnish the required bonds within seven (7) days of receipt of Notice of Award.
- F. When fully executed, these bonds shall become part of the successful bidder's Contract Documents.
- G. Application and Certificate for Payment: AIA Document G702 and G703, 1992 Edition.
- H. Contractors Affidavit of Payment of Debts: AIA Document G706, 1994 Edition.
- I. Contractors Affidavit of Release of Liens: AIA Document G706A, 1994 Edition.
- J. Certificate of Substantial Completion: AIA Document G704, 2017 Edition.

END OF SECTION

SECTION 00650 - CERTIFICATES OF INSURANCE

PART 1 - GENERAL

1.01 GENERAL

- A. Certificates of Insurance shall be filed with the Owner prior to the commencement of any work. Insurance shall be purchased by the General Contractor.
 - 1. These certificates shall contain a provision that coverages afforded under the policies shall not be canceled or in any way terminated until at least thirty days prior written notice has been given to the Owner and Architect.
 - 2. The Owner and the Architect shall be specifically named as additional insureds on all insurance coverage for this project.
- B. Detailed insurance requirements are covered in Section 00800 - Supplementary General Conditions, and all certificates shall reflect these minimum requirements for the project.

END OF SECTION

SECTION 00680 - NOTICE TO PROCEED

TO: _____ Date: _____

Project: Stearns Buildings 1 and 3 Phase I

You are hereby notified to commence WORK in accordance with the Agreement dated_____,
on or before_____, and you are to complete the WORK within 240 consecutive
calendar days thereafter. The date of completion of all WORK is therefore_____.

Owner

Signature

Name/Title

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by _____
_____this the _____ day of _____, 2025.

Contractor

Signature

Name/Title

EDA Requirements

**U. S. DEPARTMENT OF COMMERCE
ECONOMIC DEVELOPMENT ADMINISTRATION**



**EDA CONTRACTING PROVISIONS
FOR CONSTRUCTION PROJECTS**

These EDA Contracting Provisions for Construction Projects (EDA Contracting Provisions) are intended for use by recipients receiving federal assistance from the U. S. Department of Commerce - Economic Development Administration (EDA). They contain provisions specific to EDA and other federal provisions not normally found in non-federal contract documents. The requirements contained herein must be incorporated into all construction contracts and subcontracts funded wholly or in part with federal assistance from EDA.

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1. **DEFINITIONS**

Agreement – The written instrument that is evidence of the agreement between the Owner and the Contractor overseeing the Work.

Architect/Engineer - The person or other entity engaged by the Recipient to perform architectural, engineering, design, and other services related to the work as provided for in the contract.

Contract – The entire and integrated written agreement between the Owner and the Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

Contract Documents – Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents.

Contractor – The individual or entity with whom the Owner has entered into the Agreement.

Drawings or Plans – That part of the Contract Documents prepared or approved by the Architect/Engineer that graphically shows the scope, extent, and character of the Work to be performed by the Contractor.

EDA - The United States of America acting through the Economic Development Administration of the U.S. Department of Commerce or any other person designated to act on its behalf. EDA has agreed to provide financial assistance to the Owner, which includes assistance in financing the Work to be performed under this Contract. Notwithstanding EDA's role, nothing in this Contract shall be construed to create any contractual relationship between the Contractor and EDA.

Owner – The individual or entity with whom the Contractor has entered into the Agreement and for whom the Work is to be performed.

Project – The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

Recipient – A non-Federal entity receiving a Federal financial assistance award directly from EDA to carry out an activity under an EDA program, including any EDA-approved successor to the entity.

Specifications – That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.

Subcontractor – An individual or entity having direct contract with the Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.

Work – The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

2. **APPLICABILITY**

The Project to which the construction work covered by this Contract pertains is being assisted by the United States of America through federal assistance provided by the U.S. Department of Commerce - Economic Development Administration (EDA). Neither EDA, nor any of its departments, entities, or employees is a party to this Contract. The following EDA Contracting Provisions are included in this Contract and all subcontracts or related instruments pursuant to the provisions applicable to such federal assistance from EDA.

3. **FEDERALLY REQUIRED CONTRACT PROVISIONS**

(a) All contracts in excess of the simplified acquisition threshold - currently fixed at \$150,000 (*see* 41 U.S.C. §§ 134 and 1908) must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as may be appropriate.

(b) All contracts in excess of \$10,000 must address termination for cause and for convenience by the Recipient including the manner by which it will be effected and the basis for settlement.

(c) All construction contracts awarded in excess of \$10,000 by recipients of federal assistance and their contractors or subcontractors shall contain a provision requiring compliance with Executive Order 11246 of September 24, 1965, *Equal Employment Opportunity*, as amended by Executive Order 11375 of October 13, 1967, and Department of Labor implementing regulations at 41 C.F.R. part 60.

(d) All prime construction contracts in excess of \$2,000 awarded by Recipients must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. §§ 3141-3148) as supplemented by Department of Labor regulations at 29 C.F.R. part 5. The contracts must also include a provision for compliance with the Copeland "Anti-Kickback" Act (18 U.S.C. § 874 and 40 U.S.C. § 3145) as supplemented by Department of Labor regulations at 29 C.F.R. part 3.

(e) All contracts awarded by the Recipient in excess of \$100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. §§ 3702 and 3704 (the Contract Work Hours and Safety Standards Act) as supplemented by Department of Labor regulations at 29 C.F.R. part 5.

(f) All contracts must include EDA requirements and regulations that involve a requirement on the contractor or sub-contractor to report information to EDA, the Recipient or any other federal agency.

- (g) All contracts must include EDA requirements and regulations pertaining to patent rights with respect to any discovery or invention which arises or is developed in the course of or under such contract.
- (h) All contracts must include EDA requirements and regulations pertaining to copyrights and rights in data.
- (i) All contracts and subgrants in excess of \$150,000 must contain a provision that requires compliance with all applicable standards, orders, or requirements issued under the Clean Air Act (42 U.S.C. § 7401 *et seq.*) and the Federal Water Pollution Control Act (Clean Water Act) (33 U.S.C. § 1251 *et seq.*), and Executive Order 11738, *Providing for Administration of the Clean Air Act and the Federal Water Pollution Control Act With Respect to Federal Contracts, Grants, or Loans*.
- (j) Contracts must contain mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. § 6201).
- (k) Contracts must contain a provision ensuring that contracts are not to be made to parties on the government wide Excluded Parties List System in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 C.F.R. part 180.
- (l) Contracts must contain a provision ensure compliance with the Byrd Anti-Lobbying Amendment (31 U.S.C. § 1352) under which contractors that apply or bid for an award of \$100,000 or more must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. § 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.
- (m) If the Recipient is a state agency or agency of a political subdivision of a state, any contract awarded must contain a provision ensuring compliance with section 6002 of the Solid Waste Disposal Act (42 U.S.C. § 6962), as amended by the Resource Conservation and Recovery Act related to the procurement of recovered materials.

4. **REQUIRED PROVISIONS DEEMED INSERTED**

Each and every provision of law and clause required by law to be inserted in this contract shall be deemed to be inserted herein and the contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party the contract shall forthwith be physically amended to make such insertion of correction.

5. **INSPECTION BY EDA REPRESENTATIVES**

The authorized representatives and agents of EDA shall be permitted to inspect all work, materials, payrolls, personnel records, invoices of materials, and other relevant data and records.

6. **EXAMINATION AND RETENTION OF CONTRACTOR'S RECORDS**

(a) The Owner, EDA, or the Comptroller General of the United States, or any of their duly authorized representatives shall, generally until three years after final payment under this contract, have access to and the right to examine any of the Contractor's directly pertinent books, documents, papers, or other records involving transactions related to this contract for the purpose of making audit, examination, excerpts, and transcriptions.

(b) The Contractor agrees to include in first-tier subcontracts under this contract a clause substantially the same as paragraph (a) above. "Subcontract," as used in this clause, excludes purchase orders that do not exceed \$10,000.

(c) The periods of access and examination in paragraphs (a) and (b) above for records relating to (1) appeals under the disputes clause of this contract, (2) litigation or settlement of claims arising from the performance of this contract, or (3) costs and expenses of this contract to which the Owner, EDA, or Comptroller General or any of their duly authorized representatives has taken exception shall continue until disposition of such appeals, litigation, claims, or exceptions.

7. **CONSTRUCTION SCHEDULE AND PERIODIC ESTIMATES**

Immediately after execution and delivery of the contract, and before the first partial payment is made, the Contractor shall deliver to the Owner an estimated construction progress schedule in a form satisfactory to the Owner, showing the proposed dates of commencement and completion of each of the various subdivisions of work required under the Contract Documents and the anticipated amount of each monthly payment that will become due to the Contractor in accordance with the progress schedule. The Contractor also shall furnish the Owner (a) a detailed estimate giving a complete breakdown of the contract price and (b) periodic itemized estimates of work done for the purpose of making partial payments thereon. The costs employed in making up any of these schedules will be used only to determine the basis of partial payments and will not be considered as fixing a basis for additions to or deductions from the contract price.

8. **CONTRACTOR'S TITLE TO MATERIAL**

No materials, supplies, or equipment for the work shall be purchased by the Contractor or by any subcontractor that is subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller. The Contractor warrants and guarantees that he/she has good title to all work, materials, and equipment used by him/her in the Work, free and clear of all liens, claims, or encumbrances.

9. **INSPECTION AND TESTING OF MATERIALS**

All materials and equipment used in the completion of the Work shall be subject to adequate inspection and testing in accordance with accepted standards. The laboratory or inspection agency shall be selected by the Owner. Materials of construction, particularly those upon which the strength and durability of any structure may depend, shall be subject to inspection and testing to establish conformance with specifications and suitability for intended uses.

10. **"OR EQUAL" CLAUSE**

Whenever a material, article, or piece of equipment is identified in the Contract Documents by reference to manufacturers' or vendors' names, trade names, catalogue numbers, etc., it is intended merely to establish a standard. Any material, article, or equipment of other manufacturers and vendors that will perform adequately the duties imposed by the general design will be considered equally acceptable provided the material, article, or equipment so proposed is, in the opinion of the Architect/Engineer, of equal substance and function. However, such substitution material, article, or equipment shall not be purchased or installed by the Contractor without the Architect/Engineer's written approval.

11. **PATENT FEES AND ROYALTIES**

(a) Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device that is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Architect/Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by the Owner in the Contract Documents.

(b) To the fullest extent permitted by Laws and Regulations, the Contractor shall indemnify and hold harmless the Owner and the Architect/Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

12. **CLAIMS FOR EXTRA COSTS**

No claims for extra work or cost shall be allowed unless the same was done in pursuance of a written order from the Architect/Engineer approved by the Owner.

13. **CONTRACTORS AND SUBCONTRACTORS INSURANCE**

(a) The Contractor shall not commence work under this Contract until the Contractor has obtained all insurance reasonably required by the Owner, nor shall the Contractor allow any subcontractor to commence work on his/her subcontract until the insurance required of the subcontractor has been so obtained and approved.

(b) Types of insurance normally required are:

- (1) Workmen's Compensation
- (2) Contractor's Public Liability and Property Damage
- (3) Contractor's Vehicle Liability
- (4) Subcontractors' Public Liability, Property Damage and Vehicle Liability
- (5) Builder's Risk (Fire and Extended Coverage)

(c) **Scope of Insurance and Special Hazards:** The insurance obtained, which is described above, shall provide adequate protection for the Contractor and his/her subcontractors, respectively, against damage claims that may arise from operations under this contract, whether such operations be by the insured or by anyone directly or indirectly employed by him/her and also against any of the special hazards that may be encountered in the performance of this Contract.

(d) **Proof of Carriage of Insurance:** The Contractor shall furnish the Owner with certificates showing the type, amount, class of operations covered, effective dates, and dates of expiration of applicable insurance policies.

14. **CONTRACT SECURITY BONDS**

(a) If the amount of this Contract exceeds \$150,000, the Contractor shall furnish a performance bond in an amount at least equal to one hundred percent (100%) of the Contract price as security for the faithful performance of this Contract and also a payment bond in an amount equal to one hundred percent (100%) of the Contract price or in a penal sum not less than that prescribed by State, Territorial, or local law, as security for the payment of all persons performing labor on the Work under this Contract and furnishing materials in connection with this Contract. The performance bond and the payment bond may be in one or in separate instruments in accordance with local law. Before final acceptance, each bond must be approved by EDA. If the amount of this Contract does not exceed \$150,000, the Owner shall specify the amount of the payment and performance bonds.

(b) All bonds shall be in the form prescribed by the Contract Documents except as otherwise provided in applicable laws or regulations, and shall be executed by such sureties as are named in the current list of *Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies* as published in Treasury Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent must be accompanied by a certified copy of the agent's

authority to act. Surety companies executing the bonds must also be authorized to transact business in the state where the Work is located.

15. **LABOR STANDARDS - DAVIS-BACON AND RELATED ACTS**
(as required by section 602 of PWEDA)

(a) **Minimum Wages**

(1) All laborers and mechanics employed or working upon the site of the Work in the construction or development of the Project will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act at 29 C.F.R. part 3, the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at the time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor, which is attached hereto and made a part hereof, regardless of any contractual relationship that may be alleged to exist between the Contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 C.F.R. § 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 C.F.R. § 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates determined under 29 C.F.R. § 5.5(a)(1)(ii) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(2) (i) Any class of laborers or mechanics to be employed under the Contract, but not listed in the wage determination, shall be classified in conformance with the wage determination. EDA shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(A) The work to be performed by the classification requested is not performed by a classification in the wage determination;

(B) The classification is utilized in the area by the construction industry; and

(C) The proposed wage rate, including any bona fide fringe benefits, bears a

reasonable relationship to the wage rates contained in the wage determination.

(ii) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and EDA or its designee agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by EDA or its designee to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210.

(iii) In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives, and EDA or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), EDA or its designee shall refer the questions, including the views of all interested parties and the recommendation of EDA or its designee, to the Administrator for determination.

(iv) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(2)(ii) or (iii) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(3) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(4) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided, that the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(b) Withholding

EDA or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the Contractor under this Contract or any other federal contract with the same prime Contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the Contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper employed or working on the site of the Work in the construction or development of the Project, all or part of the wages required by the Contract, EDA or its designee may, after written notice to the Contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations

have ceased. EDA or its designee may, after written notice to the Contractor, disburse such amounts withheld for and on account of the Contractor or subcontractor to the respective employees to whom they are due. The Comptroller General shall make such disbursements in the case of direct Davis-Bacon Act contracts.

(c) **Payrolls and basic records**

(1) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the Work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the Work in the construction or development of the Project. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 C.F.R. § 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, the plan or program is financially responsible, and the plan or program has been communicated in writing to the laborers or mechanics affected, and provide records that show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(2) (i) For each week in which Contract work is performed, the Contractor shall submit a copy of all payrolls to the Owner for transmission to EDA or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 C.F.R. part 5.5(a)(3)(i). This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose. It may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), U.S. Government Printing Office, Washington, D.C. 20402; or downloaded from the U.S. Department of Labor's website at <https://www.dol.gov/whd/forms/wh347.pdf>. The prime Contractor is responsible for the submission of copies of payrolls by all subcontractors

(ii) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the Contract and shall certify the following:

(A) That the payroll for the payroll period contains the information required to be maintained under 29 C.F.R. § 5.5(a)(3)(i) and that such information is correct and complete;

(B) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the Contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 C.F.R. part 3; and

(C) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the Contract.

(iii) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 15(c)(2)(ii) of this section.

(iv) The falsification of any of the above certifications may subject the Contractor or subcontractor to civil or criminal prosecution under section 1001 of Title 18 and section 3729 of Title 31 of the U.S. Code.

(3) The Contractor or subcontractor shall make the records required under paragraph 15(c)(1) of this section available for inspection, copying, or transcription by authorized representatives of EDA or its designee or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit the required records or to make them available, EDA or its designee may, after written notice to the Contractor or Owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 C.F.R. § 5.12.

(d) **Apprentices and Trainees.**

(1) **Apprentices.** Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training (Bureau), or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the Contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any

apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a Contractor is performing construction on a Project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) **Trainees.** Except as provided in 29 C.F.R. § 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program that has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman's hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(3) **Equal employment opportunity.** The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity

requirements of Executive Order 11246, *Equal Employment Opportunity*, as amended, and 29 C.F.R. part 30.

(e) **Compliance with Copeland Anti-Kickback Act Requirements.** The Contractor shall comply with the Copeland Anti-Kickback Act (18 U.S.C. § 874 and 40 U.S.C. § 3145) as supplemented by Department of Labor regulations (29 C.F.R. part 3, “Contractors and Subcontractors on Public Buildings or Public Works Financed in Whole or in Part by Loans or Grants of the United States”). The Act provides that the Contractor and any subcontractors shall be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which they are otherwise entitled. The Owner shall report all suspected or reported violations to EDA.

(f) **Subcontracts.** The Contractor and any subcontractors will insert in any subcontracts the clauses contained in 29 C.F.R. §§ 5.5(a)(1) through (10) and such other clauses as EDA or its designee may require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 C.F.R. § 5.5.

(g) **Contract termination; debarment.** The breach of the contract clauses in 29 C.F.R. § 5.5 may be grounds for termination of the contract, and for debarment as a Contractor and a subcontractor as provided in 29 C.F.R. § 5.12.

(h) **Compliance with Davis-Bacon and Related Act Requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 C.F.R. parts 1, 3, and 5 are herein incorporated by reference in this contract.

(i) **Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this Contract shall not be subject to the general disputes clause of this Contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 C.F.R. parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and EDA or its designee, the U.S. Department of Labor, or the employees or their representatives.

(j) **Certification of Eligibility.**

(1) By entering into this Contract, the Contractor certifies that neither it nor any person or firm that has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 C.F.R. § 5.12(a)(1).

(2) No part of this Contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 C.F.R. § 5.12(a)(1).

(3) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. § 1001.

16. **LABOR STANDARDS - CONTRACT WORK HOURS AND SAFETY STANDARDS ACT**

As used in this paragraph, the terms “laborers” and “mechanics” include watchmen and guards.

(a) **Overtime requirements.** No Contractor or subcontractor contracting for any part of the Contract work, which may require or involve the employment of laborers or mechanics, shall require or permit any such laborer or mechanic in any workweek in which that person is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(b) **Violation; liability for unpaid wages, liquidated damages.** In the event of any violation of the clause set forth in paragraph (a) of this section, the Contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (a) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (a) of this section.

(c) **Withholding for unpaid wages and liquidated damages.** EDA or its designee shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any monies payable on account of work performed by the Contractor or subcontractor under any such Contract or any other federal contract with the same prime Contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime Contractor such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b) of this section.

(d) **Subcontracts.** The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (a) through (c) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (a) through (c) of this section.

17. **EQUAL EMPLOYMENT OPPORTUNITY**

(a) The Recipient hereby agrees that it will incorporate or cause to be incorporated into any contract for construction work, or modification thereof, as defined in the regulations of the Secretary of Labor at 41 C.F.R. chapter 60, which is paid for in whole or in part with funds obtained from EDA, the following equal opportunity clause:

During the performance of this contract, the Contractor agrees as follows:

Economic Development Administration
Contracting Provisions for Construction Projects

(1) The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training including apprenticeship. The Contractor agrees to post in conspicuous places available to employees and applicants for employment notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

(3) The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

(4) The Contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers representatives of the Contractor's commitments hereunder, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(5) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965 and of the rules, regulations, and relevant orders of the Secretary of Labor.

(6) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records, and accounts by EDA and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(7) In the event of the Contractor's noncompliance with the nondiscrimination clauses of

this Contract or with any of the said rules, regulations, or orders, this Contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts or federally-assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation or order of the Secretary of Labor, or as otherwise provided by law.

(8) The Contractor will include the portion of the sentence immediately preceding paragraph 17(a)(1) and the provisions of paragraphs 17(a)(1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as EDA or the Secretary of Labor may direct as a means of enforcing such provisions, including sanctions for noncompliance. Provided, however, that in the event the Contractor becomes involved in or is threatened with litigation with a subcontractor or vendor as a result of such direction by EDA or the Secretary of Labor, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

(9) The Recipient further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally-assisted construction work. Provided, however, that if the Recipient so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality, or subdivision of such government that does not participate in work on or under the Contract.

(10) The Recipient agrees that it will assist and cooperate actively with EDA and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish EDA and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist EDA in the discharge of the EDA's primary responsibility for securing compliance.

(11) The Recipient further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a Contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by EDA or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the Recipient agrees that if it fails or refuses to comply with these undertakings, EDA may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this EDA financial assistance; refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case

to the Department of Justice for appropriate legal proceedings.

(b) Exemptions to Above Equal Opportunity Clause (41 C.F.R. chapter 60):

(1) Contracts and subcontracts not exceeding \$10,000 (other than Government bills of lading, and other than contracts and subcontracts with depositories of Federal funds in any amount and with financial institutions which are issuing and paying agents for U.S. savings bonds and savings notes) are exempt. The amount of the Contract, rather than the amount of the federal financial assistance, shall govern in determining the applicability of this exemption.

(2) Except in the case of subcontractors for the performance of construction work at the site of construction, the clause shall not be required to be inserted in subcontracts below the second tier.

(3) Contracts and subcontracts not exceeding \$10,000 for standard commercial supplies or raw materials are exempt.

18. **CONTRACTING WITH SMALL, MINORITY AND WOMEN'S BUSINESSES**

(a) If the Contractor intends to let any subcontracts for a portion of the work, the Contractor shall take affirmative steps to assure that small, minority and women's businesses are used when possible as sources of supplies, equipment, construction, and services.

(b) Affirmative steps shall consist of:

(1) Placing qualified small and minority businesses and women's business enterprises on solicitation lists;

(2) Ensuring that small and minority businesses and women's business enterprises are solicited whenever they are potential sources;

(3) Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses and women's business enterprises;

(4) Establishing delivery schedules, where the requirements of the contract permit, which encourage participation by small and minority businesses and women's business enterprises;

(5) Using the services and assistance of the U.S. Small Business Administration, the Minority Business Development Agency of the U.S. Department of Commerce, and State and local governmental small business agencies;

(6) Requiring each party to a subcontract to take the affirmative steps of this section; and

(7) The Contractor is encouraged to procure goods and services from labor surplus area firms.

19. **HEALTH, SAFETY, AND ACCIDENT PREVENTION**

(a) In performing this contract, the Contractor shall:

- (1) Ensure that no laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to their health and/or safety as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation;
- (2) Protect the lives, health, and safety of other persons;
- (3) Prevent damage to property, materials, supplies, and equipment; and
- (4) Avoid work interruptions.

(b) For these purposes, the Contractor shall:

- (1) Comply with regulations and standards issued by the Secretary of Labor at 29 C.F.R. part 1926. Failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act (40 U.S.C. §§ 3701 – 3708); and
- (2) Include the terms of this clause in every subcontract so that such terms will be binding on each subcontractor.

(c) The Contractor shall maintain an accurate record of exposure data on all accidents incident to work performed under this Contract resulting in death, traumatic injury, occupational disease, or damage to property, materials, supplies, or equipment, and shall report this data in the manner prescribed by 29 C.F.R. part 1904.

(d) The Owner shall notify the Contractor of any noncompliance with these requirements and of the corrective action required. This notice, when delivered to the Contractor or the Contractor's representative at the site of the Work, shall be deemed sufficient notice of the noncompliance and corrective action required. After receiving the notice, the Contractor shall immediately take corrective action. If the Contractor fails or refuses to take corrective action promptly, the Owner may issue an order stopping all or part of the Work until satisfactory corrective action has been taken. The Contractor shall not base any claim or request for equitable adjustment for additional time or money on any stop order issued under these circumstances.

(e) The Contractor shall be responsible for its subcontractors' compliance with the provisions of this clause. The Contractor shall take such action with respect to any subcontract as EDA, or the Secretary of Labor shall direct as a means of enforcing such provisions.

20. **CONFLICT OF INTEREST AND OTHER PROHIBITED INTERESTS**

(a) No official of the Owner who is authorized in such capacity and on behalf of the Owner to negotiate, make, accept, or approve, or to take part in negotiating, making, accepting, or approving any architectural, engineering, inspection, construction or material supply contract or any subcontract in connection with the construction of the Project, shall become directly or indirectly interested personally in this Contract or in any part hereof.

(b) No officer, employee, architect, attorney, engineer, or inspector of or for the Owner who is authorized in such capacity and on behalf of the Owner to exercise any legislative, executive, supervisory or other similar functions in connection with the construction of the Project, shall become directly or indirectly interested personally in this Contract or in any part thereof, any material supply contract, subcontract, insurance contract, or any other contract pertaining to the Project.

(c) The Contractor may not knowingly contract with a supplier or manufacturer if the individual or entity who prepared the Contract Documents has a corporate or financial affiliation with the supplier or manufacturer.

(d) The Owner's officers, employees, or agents shall not engage in the award or administration of this Contract if a conflict of interest, real or apparent, may be involved. Such a conflict may arise when: (i) the employee, officer or agent; (ii) any member of their immediate family; (iii) their partner or (iv) an organization that employs, or is about to employ, any of the above, has a financial interest in the Contractor. The Owner's officers, employees, or agents shall neither solicit nor accept gratuities, favors, or anything of monetary value from the Contractor or subcontractors.

(e) If the Owner finds after a notice and hearing that the Contractor, or any of the Contractor's agents or representatives, offered or gave gratuities (in the form of entertainment, gifts, or otherwise) to any official, employee, or agent of the Owner or EDA in an attempt to secure this Contract or favorable treatment in awarding, amending, or making any determinations related to the performance of this Contract, the Owner may, by written notice to the Contractor, terminate this Contract. The Owner may also pursue other rights and remedies that the law or this Contract provides. However, the existence of the facts on which the Owner bases such findings shall be an issue and may be reviewed in proceedings under the dispute resolution provisions of this Contract.

(f) In the event this Contract is terminated as provided in paragraph (e) of this section, the Owner may pursue the same remedies against the Contractor as it could pursue in the event of a breach of this Contract by the Contractor. As a penalty, in addition to any other damages to which it may be entitled by law, the Owner may pursue exemplary damages in an amount (as determined by the Owner) which shall not be less than three nor more than ten times the costs the Contractor incurs in providing any such gratuities to any such officer or employee.

21. **RESTRICTIONS ON LOBBYING**

(a) This Contract, or subcontract is subject to 31 U.S.C. § 1352, regarding lobbying restrictions. The section is explained in the common rule, 15 C.F.R. part 28 (55 FR 6736-6748, February 26, 1990). Each bidder under this Contract or subcontract is generally prohibited from using federal funds for lobbying the Executive or Legislative Branches of the Federal Government in connection with this EDA Award.

(b) **Contract Clause Threshold:** This Contract Clause regarding lobbying must be included in each bid for a contract or subcontract exceeding \$100,000 of federal funds at any tier under the EDA Award.

(c) **Certification and Disclosure:** Each bidder of a contract or subcontract exceeding \$100,000 of federal funds at any tier under the federal Award must file Form CD-512, *Certification Regarding Lobbying – Lower Tier Covered Transactions*, and, if applicable, Standard Form-LLL, *Disclosure of Lobbying Activities*, regarding the use of any nonfederal funds for lobbying. Certifications shall be retained by the Contractor or subcontractor at the next higher tier. All disclosure forms, however, shall be forwarded from tier to tier until received by the Recipient of the EDA Award, who shall forward all disclosure forms to EDA.

(d) **Continuing Disclosure Requirement:** Each Contractor or subcontractor that is subject to the Certification and Disclosure provision of this Contract Clause is required to file a disclosure form at the end of each calendar quarter in which there occurs any event that requires disclosure or that materially affects the accuracy of the information contained in any disclosure form previously filed by such person. Disclosure forms shall be forwarded from tier to tier until received by the Recipient of the EDA Award, who shall forward all disclosure forms to EDA.

(e) **Indian Tribes, Tribal Organizations, or Other Indian Organizations:** Indian tribes, tribal organizations, or any other Indian organizations, including Alaskan Native organizations, are excluded from the above lobbying restrictions and reporting requirements, but only with respect to expenditures that are by such tribes or organizations for lobbying activities permitted by other federal law. An Indian tribe or organization that is seeking an exclusion from Certification and Disclosure requirements must provide EDA with the citation of the provision or provisions of federal law upon which it relies to conduct lobbying activities that would otherwise be subject to the prohibitions in and to the Certification and Disclosure requirements of 31 U.S.C. § 1352, preferably through an attorney's opinion. Note, also, that a non-Indian subrecipient, contractor, or subcontractor under an award to an Indian tribe, for example, is subject to the restrictions and reporting requirements.

22. **HISTORICAL AND ARCHAEOLOGICAL DATA PRESERVATION**

The Contractor agrees to facilitate the preservation and enhancement of structures and objects of historical, architectural or archaeological significance and when such items are found and/or unearthed during the course of project construction. Any excavation by the Contractor that uncovers an historical or archaeological artifact shall be immediately reported to the Owner and a representative of EDA. Construction shall be temporarily halted pending the notification process and further directions issued by EDA after consultation with the State Historic

Preservation Officer (SHPO) for recovery of the items. *See* the National Historic Preservation Act of 1966 (54 U.S.C. § 300101 *et seq.*, formerly at 16 U.S.C. § 470 *et seq.*) and Executive Order No. 11593 of May 31, 1971.

23. **CLEAN AIR AND WATER**

Applicable to Contracts in Excess of \$150,000

(a) **Definition.** “Facility” means any building, plant, installation, structure, mine, vessel, or other floating craft, location, or site of operations, owned, leased, or supervised by the Contractor or any subcontractor, used in the performance of the Contract or any subcontract. When a location or site of operations includes more than one building, plant, installation, or structure, the entire location or site shall be deemed a facility except when the Administrator, or a designee, of the United States Environmental Protection Agency (EPA) determines that independent facilities are collocated in one geographical area.

(b) In compliance with regulations issued by the EPA, 2 C.F.R. part 1532, pursuant to the Clean Air Act, as amended (42 U.S.C. § 7401 *et seq.*); the Federal Water Pollution Control Act, as amended (33 U.S.C. § 1251 *et seq.*); and Executive Order 11738, the Contractor agrees to:

(1) Not utilize any facility in the performance of this contract or any subcontract which is listed on the Excluded Parties List System, part of the System for Award Management (SAM), pursuant to 2 C.F.R. part 1532 for the duration of time that the facility remains on the list;

(2) Promptly notify the Owner if a facility the Contractor intends to use in the performance of this contract is on the Excluded Parties List System or the Contractor knows that it has been recommended to be placed on the List;

(3) Comply with all requirements of the Clean Air Act and the Federal Water Pollution Control Act, including the requirements of section 114 of the Clean Air Act and section 308 of the Federal Water Pollution Control Act, and all applicable clean air and clean water standards; and

(4) Include or cause to be included the provisions of this clause in every subcontract and take such action as EDA may direct as a means of enforcing such provisions.

24. **USE OF LEAD-BASED PAINTS ON RESIDENTIAL STRUCTURES**

(a) If the work under this Contract involves construction or rehabilitation of residential structures over \$5,000, the Contractor shall comply with the Lead-based Paint Poisoning Prevention Act (42 U.S.C. § 4831). The Contractor shall assure that paint or other surface coatings used in a residential property does not contain lead equal to or in excess of 1.0 milligram per square centimeter or 0.5 percent by weight or 5,000 parts per million (ppm) by weight. For purposes of this section, “residential property” means a dwelling unit, common areas, building exterior surfaces, and any surrounding land, including outbuildings, fences and play equipment affixed to the land, belonging to an owner and available for use by residents, but not

including land used for agricultural, commercial, industrial or other non-residential purposes, and not including paint on the pavement of parking lots, garages, or roadways.

- (b) As a condition to receiving assistance under PWEDA, recipients shall assure that the restriction against the use of lead-based paint is included in all contracts and subcontracts involving the use of federal funds.

25. **ENERGY EFFICIENCY**

The Contractor shall comply with all standards and policies relating to energy efficiency which are contained in the energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. § 6201) for the State in which the Work under the Contract is performed.

26. **ENVIRONMENTAL REQUIREMENTS**

When constructing a Project involving trenching and/or other related earth excavations, the Contractor shall comply with the following environmental constraints:

- (1) **Wetlands.** When disposing of excess, spoil, or other construction materials on public or private property, the Contractor shall not fill in or otherwise convert wetlands.
- (2) **Floodplains.** When disposing of excess, spoil, or other construction materials on public or private property, the Contractor shall not fill in or otherwise convert 100 year floodplain areas delineated on the latest Federal Emergency Management Agency (FEMA) Floodplain Maps, or other appropriate maps, i.e., alluvial soils on Natural Resource Conservation Service (NRCS) Soil Survey Maps.
- (3) **Endangered Species.** The Contractor shall comply with the Endangered Species Act, which provides for the protection of endangered and/or threatened species and critical habitat. Should any evidence of the presence of endangered and/or threatened species or their critical habitat be brought to the attention of the Contractor, the Contractor will immediately report this evidence to the Owner and a representative of EDA. Construction shall be temporarily halted pending the notification process and further directions issued by EDA after consultation with the U.S. Fish and Wildlife Service.

27. **DEBARMENT, SUSPENSION, INELIGIBILITY, AND VOLUNTARY EXCLUSIONS**

As required by Executive Orders 12549 and 12689, *Debarment and Suspension*, 2 C.F.R. Part 180 and implemented by the Department of Commerce at 2 C.F.R. part 1326, for prospective participants in lower tier covered transactions (except subcontracts for goods or services under the \$25,000 small purchase threshold unless the subrecipient will have a critical influence on or substantive control over the award), the Contractor agrees that:

- (1) By entering into this Contract, the Contractor and subcontractors certify, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared Economic Development Administration Contracting Provisions for Construction Projects

ineligible, or voluntarily excluded from participation in this Contract by any federal department or agency.

(2) Where the Contractor or subcontractors are unable to certify to any of the statements in this certification, the Contractor or subcontractors shall attach an explanation to this bid.

See also 2 C.F.R. part 180 and 2 C.F.R. § 200.342.

28. **EDA PROJECT SIGN**

The Contractor shall supply, erect, and maintain in good condition a Project sign according to the specifications provided by EDA. To the extent practical, the sign should be a free standing sign. Project signs shall not be located on public highway rights-of-way. Location and height of signs will be coordinated with the local agency responsible for highway or street safety in the Project area, if any possibility exists for obstructing vehicular traffic line of sight. Whenever the EDA site sign specifications conflict with State law or local ordinances, the EDA Regional Director will permit such conflicting specifications to be modified so as to comply with State law or local ordinance.

29. **BUY AMERICA**

To the greatest extent practicable, contractors are encouraged to purchase American-made equipment and products with funding provided under EDA financial assistance awards.

EDA PROJECT SIGN

The Contractor shall supply, erect, and maintain in good condition a project sign according to the specifications set forth below:

EDA SITE SIGN SPECIFICATIONS

Size: 4' x 8' x ¾"

Materials: Exterior grade/MDO plywood (APA rating A-B)

Supports: 4" x 4" x 12' posts with 2" x 4" cross branching

Erection: Posts shall be set a minimum of three feet deep in concrete footings that are at least 12" in diameter.

Paint: Outdoor enamel

Colors: Jet Black, Blue (PMS300), and Gold (PMS7406). Specifically, on white background the following will be placed:

The U. S. Department of Commerce seal in blue, black, and gold;

“EDA” in blue;

“U. S. DEPARTMENT OF COMMERCE ECONOMIC DEVELOPMENT

ADMINISTRATION” in black;

“In partnership with” in blue;

(Actual name of the) “EDA Grant Recipient” in black;

Lettering: Specific fonts are named below; positioning will be as shown on the attached illustration.

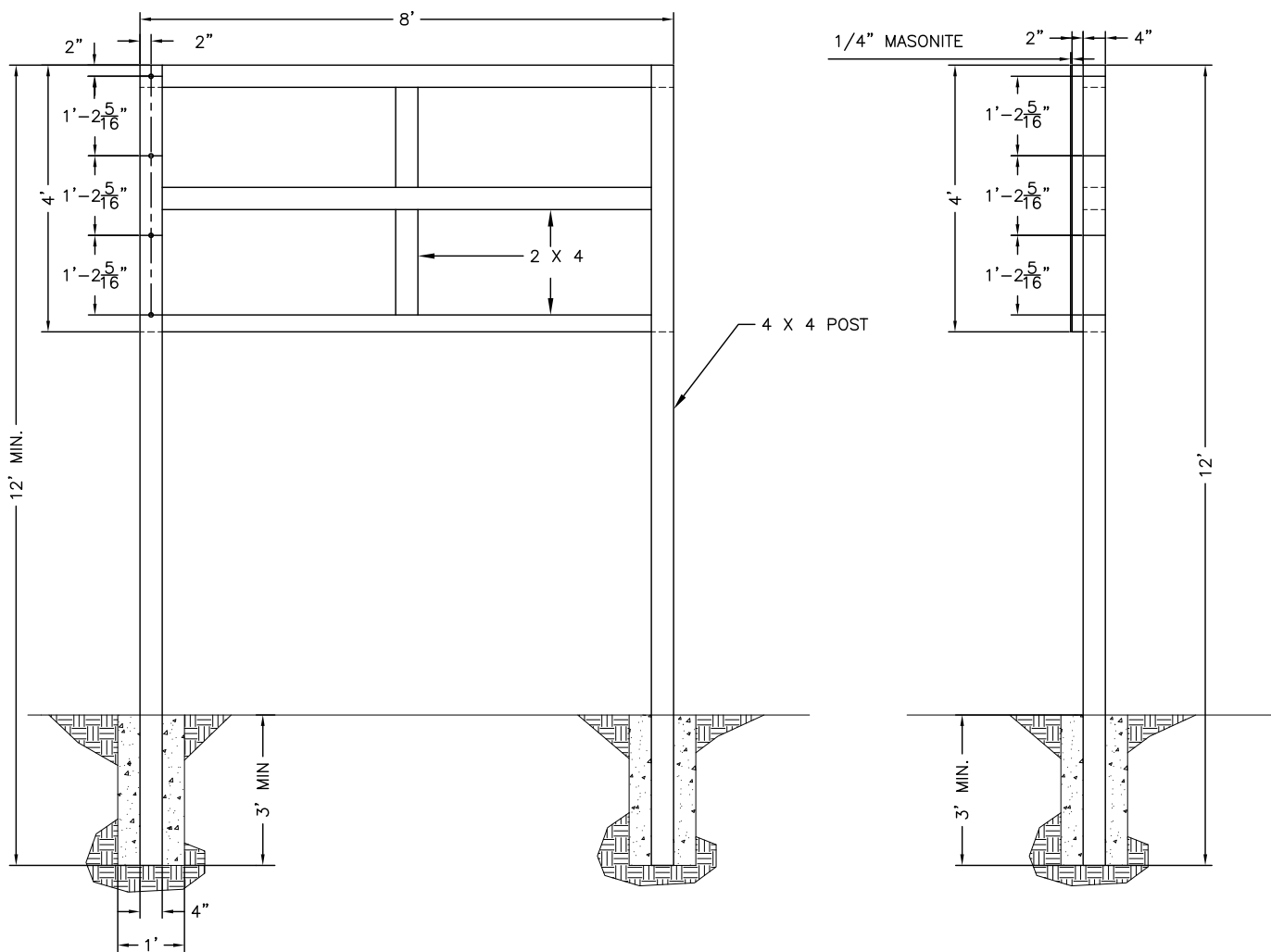
“U. S. DEPARTMENT OF COMMERCE ECONOMIC DEVELOPMENT
ADMINISTRATION” use Bank Gothic Medium - **BANK GOTHIC MED**

“In partnership with” use UniversTM 55 Oblique - **Univers 55**

(Name of) “EDA Grant Recipient” use UniversTM Extra Black 85 **Univers 85**

Project signs will not be erected on public highway rights-of-way. If any possibility exists for obstruction to traffic line of sight, the location and height of the sign will be coordinated with the agency responsible for highway or street safety in the area.

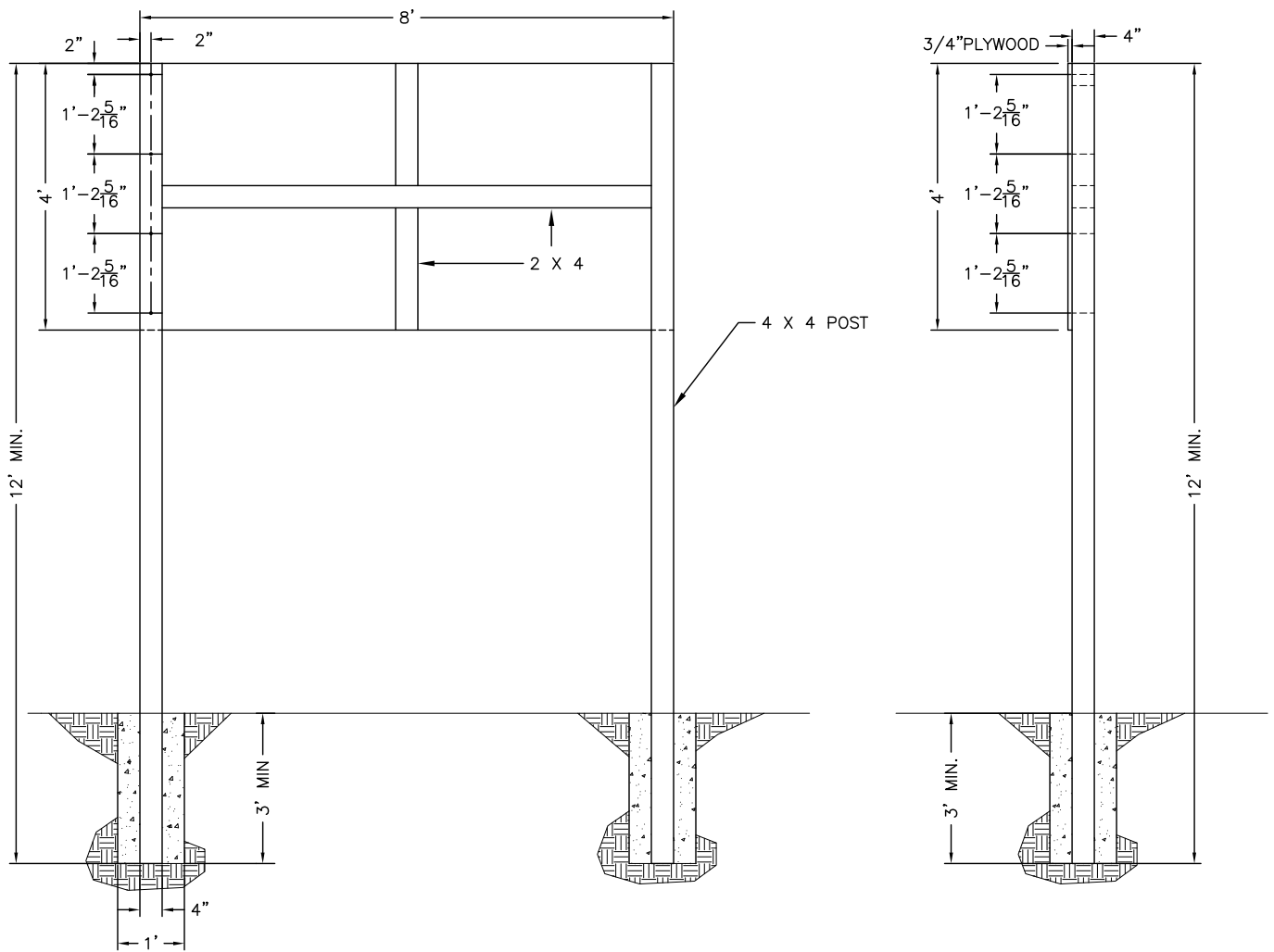
The EDA Regional Director may permit modifications to these specifications if they conflict with state law or local ordinances.



SIGN A
MASONITE SIGN
SCALE: 3/8" = 1'

PROJECT - SIGN A

ECONOMIC DEVELOPMENT ADMINISTRATION



SIGN B
PLYWOOD SIGN
SCALE: 3/8" = 1'

PROJECT – SIGN B

ECONOMIC DEVELOPMENT ADMINISTRATION



EDA

U.S. DEPARTMENT OF COMMERCE ECONOMIC DEVELOPMENT ADMINISTRATION

In partnership with

**McCreary County Heritage Foundation, Grant Recipient
Historic Stearns Downtown Revitalization Project – Phase I**

Contractor:

**Architect: MSE of Kentucky, Inc.
Lexington, KY 859-223-5694**





CERTIFICATION REGARDING LOBBYING LOWER TIER COVERED TRANSACTIONS

Applicants should review the instructions for certification included in the regulations before completing this form. Signature on this form provides for compliance with certification requirements under 15 CFR Part 28, "New Restrictions on Lobbying."

LOBBYING

As required by Section 1352, Title 31 of the U.S. Code, and implemented at 15 CFR Part 28, for persons entering into a grant, cooperative agreement or contract over \$100,000 or a loan or loan guarantee over \$150,000 as defined at 15 CFR Part 28, Sections 28.105 and 28.110, the applicant certifies that to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure occurring on or before October 23, 1996, and of not less than \$11,000 and not more than \$110,000 for each such failure occurring after October 23, 1996.

Statement for Loan Guarantees and Loan Insurance

The undersigned states, to the best of his or her knowledge and belief, that:

In any funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

Submission of this statement is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required statement shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure occurring on or before October 23, 1996, and of not less than \$11,000 and not more than \$110,000 for each such failure occurring after October 23, 1996.

As the duly authorized representative of the applicant, I hereby certify that the applicant will comply with the above applicable certification.

NAME OF APPLICANT

AWARD NUMBER AND/OR PROJECT NAME

PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

SIGNATURE

DATE

**NOTICE OF REQUIREMENTS FOR AFFIRMATIVE ACTION
TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY
(EXECUTIVE ORDER 11246 AND 41 CFR PART 60-4)**

The following Notice shall be included in, and shall be a part of all solicitations for offers and bids on all Federal and federally assisted construction contracts or subcontracts in excess of \$10,000.

The Offeror's or Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

Timetables	Goals for minority participation for each trade	Goals for female participation for each trade
	%	6.9%

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and non federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" is:

State of _____

County of _____

City of _____

Campaign Finance Law Compliance

In accordance with the provisions of KRS 45A.110 and KRS 45A.115, each bidder or offeror shall submit this affidavit with the bid or proposal.

I hereby swear or affirm under penalty of perjury that:

- (1) neither the bidder or offeror as defined in KRS 45A.070(6), nor the entity which he/she represents, has knowingly violated any provisions of the campaign finance laws of the Commonwealth of Kentucky, and
- (2) the award of a contract to the bidder or offeror or the entity which he/she represents will not violate any provisions of the campaign finance laws of the Commonwealth of Kentucky.

I have fully informed myself regarding the accuracy of the statement made above.

SIGNATURE Printed Name

Title Date

Company Name _____

Address _____

Subscribed and sworn to before me by _____,
(Affiant) (Title)

of _____ this _____ day of _____, 20____.
(Company Name)

Notary Public

(seal of notary)

My commission expires: _____

Davis-Bacon Wage Rates

"General Decision Number: KY20250042 08/22/2025

Superseded General Decision Number: KY20240042

State: Kentucky

Construction Type: Building

Counties: Barren, Casey, Clinton, Cumberland, Green, Hart, Knox, Logan, Marion, McCreary, Metcalfe, Monroe, Russell, Taylor and Wayne Counties in Kentucky.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	<ul style="list-style-type: none">. Executive Order 14026 generally applies to the contract.. The contractor must pay all covered workers at least \$17.75 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	<ul style="list-style-type: none">. Executive Order 13658 generally applies to the contract.. The contractor must pay all covered workers at least \$13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2025.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number	Publication Date
0	01/03/2025
1	02/07/2025
2	02/28/2025
3	03/14/2025
4	05/02/2025
5	05/30/2025
6	06/06/2025
7	07/18/2025
8	08/08/2025
9	08/15/2025
10	08/22/2025

ASBE0046-002 03/01/2025

	Rates	Fringes
ASBESTOS WORKER/HEAT & FROST INSULATOR.....	\$ 30.24	18.54

BOIL0040-001 01/01/2025

	Rates	Fringes
BOILERMAKER.....	\$ 43.85	28.44

CARP1650-010 06/01/2024

	Rates	Fringes
CARPENTER (Excludes Acoustical Ceiling Installation, Drywall Hanging, and Metal Stud Installation).....	\$ 32.25	18.09

ELEC0317-005 06/02/2025

	Rates	Fringes
ELECTRICIAN.....	\$ 41.15	29.35

ELEV0011-001 01/01/2025

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 57.41	38.435+a+b

PAID HOLIDAYS:

a. New Year's Day, Memorial Day, Independence Day, Labor Day, Vetern's Day, Thanksgiving Day, the Friday after Thanksgiving, and Christmas Day.

b. Employer contributes 8% of regular hourly rate to vacation pay credit for employee who has worked in business more than 5 years; 6% for less than 5 years' service.

ENGI0181-083 06/01/2025

	Rates	Fringes
POWER EQUIPMENT OPERATOR (Bobcat/Skid Steer/Skid Loader).....	\$ 41.98	19.60

ENGI0181-084 06/01/2025

	Rates	Fringes
POWER EQUIPMENT OPERATOR (Oiler).....	\$ 34.99	19.60

ENGI0181-085 06/01/2025

	Rates	Fringes
POWER EQUIPMENT OPERATOR (Crane).....	\$ 41.98	19.60

CRANES WITH BOOM 150 FEET & OVER, INCLUDING JIB, SHALL RECEIVE \$.75 ABOVE THE WAGE RATE.

ALL CRANES WITH PILING LEADS WILL RECEIVE \$.50 ABOVE THE WAGE, REGARDLESS OF BOOM LENGTH.

ENGI0181-086 06/01/2025

	Rates	Fringes
POWER EQUIPMENT OPERATOR (Forklift).....	\$ 41.98	19.60

ENGI0181-092 06/01/2025

	Rates	Fringes
POWER EQUIPMENT OPERATOR (Bulldozer).....	\$ 41.98	19.60

IRON0769-005 06/01/2025

	Rates	Fringes
IRONWORKER, REINFORCING		
ZONE 1.....	\$ 39.70	29.59
ZONE 2.....	\$ 40.10	29.59
ZONE 3.....	\$ 41.70	29.59

ZONE 1 - (no base rate increase) Up to 10 mile radius of
Union Hall, 1643 Greenup Ave, Ashland, KY.

ZONE 2 - (add \$0.40 per hour to base rate) 10 to 50 mile
radius of Union Hall, 1643 Greenup Ave, Ashland, KY.

ZONE 3 - (add \$2.00 per hour to base rate) 50 mile radius &
over of Union Hall, 1643 Greenup Ave, Ashland, KY.

* LAB00189-007 06/01/2025

	Rates	Fringes
LABORER (Pipelayer).....	\$ 28.53	17.38

* LAB00576-011 07/01/2025

	Rates	Fringes
LABORER (Carpenter Tender).....	\$ 26.69	13.32

* LAB00576-012 07/01/2025

	Rates	Fringes
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LABORER (Mason Tender - Cement/Concrete).....	\$ 26.89	13.32
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* LAB01392-004 07/01/2025

	Rates	Fringes
LABORER (Mason Tender - Brick)...	\$ 28.16	17.55

PAIN1072-005 12/01/2024

	Rates	Fringes
PAINTER (Spray Only).....	\$ 34.29	23.95

PLUM0452-014 11/01/2024

	Rates	Fringes
PIPEFITTER.....	\$ 41.00	21.66

SFKY0669-001 04/01/2025

	Rates	Fringes
SPRINKLER FITTER (Fire Sprinklers).....	\$ 44.15	26.08

SHEE0110-006 06/01/2025

	Rates	Fringes
SHEET METAL WORKER (Excludes HVAC Duct Installation).....	\$ 40.32	25.66

* UAVG-KY-0007 01/01/2025

	Rates	Fringes
IRONWORKER, ORNAMENTAL.....	\$ 36.73	27.05

* UAVG-KY-0008 01/01/2025

	Rates	Fringes
LABORER: Power Tool Operator....	\$ 28.73	19.36

* SUKY2015-023 06/02/2015

	Rates	Fringes
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BRICKLAYER.....	\$ 24.61	11.88
CEMENT MASON/CONCRETE FINISHER...	\$ 27.99	0.00
IRONWORKER, STRUCTURAL.....	\$ 22.31	15.40
LABORER: Common or General.....	\$ 16.97 **	6.11
OPERATOR:		
Backhoe/Excavator/Trackhoe.....	\$ 21.11	13.00
OPERATOR: Grader/Blade.....	\$ 24.33	13.00
PAINTER (Brush and Roller).....	\$ 18.20	6.43
PLUMBER.....	\$ 33.41	16.67
ROOFER.....	\$ 22.31	7.41
SHEET METAL WORKER (HVAC Duct Installation Only).....	\$ 25.91	8.06
TILE FINISHER.....	\$ 17.67 **	7.45
TILE SETTER.....	\$ 25.77	6.10
TRUCK DRIVER: Dump Truck.....	\$ 17.07 **	6.25

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

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** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$17.75) or 13658 (\$13.30). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours

they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than "SU", "UAVG", "SA", or "SC" denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE:

UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took

effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

- a) a survey underlying a wage determination
- b) an existing published wage determination
- c) an initial WHD letter setting forth a position on a wage determination matter
- d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.

Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

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END OF GENERAL DECISION"

SECTION 00700 - GENERAL CONDITIONS

1. Definitions
2. Execution, Correlation and Intent of Documents
3. Starting the Project
4. Contract Documents
5. Contractor's Pre-Start Representations
6. Indemnity
7. Insurance
8. Guaranty Bond
9. Additional Bonds and Insurance
10. Availability of Lands
11. Unforeseen Physical Conditions
12. Reference Points
13. Superintendence - Supervision
14. Materials, Appliances, Employees
15. Substitute Materials or Equipment
16. Subcontracts
17. Patent Fees and Royalties
18. Permits, Laws and Regulations
19. Taxes
20. Safety and Protection
21. Shop Drawings and Samples
22. Record Drawings
23. Use of Premises
24. Cleaning
25. Work By Others
26. Architect's Status During Construction
27. Architect's Decision on Disagreements
28. Status of Architect's Project Representative
29. Changes in the Work
30. Changes of Contract Price
31. Cash Allowance
32. Delays and Extension of Time
33. Warranty and Guarantee
34. Tests and Inspections
35. Access to Work
36. Uncovering Work
37. Stopping the Work
38. Correction of Work Before Final Payment
39. One Year Correction Period
40. Acceptance of Defective Work
41. Neglected Work By Contractor
42. Application for Payment
43. Approval of Payments
44. Substantial Completion
45. Partial Utilization
46. Final Payment
47. Owner's Right to Suspend Work
48. Owner's Right to Terminate Contract
49. Contractor's Right to Stop Work or Terminate
50. Arbitration by Mutual Consent
51. Computation of Time
52. Assignments
53. Ownership of Drawings
54. Compliance With Prevailing Wage Law (Where Applicable)
55. Measurement and Computation of Quantities
56. Project Signs

1. Definitions

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

Addendum - Written or graphic instrument issued to the execution of the agreement which modifies or interprets the Contract Documents, drawings and specifications.

Agreement - The written agreement between Owner and Contractor covering the work to be performed; other Contract Documents are attached to the Agreement.

Application for Payment - the form furnished by Architect which is to be used by Contractor in requesting progress payments and which is to include the schedule of values required by Article 42.

Architect - The person, firm or corporation named as such in the Agreement.

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

Bidder - Any person, firm or corporation submitting a Bid for the work.

Bonds - Bid, performance and payment bonds and other instruments of security, furnished by Contractor and his surety in accordance with the Contract Documents.

Change Order - A written order to Contractor signed by Owner authorizing an addition, deletion or revision in the work, or an adjustment in the Contract Price or the Contract Time issued after execution of the Agreement.

Contract Documents - The Advertisement for Bids, Agreement, Addenda (whether issued prior to the opening of Bids or the execution of the Agreement), Instructions to Bidders, Contractor's Bid, the Bonds, the Notice of Award, these General Conditions, the Supplementary Conditions, the Specifications, Drawings and Modifications.

Contract Price - The total moneys payable to Contractor under the Contract Documents.

Contract Time - The number of days stated in the Agreement for the completion of the work.

Contractor - The person, firm or corporation with whom Owner has executed the Agreement.

Day - A calendar day of twenty-four hours measured from midnight to the next midnight.

Drawings - The drawings which show the character and scope of work to be performed and which have been prepared or approved by Architect and are referred to in the Contract Documents. Included with the plan sheet drawings are Atmos Energy drawings and standard details.

Field Order - A written order issued by Architect to the Contractor which clarifies or interprets the Contract Documents or orders minor changes in the work without involving a change in the contract price or time.

Modification - (a) A written amendment of the Contract Documents signed by both parties, (b) a Change Order, (c) a written clarification or interpretation issued by Architect, or (d) a written order for a minor change or alteration in the work issued by Architect. A Modification may only be issued after execution of the Agreement.

SECTION 00700 - GENERAL CONDITIONS

Notice of Award - The written notice by Owner to the apparent successful bidder stating that upon compliance with the conditions precedent to be fulfilled by him within the time specified Owner will execute the Agreement with him.

Notice to Proceed - A written notice given by Owner to Contractor (with a copy to Architect) fixing the date on which the contract time will commence to run and on which Contractor shall start to perform his obligations under the Contract Documents.

Owner - A public body or authority, corporation, association, partnership, or individual for whom the work is to be performed.

Project - The entire construction to be performed as provided in the Contract Documents.

Resident Project Representative - The authorized representative of Architect who is assigned to the Project site or any part thereof.

Shop Drawings - All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by Contractor, a Subcontractor, manufacturer, supplier or distributor and which illustrate the equipment, material or some portion of the work.

Specifications - Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the work. Included by reference are Atmos Energy gas system construction standards and specifications.

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

Substantial Completion - The date as certified by Architect when the construction of the project or a specified part thereof is sufficiently completed, in accordance with the Contract Documents, so that the project or specified part can be utilized for the purposes for which it was intended.

Work - Any and all obligations, duties and responsibilities necessary to the successful completion of the project assigned to or undertaken by Contractor under the Contract Documents, including all labor, materials, equipment and other incidentals, and the furnishing thereof.

Written Notice - A notice in writing to any party of the Agreement and considered delivered and the service thereof completed, when posted by certified or registered mail to said party at his last given address or delivered in person to said party or his authorized representative.

2. Execution, Correlation and Intent of Documents

At least six copies of the Agreement and such other Contract Documents as practicable will be executed and delivered to the Owner by the Contractor within ten days of the Notice of Award. Owner shall execute and deliver one counterpart to Contractor within ten days after receipt of the executed Agreement from Contractor. Architect will identify those portions of the Contract Document not signed and such identification will be binding on all parties.

Contractor shall also deliver to Owner such Bonds as he may be required to furnish when he delivers the executed agreement to Owner.

It is the intent of the Specifications and Drawings to describe a complete project to be constructed in accordance with the Contract Documents. The Contract Documents comprise the entire Agreement between Owner and Contractor. They may be altered only by a modification.

The Contract Documents are complementary; what is called for by one is as binding as if called for by all. If Contractor finds a conflict, error or discrepancy in the Contract Documents, he shall call it to Architect's

attention in writing at once and before proceeding with the work affected thereby; however, he shall not be liable to Owner or Architect for his failure to discover any conflict, error or discrepancy in the Specifications or Drawings. In resolving such conflicts, errors and discrepancies, the documents shall be given precedence in the following order: Agreement, Modifications, Addenda, Special Conditions, Information for Bidders, General Conditions, Specifications and Drawings. Figure dimensions on Drawings shall govern over general Drawings. Any work that may reasonably be inferred from the Specifications or Drawings as being required to produce the intended result shall be supplied whether or not it is specifically called for. Work, materials or equipment described in words which so applied have a well-known technical or trade meaning shall be deemed to refer to such recognized standards.

3. Starting the Project

Before undertaking each part of the work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures shown thereon and all applicable field measurements. He shall at once report in writing to Architect any conflict, error or discrepancy which he may discover; however, he shall not be liable to Owner or Architect for his failure to discover any conflict, error or discrepancy in the Drawings or Specifications.

Within ten days after delivery of the executed Agreement by Owner to Contractor, Contractor shall submit to Architect for approval, an estimated progress schedule indicating the starting and completion dates to the various stages of the Work, and a preliminary schedule of Shop Drawing submissions.

Before starting the Work at the site, Contractor shall furnish Owner and Architect certificates of insurance as required by Article 7. Within twenty days after delivery of the executed Agreement by Owner to Contractor, but before starting the work at the site, a conference will be held to review the above schedules to establish procedures for handling Shop Drawings and other submissions and for processing Applications for Payment, and to establish a working understanding between the parties as to the Project. Present at the conference will be Owner or his representative, Architect, Resident Project Representative, Contractor and his Superintendent.

Contractor shall start to perform his obligations under the Contract Documents on the date when the Contract Time commences to run. No Work shall be done at the site prior to the date on which the contract time commences to run.

4. Contract Documents

Unless otherwise provided in the Special Conditions, the Owner or his representative will furnish the Contractor, free of charge, up to six copies of drawings and specifications and other Contract Documents. Additional copies shall be provided for the cost of reproduction.

5. Contractor's Pre-Start Representations

Contractor represents that he has familiarized himself with, and assumes full responsibility for having familiarized himself with, the nature and extent of the Contract Documents. Work, locality, and with all local conditions and federal, state and local laws, ordinances, rules and regulations that may in any manner affect performance of the work, and represents that he has correlated his study and observations with the requirements of the Contract Documents. Contractor also represents that he has studied all surveys and investigation reports of subsurface and latent physical conditions referred to in the Plans and Specifications and made such additional surveys and investigations as he deems necessary for the performance for the work at the Contract Price in accordance with the requirements of the Contract Documents and that he has correlated the results of all such data with the requirements of the Contract Documents.

6. Indemnity

The Contractor shall indemnify and hold harmless the Owner and the Architect and their agents and employees from and against all claims, damages, losses and expenses including attorney's fees arising out of or resulting from the performance of the work, providing that any such claim, damage, loss or expense (a) is attributable to bodily injury, sickness, diseases or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom and (b) is caused in whole or in part by any negligent act or omission of the Contractor and Subcontractor, anyone directly or indirectly employed by any of them or any one for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.

In any and all claims against the Owner or the Architect or any of their agents or employees by any employee of the Contractor, any Subcontractor, any one directly or indirectly employed by any of them or any one for whose acts any of them may be liable, the indemnification obligation under these General Conditions shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under workmen's compensation acts, disability benefit acts or other employee benefit acts.

The obligations of the Contractor under these General Conditions shall not extend to the liability of the Architect, his agents or employees arising out of (a) the preparation or approval of maps, drawings, opinions, reports, surveys, Change Orders, designs or specifications or (b) the giving of or the failure to give instructions or directions by the Architect, his agents or employees provided such giving or failure to give is the primary cause of injury or damage.

7. Insurance

Contractor shall purchase and maintain such insurance as will protect him from claims under workmen's compensation laws, disability benefit laws or other similar employee benefit laws; from claims for damages because of bodily injury, occupational sickness or disease, or death of his employees, and claims insured by usual personal injury liability coverage; from claims for damages because of bodily injury, sickness or disease, or death of any person other than his employees including claims insured by usual personal injury liability coverage; and from claims for injury to or destruction of tangible property, including loss of use resulting therefrom -- any or all of which arise out of or result from Contractor's operations under the Contract Documents, whether such operations be by himself or by any Subcontractor or anyone directly or indirectly employed by any of them or for whose acts any of them may be legally liable. This insurance shall include the specific coverages and be written for not less than any limits of liability and maximum deductibles specified in the Special Conditions or required by law, whichever is greater, shall include contractual liability insurance and shall include Owner and Architect as additional insured parties. Before starting the Work, Contractor shall file with Owner and Architect certificates of such insurance, acceptable to Owner; these certificates shall contain a provision that the coverage afforded under the policies will not be canceled or materially changed until at least fifteen days' prior written notice has been given to Owner and Architect.

The Contractor shall procure and maintain, at his own expense, during the contract time, liability insurance as hereinafter specified; and in the amounts listed in the Special Conditions.

- a. Compensation Insurance - The Contractor shall take out and maintain during the life of this contract Workmen's Compensation Insurance for all of his employees employed at the site of the project, and, in case any work is sublet, the Contractor shall require the subcontractor similarly to provide Workmen's Compensation Insurance for all of the latter's employees unless such employees are covered by the protection afforded by the Contractor.
- b. Public Liability and Property Damage Insurance - The Contractor shall take out and maintain during the life of this contract such Public Liability and Property Damage Insurance as shall protect him and any subcontractor performing work covered by this contract, from claims for

damages for personal injury, including accidental death, as well as for claims for property damages which may arise from operations under this contract, whether such operations be by himself or by any subcontractor or by anyone directly or indirectly employed by either of them. The insurance will include as additional named insured: the Owner and Architect and his Consultants; and each of their officers, agents and employees.

- c. Contingent Public Liability and Property Damage Insurance - If any subcontracts are awarded, subparagraph "b" above shall be interpreted to require that the General Contractor shall take out and maintain Contractor's contingent public liability and property damage insurance in the amounts required under the "Special Conditions".
- d. Builder's Risk Insurance or Installation Floater - The Contractor shall provide "All Risk" type Builder's Risk Insurance including coverage for fire, lightning, explosion, wind, hail, riot, aircraft, smoke, collapse, extended coverage, vandalism and malicious mischief. Unless specifically authorized by the Owner, the amount of such insurance shall not be less than the contract price totaled in the bid. Deductible amount shall not exceed \$250.

In case of pipeline contracts, this coverage shall be provided by an installation floater for the full cash value of materials and accessories on hand to be used in conjunction with the project. Coverage shall include insuring against transportation loss or damage. The policy shall name as the insured the Contractor, the Architect and the Owner.

- e. Railroad Protective Liability Insurance - Where work on railroad rights-of-way is involved, the Contractor shall also be covered by Railroad Protective Liability Insurance with limits of liability as required by the railroad company on whose property the work is being performed.
- f. Flood Hazard Insurance - The Contractor will be required to acquire and maintain during the life of the Contract any flood insurance made available under the National Flood Insurance Act of 1968, as amended. The insurance shall be in an amount at least equal to the contract amount costs excluding cost of uninsurable improvements, or to the maximum limit of coverage made available under the National Flood Insurance Act of 1968, as amended, whichever is less.

8. Guaranty Bond

Contractor shall furnish performance and payment bond as security for the faithful performance and payment of all his obligations under the Contract Documents. These Bonds shall be in amounts at least equal to the contract price, and (except as otherwise provided in the Supplementary Conditions) in such form and with such sureties as are licensed to conduct business in the state where the project is located and are named in the current list of "Surety Companies Acceptable on Federal Bonds" as published in the Federal Register by the Audit Staff Bureau of Accounts, U.S. Treasury Department.

If the surety on any Bond furnished by Contractor is declared a bankrupt or becomes insolvent or its rights to do business is terminated in any state where any part of the Project is located is revoked, Contractor shall within five days thereafter substitute another Bond and Surety, both of which shall be acceptable to Owner.

9. Additional Bonds and Insurance

Prior to delivery of the executed Agreement by Owner to Contractor, Owner may require Contractor to furnish such other Bonds and such additional insurance, in such form and with such sureties or insurers as Owner may require. If such other Bonds or such other insurance are specified by written instructions given prior to opening of bids, the premiums shall be paid by Contractor: if subsequent thereto, they shall be paid by Owner (except as otherwise provided in Article 15.)

10. Availability of Lands

Prior to issuance 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.

The Owner shall provide the Contractor information which delineates and describes the land owned and rights-of-way acquired.

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.

11. Unforeseen Physical Conditions

Contractor shall promptly notify Owner and Architect in writing of any subsurface or latent physical conditions at the site differing materially from those indicated in the Contract Documents. Architect will promptly investigate those conditions and advise Owner in writing if further surveys or subsurface test are necessary. Promptly thereafter, Owner shall obtain the necessary additional surveys and tests and furnish copies to Architect and Contractor. If Architect finds that the results of such surveys or test indicate that there are subsurface or latent physical conditions which differ materially from those intended in the Contract Documents, and which could not reasonably have been anticipated by Contractor, a Change Order shall be issued incorporating the necessary revisions.

12. Reference Points

Owner shall provide Architecting surveys for construction to establish reference points which in his judgment are necessary to enable Contractor to proceed with the work. Contractor shall be responsible for surveying and laying out the work (unless otherwise provided in the Special Conditions), and shall protect and preserve the established reference points and shall make no changes or relocations without the prior written approval of Owner. He shall report to Architect whenever any reference point is lost or destroyed or requires relocation because of necessary changes in grades or location. Contractor shall replace and accurately relocate all reference points so lost, destroyed or moved.

13. Superintendence - Supervision

The Contractor shall keep on his work, during its progress, a competent Superintendent and any necessary assistants, all satisfactory to the Architect. The Superintendent shall not be changed without written notice to the Owner and Architect except under extraordinary circumstances. The Superintendent shall represent the Contractor in his absence and all directions given to him shall be as binding as if given to the Contractor.

The Contractor shall give efficient supervision to the Work, using his best skill and attention. He shall be solely responsible for the means, methods, techniques, sequences and procedures of construction, but he shall not be solely responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence or procedure of construction which is indicated in and required by the Contract Documents. Contractor shall be responsible to see that the finished Work complies accurately with the Contract Documents.

The Contractor shall see that for his own Work and for the Work of each subcontractor, proper templates and patterns necessary for the coordination of the various parts of the Work are prepared, and shall furnish, or require subcontractors to fit together and execute fully their respective portions of the Work.

14. Materials, Appliances, Employees

The Contractor shall provide and pay for all materials, labor, water tools, appliances, fuel, heat, sanitary facilities, equipment, light, power, telephone, transportation and other facilities necessary for the execution, testing, initial operation and completion of the Work.

Approval of manufacturer's Shop Drawings of materials and equipment shall not mean final acceptance, but they shall be subject to inspection and test or delivery and installation. The Contractor shall repair, replace, or adjust any materials or equipment found defective or not operating properly, due to improper materials, workmanship, and adjustment on his part, during the correction period.

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.

Manufactured articles, materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directly by the manufacturer.

The Contractor shall provide competent, suitably qualified personnel to survey and lay out the work and perform construction as required by the Contract Documents. The Contractor shall at all times enforce strict discipline and good order among his employees, and shall not employ on the work any unfit person or anyone not skilled in the work assigned to him.

15. Substitute Materials or Equipment

Wherever the words "or equal", appear in the Specifications or on the Drawings, they shall be interpreted to mean an item of material or equipment equal in quality to that named and which is suited to the same use and capable of performing the same function as that named.

The burden of proof of equal quality or service shall be on the Contractor. Proof of inequality is not implied by the Specifications and is not a burden of the Architect. His duty shall be to properly weigh the proven facts of equality in fairness to all parties involved.

Inclusion of a certain make or type of materials or equipment in Contractor's bid or estimate shall not obligate the Owner to accept such material or equipment if it does not meet the requirements of the Plans and Specifications.

If the Contract, Specifications, law, ordinance or applicable rules or regulations permit Contractor to furnish or use a substitute that is equal to any material or equipment specified, and if Contractor wishes to furnish or use a proposed substitute, he shall prior to 30 days before such substitute is required make written application to Architect for approval of such a substitute certifying in writing that the proposed substitute will perform adequately the functions called for by the general design, be similar and of equal substance to that specified and be suited to the same use and capable of performing the same function as that specified; stating whether or not its incorporation in or use in connection with the project is subject to the payment of any license fee or royalty; and identifying all variations of the proposed substitute from that specified and indicating available maintenance service. No substitute shall be ordered or installed without the written approval of Architect who will be the judge of equality and may require Contractor to furnish such other data about the proposed substitute as he considers pertinent. No substitute shall be ordered or installed without such performance guarantee and bonds as Owner may require which shall be furnished at Contractor's expense.

In case where one or more specified brands, makes or manufacturers are named and these names are not qualified by the "or equal" clause, it is intended that the Contractor be restricted to one of those named unless otherwise set out.

16. Subcontracts

Contractor shall not employ any Subcontractor or other person or organization (including those who are to furnish the principal items of materials or equipment), whether initially or as a substitute, against whom Owner or Architect may have reasonable objection.

The Contractor will not be permitted to sublet any portion of his contract to any individual, co-partnership or corporation without the prior written consent of the Owner and the approval of the Architect.

The Contractor shall not sublet more than fifty percent (50%) of the work without the written consent of the Owner and approval of the Architect prior to the receipt of bids.

Contractor shall be fully responsible for all acts and omissions of his Subcontractor and of persons and organizations directly or indirectly employed by them and of persons and organizations for whose acts any of them may be liable to the same extent that he is responsible for the acts and omissions of persons directly employed by him. Nothing in the Contract Documents shall create contractual relationship between Owner or Architect and any Subcontractor or other person or organization having a direct contract with Contractor, nor shall it create any obligation on the part of Owner or Architect to pay or to see to the payment of any moneys due any Subcontractor or other persons or organization, except as may otherwise be required by law. Owner or Architect may furnish to any Subcontractor or other person or organization, to the extent practicable, evidence of amounts paid to Contractor on account of specific Work done in accordance with the schedule of values.

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

Contractor agrees to bind specifically every Subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of Owner.

All work performed for Contractor by a Subcontractor shall be pursuant to an appropriate agreement between Contractor and the Subcontractor which shall contain provisions that waive all rights the contracting parties may have against one another for damages caused by fire or other perils covered by insurance provided in accordance with Article 7, except such rights as they may have to the proceeds of such insurance held by Owner as trustee.

17. Patent Fees and Royalties

Contractor shall pay all license fees and royalties and assume all costs incidental to the use in the performance of the work of any invention, design, process, product or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner or Architect its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents. Contractor shall indemnify and hold harmless Owner and Architect and anyone directly or indirectly employed by either of them from and against all claims, damages, losses and expenses (including attorney's fees) arising out of any infringement of patent rights or copyrights incidental to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product or device not specified in the Contract Documents, and shall defend all such claims in connection with any alleged infringement of such rights.

18. Permits, Laws and Regulations

Contractor shall obtain and pay for all construction permits and licenses and shall pay all governmental charges and inspection fees necessary for the prosecution of the Work, which are applicable at the time of

his bid. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall also pay all public utility charges.

Contractor shall give all notices and comply with all laws, ordinances, rules and regulations applicable to the Work. If Contractor observes that the specifications or drawings are at variance therewith, he shall give the Architect prompt written notice thereof, and any necessary changes shall be adjusted by an appropriate modification. If Contractor performs any Work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to Architect, he shall bear all costs arising therefrom; however, it shall not be his primary responsibility to make certain that the Specifications and Drawings are in accordance with such laws, ordinances, rules and regulations.

19. Taxes

Contractor shall pay all sales, consumer use and other similar taxes required to be paid by him in accordance with the law of the place where the Work is to be performed.

20. Safety and Protection

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. He shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

- a. All employees on the Work and other persons who may be affected thereby.
- b. All the Work and all materials or equipment to be incorporated therein, whether in storage on or off the site.
- c. Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

The Contractor shall comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. He shall erect and maintain, as required by the conditions and progress of the Work, all necessary safeguards for its safety and protection. He shall notify owners of adjacent utilities when prosecution of the work may affect them. All damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, shall be remedied by Contractor; except damage or loss attributable to the fault of Owner or Architect 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 Contractor. Contractor's duties and responsibilities for the safety and protection of the Work shall continue until such time as all the Work is completed and Architect has issued a notice to Owner and Contractor that the Work is acceptable.

Contractor shall designate a responsible member of his organization at the site whose duty shall be the prevention of accidents. This person shall be Contractor's Superintendent unless otherwise designated in writing by Contractor to Owner

In emergencies affecting the safety of persons or the Work or property at the site or adjacent thereto, Contractor, without special instruction or authorization from Architect or Owner, is obligated to act, at his discretion, to prevent threatened damage, injury or loss. He shall give Architect prompt written notice of injury or loss. He shall give Architect prompt written notice of any significant changes in the Work or deviations from the Contract Documents caused thereby, and Change Order shall thereupon be issued covering the changes and deviations involved. If Contractor believes that additional Work done by him in an emergency which arose from causes beyond his control entitles him to an increase in the Contract

Price or an extension of the Contract Time, he may make a claim therefor as provided in these Specifications.

21. Shop Drawings and Samples

After checking and verifying all field measurements, the Contractor shall submit with such promptness as to cause no delay in the Work two (2) copies of all Shop Drawings and schedules required for the Work, and the Architect will pass upon them with reasonable promptness, making necessary corrections. The Contractor shall then revise the drawings as required by the Architect and file with him five (5) corrected copies for final approval (or one (1) reproducible copy).

Drawings shall have been checked by and stamped with the approval of Contractor and identified as Architect may require. The data shown on the Shop Drawings will be complete with respect to dimensions, design criteria, materials of construction and the like to enable Architect to review the information as required.

The Contractor shall also submit to Architect for approval with such promptness as to cause no delay in work, all samples required by the Contract Documents. All samples will have been checked by and stamped with the approval of Contractor, identified clearly as to material, manufacturer, any pertinent catalog numbers and the use for which intended.

At the time of each submission, Contractor shall in writing call Architect's attention to any deviations that the Shop Drawings or sample may have from the requirement of the Contract Documents.

The Architect will review and approve with reasonable promptness Shop Drawings and samples, but his review and approval shall be only for conformance with the design concept of the project and for compliance with the information given in the Contract Documents. The approval of a separate item as such will not indicate approval of the assembly in which the item functions. Contractor shall make any corrections required by Architect and shall return the required number of corrected copies of Shop Drawings and resubmit new samples until approved. Contractor shall direct specific attention in writing or on resubmitted Shop Drawings to revisions other than the corrections called for by Architect on previous submissions. Contractor's stamp of approval on any Shop Drawing or sample shall constitute a representation to Owner and Architect that Contractor has either determined and verified all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar data or he assumes full responsibility for doing so, and that he has reviewed or coordinated each Shop Drawing or sample with therequirements of the Work and the Contract Documents.

Where a Shop Drawing or sample submission is required by the Specifications, no related Work shall be commenced until the submission has been approved by Architect. A copy of each approved Shop Drawing and each approved sample shall be kept in good order by Contractor at the site and shall be available to Architect.

The following items of Work and other such items as required shall have Shop Drawings submitted:

- a. All concrete reinforcement, water stops, pre cast concrete and location of construction joints.
- b. Structural steel, miscellaneous metal and fencing.
- c. Windows and doors.
- d. Piping layouts, including small piping layouts.
- e. Mechanical equipment.
- f. Pumps and related equipment, including pump control equipment.

- g. Building service equipment.
- h. Control and instrumentation, metering equipment.
- i. Electrical equipment and wiring diagrams.
- j. Plumbing, heating, ventilating and air conditioning equipment.

No fabrication, erection, installation or construction shall commence until drawings and details have been approved by the Architect.

Architect's approval of Shop Drawings or samples shall not relieve the Contractor from his responsibility for any deviations from the requirements of the Contract Documents unless Contractor has in writing called Architect's attention to such deviation at the time of submission and Architect has given written approval to the specific deviation, nor shall any approval by Architect relieve Contractor from responsibility for errors or omissions in the Shop Drawings.

22. Record Drawings

The Contractor shall keep an accurate record of the location, size, and material for all piping, both interior and exterior, concealed and exposed; size and routing of conduits, size and location of pull boxes and number and size of conductors installed therein; and changes in equipment dimensions, structural openings, foundations and any other variations between the Work actually provided and that shown on the Contract Drawings. The representation of such variations shall conform to standard drafting practices and shall include such supplementary notes, legends and details as may be necessary for legibility and clear portrayal of the as-built construction. Upon completion, the Contractor shall have these drawings and records certified as to their completeness and correctness by the Resident Inspector and deliver them to the Architect for incorporation into the tracings. Final As-Built alignment, invert elevations and locations including the location of service connections for water and sewer lines are to be supplied by the Contractor.

As-Built information shall be provided monthly to the Architect and submitted with the partial pay request.

23. Use of Premises

The Contractor shall confine his apparatus, the storage of materials and the operation of his workmen to limits indicated by law, ordinances, permits or direction of the resident Architect and shall not unreasonably encumber the premises with his materials.

The Contractor shall not load or permit any part of any structure to be loaded with weights that will endanger the structure, nor shall he subject any part of the Work to stresses or pressures that will endanger it.

The Contractor shall enforce all applicable regulations and any additional requirements of the Owner regarding signs, advertisements, fires and smoking.

24. Cleaning

Contractor shall keep the premises free from accumulations of waste materials, rubbish and other debris resulting from the Work, and at the completion of the Work he shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, construction equipment and machinery, and surplus materials, and shall leave the site clean and ready for occupancy by Owner. Contractor shall restore to their original condition those portions of the site not designated for alteration by the Contract Documents.

25. Work By Others

The Owner reserves the right to perform additional work related to the project by himself or to let other contracts in connection with the Work. 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 any part of the Contractor's Work depends on proper execution or results upon the Work of any other Contractor, the Contractor shall inspect and promptly report to the Architect any defects in such Work that render it unsuitable for such proper execution and results. His failure to inspect and report shall constitute an acceptance of the other Contractor's Work as fit and proper for the reception of his Work, except as to defect which may develop in the other Contractor's Work after the execution of his Work.

To ensure the proper execution of this subsequent Work, the Contractor shall measure Work already in place and shall at once report to the Architect any discrepancy between the executed Work and the Drawings.

Whenever Work being done by the Owner's forces or by other Contractors is contiguous to Work covered by this Contract, the respective rights of the various interest involved shall be established by the Architect, to secure the completion of the various portion of the Work in general harmony.

The Contractor shall do all cutting, fitting and patching of his Work that may be required to make its several parts come together properly and fit it to receive or be received by such other Work. Contractor shall not endanger any Work of others by cutting, excavating or otherwise altering their Work and will only cut or alter their Work with the written consent of Architect and of the other Contractors whose Work will be affected.

If the performance of additional Work by other Contractors or Owner is not noted in the Contract Documents prior to the execution of the contract, written notice thereof shall be given to Contractor prior to starting any such additional Work. If Contractor believes that the performance of such additional Work by Owner or others involves him in additional expense or entitles him to an extension of the Contract Time, he may make a claim thereof as provided in these Specifications.

26. Architect's Status During Construction

The Architect will be the Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of the Architect as Owner's representative during construction as defined in these General Conditions shall not be extended without written consent of the Owner and the Architect.

The Architect will make periodic visits to the site to observe the progress and quality of the executed Work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents. He will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. His efforts will be directed toward providing assurance for Owner that the completed project will conform to the requirements as an experienced and qualified design professional, he will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defects and deficiencies in the Work of Contractors.

The Architect will issue with reasonable promptness such written clarifications or interpretations of the Contract Documents (in the form of Drawings or otherwise) as he may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents. If Contractor believes that a written clarification and interpretation entitles him to an increase in the Contract Price, he may make claim therefore, as provided in these Specifications.

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The Architect will have authority to disapprove or reject Work which is "defective" (which term is hereinafter used to describe Work that is unsatisfactory, faulty or defective, or does not conform to the requirements of the Contract Documents or does not meet the requirements of any inspection, test or approval referred to in these Specifications or has been damaged prior to approval of final payment.) He will also have authority to require special inspection or testing of the Work as provided in these specifications whether or not the Work is fabricated, installed or completed.

The Architect is responsible for review and approval of Shop Drawings and samples in accordance with Article 21 of these General Conditions.

The Architect has responsibilities for preparation of Change Orders for execution by the Owner in accordance with Article 29 of these General Conditions.

In accordance with Article 27 of these General Conditions, the Architect shall decide claims of the Owner or Contractors and interpret the Contract Documents.

The Architect shall faithfully discharge his responsibilities with regard to Applications for Payment as described in Articles 42, 43, 44 and 46 of these General Conditions.

If Owner and Architect agree, the Architect will furnish a Resident Project Representative and/or inspector to assist the Architect in carrying out his responsibilities at the site. The duties, responsibilities and authority of any such representative shall be as set forth in Article 28 of these General Conditions.

Neither Architect's authority to act under this Article 26 or elsewhere in the Contract Documents nor any decision made by him in good faith either to exercise or not exercise such authority shall give rise to any duty or responsibility of Architect to Contractor, any Subcontractor, any material man, fabricator, supplier, or any of their agents or employees or any other person performing any of the work.

The Architect will not be responsible for Contractor's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, and he will not be responsible for Contractor's failure to perform the work in accordance with the Contract Documents.

The Architect will not be responsible for the acts or omissions of Contractor, or any Subcontractors, or any of his or their agents or employees, or any other persons at the site or otherwise performing any of the work.

27. Architect's Decision on Disagreements

Architect will be the interpreter of the requirements of the Contract Documents and the judge of the performance thereunder. In his capacity as interpreter and judge, he will exercise his best efforts to insure faithful performance by both Owner and Contractor. He will not show partiality to either and will not be liable for the result of any interpretation or decision rendered in good faith. Claims, disputes and other matters relating to the execution and progress of the work or the interpretation of or performance under the Contract Documents shall be referred to Architect for decision; which he will render in writing within a reasonable time.

Either Owner or Contractor may request arbitration with respect to any such claim, dispute or other matter that has been referred to Architect, except any which have been waived by the making or acceptance of final payment as provided in Article 46, such arbitration to be in accordance with Article 50. However, no request for arbitration of any such claim, dispute or other matter shall be made until the earlier of (a) the date on which Architect has rendered his decision, or (b) the tenth day after parties have presented their evidence to Architect if he has not rendered his written decision before that date. No request for arbitration shall be made later than thirty days after the date on which Architect rendered his written decision in respect of the claim, dispute or other matter as to which arbitration is sought; and the failure to request arbitration within said thirty days' period shall result in Architect's decision being final and binding upon Owner and Contractor. If Architect renders a decision after arbitration proceedings have been

initiated, such decision may be entered as evidence but shall not supersede the arbitration proceedings, except where the decision is acceptable to the parties concerned.

28. Status of Architect's Project Representative

Resident Project Representative is Architect's Agent and shall act as directed by and under the supervision of Architect. He shall confer with Architect regarding his actions. His dealings in matters pertaining to the on-site work will in general be only with Architect and Contractor. His dealings with Subcontractors will only be through or with the full knowledge of Contractor or his Superintendent. He shall generally communicate with Owner only through or as directed by Architect.

Resident Project Representative shall:

- a. Schedules: Review the progress schedule, schedule of Shop Drawing submissions, schedule of values and other schedules prepared by Contractor and consult with Architect concerning their acceptability.
- b. Conferences: Attend pre construction conferences. Arrange a schedule of progress meetings and other job conferences as required in consultation with Architect and notify in advance those expected to attend. Attend meetings, and maintain and circulate copies of minutes thereof.
- c. Liaison:
 1. Serve as Architect's liaison with Contractor working principally through Contractor's Superintendent and assist him in understanding the intent of the Contract Documents. Assist Architect in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-site operations.
 2. As requested by Architect, assist in obtaining from Owner additional details or information, when required at the job site for proper execution of the work.
 3. In the interest of preserving the proper channels of communication, advise Architect of any direct communication between Owner and Contractor.
- d. Shop Drawings and Samples:
 1. Receive and record date of receipt of Shop Drawings and samples which have been approved by Architect.
 2. Receive samples which are furnished at the site by Contractor for Architect's approval, and notify Architect of their availability for examination.
 3. Advise Architect and Contractor or his Superintendent immediately of the commencement of any Work requiring a Shop Drawing or sample submission if the submission has not been approved by Architect.
- e. Review of Work, Rejection of Defective Work, Inspections and Tests:
 1. Conduct on-site observations of the Work in progress to assist Architect in determining that the project is proceeding in accordance with the Contract Documents and that completed Work will conform to the Contract Documents.
 2. Report to Architect whenever he believes that any Work is unsatisfactory, faulty or defective or does not conform to the Contract Documents, or has been damaged, or does not meet the requirements of any inspections, tests or approvals required to be made;

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and advise Architect when he believes Work should be corrected or rejected or should be uncovered for observation, or requires special testing or inspection.

3. Verify that tests, equipment and system's startups and operating and maintenance instructions are conducted as required by the Contract Documents and in presence of the required personnel, and that Contractor maintains adequate records thereof; observe, record and report to Architect appropriate details relative to the test procedures and startups.
 4. Accompany Owner and visiting inspectors representing public or other agencies having jurisdiction over the Project, record the outcome of these inspections and report to Architect.
- f. Interpretation of Contract Documents: Transmit to Contractor clarification and interpretation of the Contract Documents as issued by Architect.
- g. Modifications: Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report them with recommendations to Architect.
- h. Records:
1. Maintain at the job site orderly files for correspondence, reports of job conferences, Shop Drawings and sample submissions, reproductions of original Contract Documents including all addenda, change orders, field orders, additional Drawings issued subsequent to the execution of the Contract, Architect's clarifications and interpretations of the Contract Documents, progress reports and other project-related documents.
 2. Keep a diary or log book, recording hours on the job site, weather conditions, data relative to questions of extras or deductions, list of principal visitors, daily activities, decisions, observations in general and specific observations in more detail as in the case of observing test procedures. Send Copies to Architect.
 3. Record names, address and telephone numbers of all Contractors, Subcontractors and major suppliers of equipment and materials.
 4. Advise Architect whenever Contractor is not currently maintaining an up-to-date copy of Record Drawings at the site.
- i. Reports:
1. Furnish Architect periodic reports as required of progress of the Work and of Contractor's compliance with the approved progress schedule, schedule of Shop Drawing submissions and other schedules.
 2. Consult with Architect in advance of scheduled major tests, inspections or start of important phases of the Work.
- j. Payment Requisitions: Review Applications for Payment with Contractor for compliance with the established procedure for their submission and forward them with recommendations to Architect, noting particularly their relation to the schedule of values, Work completed and materials and equipment delivered at the site.
- k. Guarantees, Certificates, Maintenance and Operation Manuals: During the course of the Work verify that guarantees, certificates, maintenance and operation manuals and other data required to be assembled and furnished by Contractor are applicable to the items actually installed and

deliver these data to Architect for his review and forwarding to Owner prior to final acceptance of the Project.

I. Completion:

1. Before Architect issues a Certificate of Substantial Completion, submit to Contractor a list of observed items requiring correction.
2. Conduct final inspection in the company of Architect, Owner and Contractor and prepare a final list of items to be corrected.
3. Verify that all items on final list have been corrected and make recommendations to Architect concerning acceptance.

Except upon written instructions of Architect, Resident Project Representative:

- a. Shall not authorize any deviation from the Contract Documents or approve any substitute materials or equipment.
- b. Shall not undertake any of the responsibilities of Contractor, Subcontractor or Contractor's Superintendent.
- c. Shall not expedite Work for the Contractor.
- d. Shall not advise on or issue directions relative to any aspect of the means, methods, techniques, sequences or procedures of construction unless such is specifically called for in the Contract Documents.
- e. Shall not advise on or issue directions as to safety precautions and programs in connection with the Work.
- f. Shall not authorize Owner to occupy the Project in whole or in part.
- g. Shall not participate in specialized field or laboratory tests or inspections conducted by others.
- h. Shall not assist Contractor in maintaining up-to-date copy of Record Drawings.

29. Changes in the Work

Without invalidating the Agreement, Owner may, at any time or from time to time, order additions, deletions or revisions in the Work; these will be authorized by Change Orders. Upon receipt of a Change Order, Contractor shall proceed with the Work involved. All such Work shall be executed under the applicable conditions of the Contract Documents. If any Change Order causes an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, an equitable adjustment will be made as provided in Article 30 on the basis of a claim made by either party.

Architect may authorize minor changes or alterations in the Work not involving extra cost and not inconsistent with the overall intent of the Contract Documents. These may be accomplished by a Field Order. If Contractor believes that any minor change or alteration authorized by Architect entitles him to an increase in the Contract Price, he may make a claim therefore, as provided in Article 30.

Additional work performed by Contractor without authorization of a Change Order will not entitle him to an increase in the Contract Sum or an extension of the Contract Time, except in the case of an emergency as provided in Article 20.

Owner shall execute appropriate Change Orders prepared by Architect covering changes in the Work to be performed, work performed in an emergency and any other claim of the Contractor for a change in the Contract Time or the Contract Sum which is approved by the Architect.

It is the Contractor's responsibility to notify his surety of any changes affecting the general scope of the Work or change in the Contract Sum and the amount of the applicable bonds shall be adjusted accordingly. Contractor shall furnish proof of such adjustment to Owner.

30. Changes of Contract Price

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

The Contract Price may only be changed by a Change Order. Any claim for an increase in the Contract Price shall be based on written notice delivered to Owner and Architect within fifteen days of the occurrence of the event giving rise to the claim. Notice of the amount of the claim with supporting data shall be delivered within forty-seven days of such occurrence unless Architect allows an additional period of time to ascertain accurate cost data. All claims for adjustment in the Contract Price shall be determined by Architect if Owner and Contractor cannot otherwise agree on the amount involved. Any change in the Contract Price resulting from any such claim shall be incorporated in a Change Order.

The value of any Work covered by a Change Order shall be determined in one or more of the following ways:

- a. By estimate and mutual acceptance in a lump sum.
- b. By unit prices named in the Contract or subsequently agreed upon.
- c. On the basis of the cost of the Work plus a Contractor's fee for overhead and profit as provided in this Article.

In Case "c", the Contractor shall keep and present in such form as the Architect may direct, a correct account of all items comprising the net cost of such work, together with vouchers. The determination of the Architect shall be final upon all questions of the amount and cost of extra work and changes in the work.

The term Cost of the Work means the sum of all costs necessarily incurred and paid by the Contractor in the proper performance of the Work. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items and shall not include any of the costs itemized in paragraph 30.6.

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

30.2 Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and manufacturer's field service required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and

refunds, and all returns from sale of surplus materials and equipment shall accrue to Owner and Contractor shall make provisions so that they may be obtained.

30.3 Payments made by Contractor to the Subcontractors for work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from Subcontractors acceptable to him and shall deliver such bids to Owner who will then determine with the advice of Architect, which bids will be accepted. If a subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work, plus a Fee, the Cost of the Work shall be determined in accordance with paragraphs 30.4 and 30.5. All subcontracts shall be subject to the other provisions of the Contract Documents insofar as applicable.

30.4 Cost of special consultants (including, but not limited to, Architects, architects, testing laboratories, surveyors, lawyers and accountants) employed for services specifically related to the Work.

30.5 Supplemental costs including the following:

The proportions of necessary transportation, traveling and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

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

Rentals of all construction equipment and machinery and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Architect and the costs of transportation (shall not exceed 100 miles), loading, unloading, installation, dismantling and removing thereof ; all in accordance with terms of said rental agreements. The rental of any such equipment, machinery or parts shall cease when the use thereof is no longer necessary for the Work.

Sales, use or similar taxes related to the Work, and for which Contractor is liable, imposed by any governmental authority.

Deposits lost for causes other than Contractor's negligence, royalty payments and fees for permits and licenses.

Losses, damages and expenses, not compensated by insurance or otherwise, sustained by Contractor in connection with the execution of, and to, the Work, provided they have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's Fee. If, however, any such loss or damage requires reconstruction and Contractor is placed in charge thereof, he shall be paid for his services a fee proportionate to that stated in paragraph 30.6.

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

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

Cost of premiums for bonds and insurance which Owner is required to pay.

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

Payroll costs and other compensation of Contractor's officers, executives, principals (of partnership and sole proprietorships), general managers, Architects, architects, estimators, lawyers, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by

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Contractor whether at the site or in his principal or a branch office for general administration of the work and not specifically included in the schedule referred to in subparagraph 30.1 -- all of which are to be considered administrative costs covered by the Contractor's Fee.

Expenses of Contractor's principal and branch offices other than his office at the site.

Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the work and charges against Contractor for delinquent payments.

Cost of premiums for all bonds and for all insurance policies whether or not Contractor is required by the Contract Documents to purchase and maintain the same (except as otherwise provided in subparagraph 30.5).

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

Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraphs 30.1 - 30.5.

30.7 The Contractor's Fee which shall be allowed to Contractor for his overhead and profit shall be determined as follows:

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

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

- a. For costs incurred under paragraph 30.1 and 30.2, the Contractor's Fee shall be ten (10%) percent.
- b. For costs incurred under paragraph 30.3, the Contractor's Fee shall be five (5%) percent; and if a subcontract is on the basis of Cost Plus a Fee, the maximum allowable to the subcontractor as a fee for overhead and profit shall be ten (10%) percent.
- c. No fee shall be payable on the basis of costs itemized under paragraph 30.4, 30.5 and 30.6.

The amount of credit to be allowed by Contractor to Owner for any such change which results in a new decrease in cost will be the amount of the actual net decrease. When both additions and credits are involved in any one change, the combined overhead and profit shall be figured on the basis of the net increase, if any.

Whenever the cost of any work is to be determined pursuant to Article 30, Contractor will submit in form prescribed by the Architect an itemized cost breakdown together with supporting data.

In all cases where Extra Work or Changes are covered by unit prices set forth in the Contract, the value of such Extra Work or Changes shall be determined only upon the basis of such unit prices.

Pending final determination of value, payments on accounts of Extra Work or Changes shall be made only upon the estimate of the Architect.

30.8 All Change Orders to the construction contract (if required) must be negotiated pursuant to 40 CFR 35.938.5.

31. Cash Allowance

The Contractor shall include in the contract sum all allowances named in the Contract Documents and shall cause the Work so covered to be done by such Contractors and for such sums as the Architect may direct, the contract sum being adjusted in conformity therewith. The Contractor declares that the contract sum includes such sums for expenses and profit on account of cash allowance as he deems proper. No demand for expense or profit other than those included in the contract sum shall be allowed.

32. Delays and Extension of Time

The Contract Time may only be changed by a Change Order. Any claim for an extension in the Contract Time shall be based on written notice delivered to Owner and Architect within fifteen (15) days of the occurrence of the event giving rise to the claim. Notice of the extent of the claim with supporting data shall be delivered within forty-five (45) days of such occurrence unless Architect allows an additional period of time to ascertain more accurate data. All claims for adjustment in the Contract Time shall be determined by Architect if Owner and Contractor cannot otherwise agree. Any change in the Contract Time resulting from any such claim shall be incorporated in a Change Order.

The Contract Time will be extended in an amount equal to time lost due to delays beyond the control of Contractor if he makes a claim therefore as provided in this Article. Such delays shall include, but not be restricted to, acts or neglect by any separate Contractor employed by Owner, fires, floods, labor disputes, epidemics, abnormal weather conditions, or acts of God.

All time limits stated in the Contract Documents are of the essence of the Agreement. The provisions of this Article shall not exclude recovery for damages (including compensation for additional professional services) for delay by either party.

33. Warranty and Guarantee

Contractor warrants and guarantees to Owner and Architect that all materials and equipment will be new unless otherwise specified and that all work will be of good quality and free from faults or defects and in accordance with the requirements of the Contract Documents and of any inspections, tests or approval referred to in Article 34. All unsatisfactory Work, all faulty or defective Work, and all Work not conforming to the requirements of the Contract Documents at the time of acceptance thereof or of such inspection, tests or approvals, shall be considered defective. Prompt notice of all defects shall be given to Contractor. All defective Work, whether or not in place, may be rejected, corrected or accepted as provided in these Contract Documents.

34. Tests and Inspections

If the Contract Documents, Laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any Work to specifically be inspected, tested, or approved by some public body, Contractor shall assume full responsibility therefor, pay all costs in connection therewith and furnish Architect the required certificates of inspection, testing or approval. All other inspections, tests and approvals required by the Contract Documents shall be performed by organizations acceptable to Owner and Contractor and the costs thereof shall be borne by Owner unless otherwise specified.

The Contractor shall give Architect timely notice of readiness of the Work for all inspections, tests or approvals. If such Work required so to be inspected, tested or approved is covered without written approval of Architect, it must, if requested by Architect, be uncovered for observation, and such uncovering shall be at Contractor's expense unless Contractor has given Architect timely notice of his intention to cover such Work and Architect has not acted with reasonable promptness in response to such notice.

Neither observations by Architect nor inspections, tests or approvals by persons other than Contractor shall relieve Contractor from his obligations to perform the Work in accordance with the requirements of the Contract Documents.

35. Access to Work

Architect and his representatives and other representatives of Owner will at reasonable times have access to the work. Contractor shall provide proper and safe facilities for such access and observation of the Work and also for any inspection or testing thereof by others.

36. Uncovering Work

If any Work should be covered contrary to the written request of the Architect, it must, if required by the Architect be uncovered for examination and replace at the Contractor's expense.

If any Work has been covered which Architect has not specifically requested to observe prior to its being covered, or if Architect considers it necessary or advisable that covered Work be inspected or tested by others, Contractor at Architect's request, shall uncover, expose or otherwise make available for observation, inspection or testing as Architect may require, that portion of the Work in question, furnishing all necessary labor, material and equipment. If it is found that such Work is defective, Contractor shall bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction, including compensation for additional professional services, and an appropriate deductive Change Order shall be issued. If, however, such Work is not found to be defective, Contractor shall 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 if he makes a claim therefore as provided in these Specifications.

37. Stopping the Work

If the Work is defective, or Contractor fails to supply sufficient skilled workmen or suitable materials or equipment, or if Contractor fails to make prompt payments to Subcontractors or for labor, materials or equipment, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor or any other party.

38. Correction of Work Before Final Payment

If required by Architect prior to approval of final payment, Contractor shall promptly, without cost to Owner and as specified by Architect, either correct any defective Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by Architect, remove it from the site and replace it with non-defective Work. If Contractor does not correct such defective Work or remove and replace such rejected Work within a reasonable time, all as specified in a written notice from Architect, Owner may have the deficiency corrected or the rejected Work removed and replaced. All direct or indirect costs of such correction or removal and replacement, including compensation for additional professional services, shall be paid by Contractor and an appropriate deductive Change Order shall be issued. Contractor shall also bear the expense of making good all Work of others destroyed or damaged by his correction, removal or replacement of his defective Work.

39. One Year Correction Period

If, after the approval of final payment and prior to the expiration of one year after the date of substantial completion or such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents, any Work is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions, either correct such defective Work, or, if it has been rejected by Owner, remove it from the site and replace it with non-defective Work. If Contractor does not promptly comply with the terms of such instructions, Owner may

have the defective Work corrected or the rejected Work removed and replaced, and all direct and indirect costs of such removal and replacement, including compensation for additional professional services, shall be paid by Contractor.

40. Acceptance of Defective Work

If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to approval of final payment, also Architect) prefers to accept it, he may do so. In such case, if acceptance occurs prior to approval of final payment, a Change Order shall be issued incorporating the necessary revisions in the Contract Documents, including appropriate reduction in the Contract Price; or, if the acceptance amount shall be approval of final payment, an appropriate amount shall be paid by Contractor to Owner.

41. Neglected Work By Contractor

If Contractor should fail to prosecute the work in accordance with the Contract Documents, including any requirements of the progress schedule, Owner, after seven (7) days' written notice to Contractor may, without prejudice to any other remedy he may have, make good such deficiencies and the cost thereof (including compensation for additional professional services) shall be charged against Contractor if Architect approved such action, in which case a Change Order shall be issued incorporating an appropriate reduction in the Contract Price. If the payments then or thereafter due Contractor are not sufficient to cover such amount, Contractor shall pay the difference to Owner.

42. Application for Payment

At least ten days prior to submitting the first Application for a progress payment, Contractor shall submit a progress schedule, a final schedule of Shop Drawing submission and a schedule of values of the Work. These schedules shall be satisfactory in form and substance to Architect. The schedule of values shall include quantities and unit prices aggregating the Contract Price, and shall subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments during construction. Upon approval of the schedules of values by Architect, it shall be incorporated into the form of Application for Payment furnished by Architect.

At least ten days before each progress payment falls due (but not more often than once a month), Contractor shall submit to Architect for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such data and schedules as Architect 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 the site or at another location agreed to in writing, the Application for Payment shall also be accompanied by such data, satisfactory to Owner, as will establish Owner's title to the material and equipment and protect his interest therein, including applicable insurance. Each subsequent Application for Payment shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied to discharge in full all of Contractor's obligations reflected in prior Applications for Payment.

Retainage shall be an amount equal to 10% of the Work completed until 50% of the Work has been completed. At 50% completion, further partial payments shall be made in full to the Contractor and no additional amounts may be retained unless the Architect certifies that the job is not proceeding satisfactorily, but amounts previously retained shall not be paid to the Contractor. At 50% completion or any time thereafter when the progress of the Work is not satisfactory, additional amounts may be retained but in no event shall the total retainage be more than 10% of the value of the work completed. Upon substantial completion of the work, any amount retained may be paid to the Contractor. When the Work has been substantially completed except for Work which cannot be completed because of weather conditions, lack of materials or other reasons which in the judgment of the Owner are valid reasons for non-completion, the Owner may make additional payments, retaining at all times an amount sufficient to cover the estimated cost of the Work still to be completed.

Contractor warrants and guarantees that title to all Work, materials and equipment covered by any Application of Payment, whether incorporated in the Project or not, will pass to Owner at the time of payment free and clear of all liens, claims, security interests and encumbrances (hereafter in these General Conditions referred to as "Liens").

43. Approval of Payments

Architect will, within ten days after receipt of each Application for Payment, either indicate in writing his approval of payment and present the Application to Owner, or return the Application to Contractor indicating in writing his reasons for refusing to approve payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application. Owner shall, within thirty days of presentation to him of an approved Application for Payment, pay Contractor the amount approved by Architect.

Architect's approval of any payment requested in an Application for Payment will constitute a representation by him to Owner, based on Architect's on-site observations of the Work in progress as an experienced and qualified design professional and on his review of the Application for Payment and the accompanying data and schedules that the Work has progressed to the point indicated; that, to the best of his knowledge, information and belief, the quality of the Work is in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning Project upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents and any qualifications stated in his approval); and that Contractor is entitled to payment of the amount approved. However, by approving any such payment Architect will not thereby be deemed to have represented that he made exhaustive or continuous on-site inspections to check the quality or the quantity of the Work, or that he has reviewed the means, methods, techniques, sequences, and procedures of construction, or that he has made any examination to ascertain how or for what purpose Contractor has used the moneys paid or to be paid to him on account of the Contract Price, or that title to any Work, materials or equipment has passed to Owner free and clear of any Liens.

Architect's approval of final payment will constitute an additional representation by him to Owner that the conditions precedent to Contractor's being entitled to final payment as set forth in Article 46 has been fulfilled.

Architect may refuse to approve the whole or any part of any payment if, in his opinion, it would be incorrect to make such representation to Owner. He may also refuse to approve any such payment, or, because of subsequently discovered evidence or the results of subsequent inspections or tests, nullify any such payment previously approved, to such extent as may be necessary in his opinion to protect Owner from loss because:

- a. The Work is defective, or completed Work has been damaged requiring correction or replacement.
- b. Claims or Liens have been filed or there is reasonable cause to believe such may be filed.
- c. The Contract Price has been reduced because of Modifications.
- d. Owner has been required to correct defective Work or complete the Work in accordance with Article 41.
- e. Unsatisfactory prosecution of the Work, including failure to furnish acceptable submittals or to clean up.

When the above grounds are removed, payment shall be made for amounts withheld because of them.

44. Substantial Completion

Prior to final payment, Contractor may, in writing to Owner and Architect, certify that the entire Project is substantially complete and request that the Architect issue a certificate of Substantial Completion. Within a reasonable time thereafter, Owner, Contractor and Architect shall make an inspection of the Project to determine the status of completion. If Architect does not consider the Project substantially complete, he will notify Contractor in writing giving his reasons therefore. If Architect considers the Project substantially complete, he will prepare and deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion and the responsibilities between Owner and Contractor for maintenance, heat and utilities. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment, and the certificate shall fix the time within which such items shall be completed or corrected, said time to be within the Contract Time. Owner shall have seven (7) days after receipt of the tentative certificate during which he may make written objection to Architect as to any provisions of the certificate or attached list. If, after considering such objections, Architect concludes that the project is not substantially complete, he will within fourteen days (14) days after submission of the tentative certificate to Owner notify Contractor in writing, stating his reasons therefore. If, after consideration of Owner's objections, Architect considers the project substantially complete, he will within said fourteen days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as he believes justified after consideration of the objections from Owner.

The Owner may reduce the retainage to five (5%) percent of the total Contract Price after substantial completion. Owner shall have the right to exclude Contractor from the Project after the date of Substantial Completion, but Owner shall allow Contractor reasonable access to complete or correct items on the tentative list.

45. Partial Utilization

Prior to final payment, Owner may request Contractor in writing to permit him to use a specified part of the Project which he believes he may use without significant interference with construction of other parts of the Project. If Contractor agrees, he will certify to Owner and Architect that said part of the Project is substantially complete and request Architect to issue a certificate of Substantial Completion for that part of the Project. Within a reasonable time thereafter Owner, Contractor and Architect shall make an inspection of that part of the Project to determine its status of completion. If Architect does not consider that it is substantially complete, he will notify Owner and Contractor in writing giving his reasons therefore. If Architect considers that part of the Project to be substantially complete, he will execute and deliver to Owner and Contractor a certificate to that effect, fixing the date of Substantial Completion as to that part of the Project, attaching thereto a tentative list of items to be completed or corrected before final payment and fixing the responsibility between Owner and Contractor for maintenance, heat and utilities as to that part of the Project. Owner shall have the right to exclude Contractor from any part of the Project which Architect has so certified to be substantially complete, but Owner shall allow Contractor reasonable access to complete or correct items on the tentative list.

Insurance carrier shall be informed by the Contractor of occupancy and adjustments made so that coverage of construction will not be invalidated.

46. Final Payment

Upon written notice from Contractor that the Project is complete, Architect will make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to remedy such deficiencies.

After Contractor has completed all such corrections to the satisfaction of Architect and delivered all maintenance and operating instructions, schedules, guarantees, Bonds, certificates of inspection and other documents -- all as required by the Contract Documents, he may make Application for final Payment

following the procedure for progress payments. The final Application for Payment shall be accompanied by such date and scheduling as Architect may reasonably require, together with complete and legally effective releases or waivers (satisfactory to Owner) of all Liens arising out of the Contract Documents and the labor and services performed and the material and equipment furnished hereunder. In lieu thereof and as approved by Owner, Contractor may furnish receipts or releases in full, an affidavit of Contractor that the releases and receipts include all labor, services, material and equipment for which a Lien could be filled, and that all payrolls, material and equipment bills, and other indebtedness connected with the work for which Owner or his property might in any way be responsible, have been paid or otherwise satisfied; and consent of the Surety, if any, to final payment. If any Subcontractor, material man, fabricator or supplier fails to furnish a release or receipt in full, Contractor may furnish a Bond or other collateral satisfactory to Owner to indemnify him against any Lien.

If, on the basis of his observation and review of the Work during construction, his final inspection and his review of the final Application for Payment -- all required by the Contract Documents, Architect is satisfied that the Work has been completed and Contractor has fulfilled all of his obligations under the Contract Documents, he will, within ten (10) days after receipt of the final Application for Payment, indicate in writing his approval of payment and present the Application to Owner for payment. Thereupon Architect will give written notice to Owner and Contractor that the Work is acceptable. Otherwise, he will return the Application to Contractor, indicating in writing his reasons for refusing to approve final payment, in which case Contractor shall make the necessary corrections and resubmit the Application. Owner shall, within ten (10) days of presentation to him of an approved final Application for Payment, pay Contractor the amount approved by Architect.

If after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of Contractor and Architect so confirms, Owner shall, upon certification by Architect and without terminating the Agreement, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance for Work is not fully completed or corrected and is less than the retainage stipulated in the Agreement, and if Bonds have been furnished, the written consent of the Surety to the payment of the balance due for that portion of the Work fully completed and accepted, shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

The making and acceptance of final payment shall constitute:

- a. a waiver of all claims by Owner against Contractor other than those arising from unsettled Liens, from defective Work appearing after final inspection or from failure to comply with the requirements of the Contract Documents or the terms of any special guarantees specified therein, and
- b. a waiver of all claims by Contractor against Owner other than those previously made in writing and still unsettled.

Contractor's obligation to perform the Work and complete the Project in accordance with the Contract Documents shall be absolute. Neither approval of any progress or final payment by Architect, nor the issuance of a certificate of Substantial Completion, nor any payment by Owner to Contractor under the Contract Documents, nor any use or occupancy of the Project or any part thereof by Owner, nor any act of acceptance by Owner nor any failure to do so, nor any correction of defective Work by Owner shall constitute an acceptance of Work not in accordance with the Contract Documents.

47. Owner's Right to Suspend Work

Owner may, at any time and without cause, suspend the Work or any portion thereof for a period of not more than ninety (90) days by notice in writing to Contractor and Architect which shall fix the date on which Work shall be resumed. Contractor shall resume the Work on the date so fixed. Contractor will be

allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension if he makes a claim therefore as provided in these Contract Documents.

48. Owner's Right to Terminate Contract

If the Contractor should be adjudged a bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency, or if he should persistently or repeatedly refuse or should fail, except in cases for which extension of time is provided, to supply enough properly skilled workmen or proper material, or if he should fail to make prompt payment to subcontractors or for material or labor, or persistently disregard laws, ordinances or the instruction of the Architect, or otherwise be guilty of a substantial violation of any provision of the Contract, then the Owner, upon the certificate of the Architect that sufficient cause exists to justify such action, may without prejudice to any other right or remedy and after giving the Contractor and his Surety a minimum of seven (7) days from delivery of a written notice, take possession of the premises and of all materials, tools and appliances thereof 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 shall exceed the expense of finishing the Work including compensation for additional managerial and administrative services, such excess shall be paid to the Contractor. If any such expense shall exceed such unpaid balance, the Contractor shall pay the difference to the Owner.

The expense incurred by the Owner as herein provided, and the damage incurred through the Contractor's default, shall be certified by the Architect and incorporated in a Change Order.

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 moneys by the Owner due the Contractor will not release the Contractor from compliance with the Contract Documents.

After ten (10) days from delivery of a written notice to the Contractor and the Architect, 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 reasonable profit.

49. Contractor's Right to Stop Work or Terminate

If, through no act or fault of Contractor the Work is suspended for a period of more than ninety (90) days by Owner or under an order of court or other public authority, or Architect fails to act on any Application for Payment within thirty (30) days after it is submitted, or Owner fails to pay Contractor any sum approved by Architect or awarded by arbitrators within thirty (30) days of its approval and presentation, then Contractor may, upon fifteen (15) days' written notice to Owner and Architect, terminate the Agreement and recover from Owner payment for all Work executed and any expense sustained plus a reasonable profit. In addition, and in lieu of terminating the Agreement, if Architect has failed to act on an Application for Payment or Owner has failed to make any payment as aforesaid, Contractor may upon fifteen (15) days' notice to Owner and Architect stop the Work until he has been paid all amounts then due.

50. Arbitration by Mutual Consent

All claims, disputes and other matters in question arising out of, or relating to, this Agreement or the breach thereof except for claims which have been waived by the making or acceptance of final payment, may be decided by arbitration if the parties mutually agree. Any agreement to arbitrate shall be specifically enforceable under the prevailing arbitration law. The award rendered by the arbitrators shall be final, and judgment may be entered upon it in any court having jurisdiction thereof.

Notice of the request for arbitration shall be filed in writing with the other party to the Agreement and a copy shall be filed with Architect. Request for arbitration shall in no event be made on any claim, dispute or other matter in question which would be barred by the applicable statute of limitations.

The Contractor will carry on the Work and maintain the progress schedule during any arbitration proceedings, unless otherwise mutually agreed in writing.

51. Computation of Time

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

52. Assignments

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 of interest herein, or his obligations thereunder, without written consent of the other party.

53. Ownership of Drawings

All Drawings, Specifications and copies thereof furnished by the Architect are the property of the Architect. They are not to be used on other work and, with the exception of the signed Contract set, are to be returned to the Architect or his representative upon request, at the completion of the Work.

54. Compliance With Prevailing Wage Law

Full compliance by the Contractor and any Subcontractor as to their duties prescribed by the applicable State or Federal Minimum Wage Laws is required in the performance of Work under this Contract.

The Contractor will be required to accept liability for payment of all payroll taxes or deductions required by local and federal law, including old age pension, social security or annuities. Workmen's Compensation Insurance shall be carried to the full amounts as required by local statutes.

Incorporated within the Labor Regulations and Wage Rates is a classified list of labor positions used in this work. Opposite the positions are shown the general prevailing hourly rates of wages as ascertained for this contract.

In case it shall become necessary for the Contractor or any Subcontractor to employ on the work under this contract any person in a trade or occupation (except executive, administrative or supervisory workers) for which no wage rates are specified herein, the Contractor shall immediately notify the Architect who will promptly thereafter furnish the Contractor with the general prevailing rates. The rates thus furnished shall be applicable for such trade or occupation from the time of initial employment of the person or persons affected and during the continuance of such employment.

The Contractor and any Subcontractor shall post and keep posted in a conspicuous place at the site of the Work a copy of the prevailing rates of wages and work hours for each classification of laborers employed in the performance of this Contract.

55. Measurement and Computation of Quantities

Computation of quantities that will be the basis for payment estimates, both monthly and final, will be made by the Architect. In general, all payment-estimates will be checked and approved by a representative of the funding agency before payment.

No extra measurements of any kind, unless specially noted shall be allowed in measuring the Work under these Specifications; but the length, area solid contents or number only shall be considered as the basis for payment as hereinafter specified.

SECTION 00700 - GENERAL CONDITIONS

Where the computation of areas or volumes by exact geometric methods is unduly laborious or refined, the planimeter shall be held an instrument of precision and may be used in the determination of quantities upon which payments are based.

The measurements of the Architect as to the amount of Work done shall be final and conclusive. Payments shall be made upon the Work done within the lines prescribed by the Drawings or Specifications and in accordance with the unit prices for the items under which the Work is done.

56. Project Signs

The Contractor shall erect a project sign at a prominent location on the Project. The sign shall be four feet by eight feet, two colors and shall contain the name of the Project, the Owner, the Architect, and the Contractor. The lettering shall be approved by the Architect prior to making the signs.

End of Section

SECTION 00800 - SUPPLEMENTAL CONDITIONS

PART 1 - GENERAL

1.01 DESCRIPTION

- A. The "General Conditions of the Contract for Construction," AIA Document A201, 2017 is a part of this Contract.

1.02 SUPPLEMENTS

- A. The following supplements modify, change, delete or add to the "General Conditions of the Contract for Construction." Where any Article, Paragraph, Sub-Paragraph or Clause thereof is modified or deleted by these supplements, the unaltered provisions of that Article, Paragraph, SubParagraph or Clause shall remain in effect.

PART 2 - ARTICLE 2: OWNER

2.01 2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

- 2.2.5 The Contractor can download pdf's from mselex.com.
MSE will not furnish the Contractor any sets of drawings or project manuals for their use during construction.

PART 3 - ARTICLE 3: CONTRACTOR

3.01 REVIEW OF CONTRACT SUB-PARAGRAPHS

- A. Add the following sub-paragraphs:
 - 322 The Contractor shall not perform any work at any time requested by persons other than the Architect. Any interpretations to the documents, or request for minor changes in the work will be by the Architect.
 - 323 Where there is a conflict in or between the Drawings and Specifications, the Contractor shall be deemed to have estimated on the more expensive way of doing the work and/or the larger quantity required. Only changes in interpretations covered by Addenda or in writing from the Architect will be permitted during construction of the work.

3.02 WARRANTY

- A. Add the following sub-paragraph:
 - 3.5.2 General Contractor shall guarantee the work for a period of one year from the date of acceptance by the Owner, except where a longer guarantee is specified and will thus control and leave the work in perfect order at completion. Neither the final certificate of payment any provision in the Contract Documents shall relieve the Contractor of responsibility within the extent and period provided by said guarantee or by law whichever is longer. Upon written notice, he shall remedy any damage to other work resulting therefrom, including necessary labor for removing and replacing.

PART 4 - ARTICLE 8: TIME OF COMPLETION AND LIQUIDATED DAMAGES

See the Bid Schedule, Section 00310, for the time allotted for this contract. The time allowed for completion shall begin at midnight, local time, on the date which the Owner shall instruct the Contractor, in writing, to start work, but not later than 10 days after Notice to Proceed.

The Contract completion time stipulated above includes an allowance for an average number of inclement weather days as follows:

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Precip.	7	7	9	8	8	8	8	7	6	5	6	7
Freeze	10	6	1								1	5

When number of days (including Saturdays, Sundays and Holidays) of precipitation in excess of 0.1" per day or maximum daily temperatures of 32° F, Contractor shall be entitled to an equal number of additional days for Contract Completion.

This provision for inclement weather shall only apply to that time while foundations are being constructed and prior to the building being "under-roof".

It is understood that time is the essence of this contract and that the Owner will sustain damages, monetary and otherwise, in the event of delay in completion of the work hereby contracted.

Therefore, if the said Contractor shall neglect, fail or refuse to complete the work within the time herein specified, or any proper extension thereof granted by the Owner, then the Contractor does hereby agree, as part consideration for the awarding of this contract, to pay the Owner the amount specified in the contract, not as a penalty, but as liquidated damages for such breach of contract as hereinafter set forth, for each and every calendar day that the Contractor shall be in default after the time stipulated in the contract for completing the work.

The said amount is fixed and agreed upon by and between the Contractor and the Owner because of the extreme difficulty in fixing and ascertaining the actual damages the Owner would in such event sustain, and said amount is agreed to be the amount of damages which the Owner would sustain and said amount shall be retained from time to time by the Owner from current periodical estimates.

PART 5 - ARTICLE 9: PAYMENTS AND COMPLETION

5.01 APPLICATIONS FOR PAYMENT

A. Add the following sub-paragraph:

9.3.1.1 Monthly payments will be based on one hundred (100%) percent of the value of the work done and materials delivered and suitably stored until work under this contract is fifty (50%) completed. If at that time, progress of the work has been satisfactory, there will be no additional retainage, provided the Contractor submits Consent of Surety for each application, authorizing any remaining partial payments to be paid in full. The form of Application for Payment shall be AIA Document G702, Application for Certificate for Payment, supported by AIA Document G702A Continuation Sheet.

PART 6 - ARTICLE 11: INSURANCE AND BONDS

6.01 11.1 CONTRACTOR'S LIABILITY INSURANCE

A. Change as follows:

General Contractor shall take out and maintain insurance of such types and in such amounts as are necessary to cover his responsibilities and liabilities on all projects, and shall require all his subcontractors to carry similar insurance.

1. The Owner will accept in lieu of all subcontractors carrying similar insurance an "Owner's and Contractor's Protective Liability Policy" paid for by the Contractor and written in the name of the Owner for the amount specified hereinafter including all the special coverages. Said policy must protect the Owner for all claims for bodily injury and/or property damage arising out of operations for the named insured by said Contractor, or any subcontractor of said Contractor.
- B. No Contractor shall commence work under this contract until he has obtained all insurance required under this section and such insurance has been approved by the Owner, nor shall any Contractor allow any subcontractor to commence work on his subcontract until the same insurance has been obtained by the subcontractor and approved by the Owner. Each and every contractor and subcontractor shall maintain all insurance required under paragraphs (1) and (2) of this section for not less than one year after completion of this contract.
- C. Each Contractor shall file with the Owner and Architect, a Certificate of Insurance. Any certificate submitted and found to be altered or incomplete will be returned as unsatisfactory.
- D. If requested by the Owner, Contractor shall furnish the Owner with true copies of each policy required of him or his subcontractors. Said policies will not be canceled or materially altered, except after fifteen (15) days advance written notice to the Owner and Architect, mailed to the addresses indicated herein.
- E. Insurance under this section, as a minimum, shall include the following coverages:
 1. Workman's Compensation and Employer's Liability Insurance: Workman's Compensation and Occupational Disease Insurance of statutory limits as provided by the state in which his contract is performed and Employers' Liability Insurance at a limit of not less than \$100,000.00 for all damages arising from each accident or occupational disease.
 2. Comprehensive General Liability Insurance covering:
 - a. Operations- Premises Liability:
Including, but not limited to, Bodily Injury, including death at any time resulting therefrom, to any person or Property Damage resulting from execution of the work provided for in this contract, or due to or arising in any manner from any act of omission or negligence of the Contractor and any Subcontractor, their respective employees or agents.

b. Contractor's Protective Liability:
Including, but not limited to, Bodily Injury, including death at any time, resulting therefrom to any person, or Property Damage arising from acts or omissions of any subcontractor, their employees or agents.

c. Products-- Completed Operation Liability:
Including, but not limited to, Bodily Injury, including death at any time, resulting therefrom to any person, or Property Damage because of goods, products, materials or equipment used or installed under this contract, or because of completed operation, which may become evident within one year after acceptance of the building, including damage to the building or its contents.

d. Contractual Liability:

Each and every policy for liability insurance, carried by each Contractor and Subcontractor, as required by this section shall specifically include Contractual Liability coverage with respect to Section F of this Division.

e. Special Requirements:

The insurance required under Paragraph (2) of this Section shall specifically include the following special hazards:

Property Damage caused by conditions otherwise subject to exclusions "x, c, u," Explosion, Collapse or Underground Damage.

Broad Form Property Damage endorsement, which has reference to property in the "care, custody, or control" of the insured.

"Occurrence" Bodily Injury coverage in lieu of "caused by accident."

"Occurrence" Property Damage coverage in lieu of "caused by accident."

f. Limits of Liability:

The insurance under Paragraph (2) of this Section shall be written in the following limits of liability, as a minimum:

Bodily injury

\$1,000,000 Each Person

\$3,000,000 Each Occurrence

\$500,000 Aggregate Products

Property Damage

\$1,000,000 Each Occurrence

\$2,000,000 General Aggregate

\$1,000,000 Aggregate Protective

\$1,000,000 Aggregate Contractual

3. Comprehensive Automobile Liability covering:
 - a. All owned, hired, or non-owned vehicles including the loading or unloading thereof.
 - b. Special Requirements: The insurance required under paragraph (3) of this section shall specifically include the following special hazards:

"Occurrence" Bodily Injury in lieu of "caused by accident."

"Occurrence" Property Damage in lieu of "caused by accident."

The insurance under Paragraph (3) of this section shall be written in the following limits of liability as a minimum:

<u>Automobile Bodily Injury</u>	<u>Automobile Property Damage</u>
\$1,000,000 Each Person	\$1,000,000 Each Occurrence
\$3,000,000 Each Occurrence	

\$5,000,000 Excess/Umbrella Liability

F. Hold Harmless Agreement:

1. The Contractor shall indemnify and hold harmless the Owner and the Architect and their agents and employees from and against all claims, damages, losses and expenses including attorney's fees arising out of or resulting from the performance of the work, provided that any such claim, damage, loss or expense (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom and (b) is caused in whole or part by any negligent act or omission of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.
2. In any and all claims against the Owner or the Architect or any of their agents or employees by any employee of the Contractor, Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this Hold Harmless agreement shall not be limited in any way by any limitation on the amount payable by or for the Contractor or any Subcontractor under workman's compensation acts, disability benefit acts or other employee benefit acts.
3. The obligations of the Contractor under this Hold Harmless Agreement shall not extend to any claim, damage, loss or expense arising out of professional services performed by the Architect, his agents, or employees, including (a) the preparation of maps, plans, opinions, reports, surveys, designs or specifications, and (b) supervisory, inspection or engineering services.

PART 7 - ARTICLE 11.3: PROPERTY INSURANCE (Purchased by the General Contractor)

7.01 A. Change the first sentence of paragraph 11.3.1 to read: The contractor shall purchase....

B. Change the second sentence of Paragraph 11.3.1 to read:

11.3.1 "This insurance shall include the interests of the Owner, the Contractor, the Subcontractor and Sub-Subcontractors in the work and shall insure against the perils of fire, extended coverage, vandalism, malicious mischief and theft."

C. Add the following subparagraph:

"11.3.1.1 If by the terms of this insurance any mandatory deductibles are required, or if the Owner should elect to increase the mandatory deductible amounts or purchase this insurance with voluntary deductible amounts, the Owner shall be responsible for payment of the amount of the deductible in the event of a paid claim."

11.3.6 Revise a portion on the first sentence in Subparagraph to read as follows: "...and

(2) the Architect, his consultants, and separation contractors, if any..."

D. Add the following Article to the General Conditions of the Contract for Construction:

PART 8 - ARTICLE 15: EQUAL OPPORTUNITY

8.01 15.1 Employment Policies

15.1.1 The Contractor and all Subcontractors shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin or age. The Contractor shall take affirmative action to insure that applicants are employed, and that employees are treated during employment without regard to their race, religion, color, sex, national origin or age. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates or pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the policies of non-discrimination.

15.1.2 The Contractor and all Subcontractors shall, in all solicitations or advertisements for employees placed by them or on their behalf, state that all qualified applicants will receive consideration for employment without regard to race, religion, color, sect, national origin or age.

PART 9 - ARTICLE 16: CHARACTER OF WORKERS, METHODS, AND EQUIPMENT

- 161 The Contractor shall, at all times, employ sufficient and equipment for prosecuting the work to full completion in the manner and time required by the contract, drawings, and specifications. Suitable number of foremen and supervisors shall be available on the job to insure proper prosecution and coordination of the work. All workers shall have sufficient skill and experience to perform properly the work assigned to them. Workers engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform the work satisfactorily.
- 162 Any person employed by the Contractor or by any subcontractor who, in the opinion of the Owner and Architect, does not perform his work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the Architect, be removed forthwith by the Contractor or Subcontractor employing such person, and shall not be employed again in any portion of the work.
- 163 Should the Contractor fail to remove such person or persons or fail to furnish suitable and sufficient personnel for the proper prosecution of the work, the Architect may suspend the work by written notice until compliance with such orders.
- 164 After the beginning of work on the site, the Contractor may not remove his Superintendent from the project without the prior written approval of the Owner.
- 16.5 In the event of unanticipated discovery of an archaeological site or object of antiquity, the discovery shall be reported to the EDA, the Kentucky Heritage Council and to the Kentucky Office of State Archeology in the Anthropology Department at the University of Kentucky in accordance with KRS 154.730. If human remains are encountered during project activities, all work should be immediately stopped in the area and the area cordoned off, and in accordance with KRS 72.020 the county coroner and local law enforcement must be contacted immediately. Upon confirmation that human remains are not of forensic interest, the unanticipated discovery must be reported to the Kentucky Heritage Council.

END OF SECTION

Section 00815 - Supplemental General Conditions
Part Two

- 1) General Contractors and Sub-contractors are hereby notified that they are encouraged, to the greatest extent practicable, to purchase American-made equipment and products with funding provided under this Award.

End of Section

SECTION 00900, ASBESTOS REMOVAL/ABATEMENT

1.0 Contractor shall retain the services of a certified asbestos removal contractor to perform asbestos removal work in compliance with Kentucky Statute 401 KAR 58:025 and the National Emission Standards for Hazardous Air Pollutants (NESHAP) for asbestos listed in 40 CFR 61 Part M. Asbestos contractor shall comply with the "Asbestos Guidance Manual for Renovation and Demolition Projects" published by the Kentucky Energy and Environment Cabinet. The Asbestos Removal Contractor must be certified as required by 401 KAR 58:040.

2.0 An asbestos survey of Buildings 1 and 3 has identified asbestos containing materials (ACM) to be abated. The Asbestos Abatement Contractor shall satisfy himself to the actual quantities to be abated.

The materials identified are asbestos vinyl floor covering and floor tiles with asbestos floor mastic.

3.0 Contractor shall provide to the Architect documentation of all permit fees, abatement costs and handling/disposal receipts to be charged against the bid allowance item for Asbestos Removal/Abatement. Contractor shall provide to the Architect the documentation of the Asbestos Abatement Contractor's Kentucky Certification and insurance requirement as follows:

General Liability:	\$2,000,000	aggregate
Contractor's Pollution Liability:	\$5,000,000	aggregate
Workers Compensation:	Statutory	
Auto Liability:	\$1,000,000	per occurrence

Division I – General Requirements

SECTION 01010 - SUMMARY OF WORK

PART 1 - GENERAL

1.01 SUMMARY OF WORK

- A. Work covers construction of the new Senior Center located on property address:
Clearfield Street, Morehead, KY 40351.
- B. Existing structures and trees on site will be removed by the Contractor.
- C. Related requirements specified elsewhere:
 - 1. Submittals- Section 01300
 - 2. Temporary Facilities- Section 01500
 - 3. Project Closeout - Section 01700
- C. Contractor's Duties:
 - 1. Except as specifically noted, provide and pay for:
 - a. Labor, materials, tools, and equipment.
 - b. Permits.
 - c. Fees.
 - d. Licenses.
 - e. Taxes.
 - 2. Give required notices.
 - 3. Comply with codes, ordinances, rules, regulations, orders, and other legal requirements of public authorities which bear on performance of work.
 - 4. Promptly submit written notice to Architect of observed variance of Contract Documents from legal requirements.
 - 5. Contractor shall verify all grades, lines, levels, and dimensions indicated on the drawings and shall report any inconsistencies before commencing work.
 - 6. Each Sub Contractor shall be responsible for the layout for their specific phase of work.

1.02 CONTRACT (OWNER AND GENERAL CONTRACTOR)

- A. Construction work shall be under a single lump sum contract, which shall include all general construction, steel, concrete, mechanical, electrical, plumbing and site work, etc.

1.03 CONTRACTORS' USE OF PREMISES

A. Confine operations at site to areas permitted by:

General Contractor can store material in the existing building and use existing utilities.

1. Law.
2. Ordinances.
3. Permits.
4. Contract Documents.
5. Owner.

B. Do not unreasonably encumber site with materials or equipment.

C. Do not load structure with weight that will endanger structure.

D. Assume full responsibility for protection and safekeeping of products stored on site.

E. Move any stored products which interfere with operations of the Owner.

END OF SECTION

SECTION 01027 - APPLICATIONS FOR PAYMENT REQUIREMENTS OF CONTRACTOR

PART 1 - GENERAL

1.01 SECTION INCLUDES:

- A. Procedures of Contractor for preparation and submittal of applications for payment.

1.02 RELATED SECTIONS

- A. Document 00500 - Agreement: Contract Sum amounts of progress payments and retainages.
- B. Section 00800 - Supplementary Conditions: Progress payments and final payment.
- C. Section 01028 - Modification Requirements: Procedures for changes to the Work.
- D. Section 01300 - Submittals: Submittal procedures.
- E. Section 01700 - Contract Closeout - Final Payment

1.03 FORMAT

- A. For each item, provide a column for listing each of the following:
 - 1. Item Number.
 - 2. Description of Work.
 - 3. Scheduled Values.
 - 4. Previous Applications.
 - 5. Work in Place and Stored Materials under this Application.
 - 6. Authorized Change Orders.
 - 7. Total Completed and Stored to Date of Application.
 - 8. Percentage of Completion.
 - 9. Balance to Finish.
 - 10. Retainage.

1.04 PREPARATION OF APPLICATIONS

- A. Present required information in typewritten form on specified AIA Documents.
- B. Execute certification by signature of authorized officer.
- C. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored Products.

- D. List each authorized Change Order as an extension on AIA G703 Continuation Sheet, listing Change Order number and dollar amount as for an original item of Work.
- E. Prepare Application for Final Payment as specified in Section 01700.
- F. Submit partial release of liens waiver for all work completed to date with each payment application.
- G. Submit up-to-date (revised) construction schedule.

1.05 SUBMITTAL PROCEDURES

- A. Submit three copies of each Application for Payment.
- B. Submit an updated construction schedule with each Application for Payment.
- C. Payment Period: Submit at intervals stipulated in the Agreement.
- D. Submit with transmittal letter as specified for Submittals in Section 01300.

1.06 DETAILED COST BREAKDOWN

- A. Upon award of contract, Contractor will have seven working days to generate a finalized cost breakdown of the project.

1.07 SUBSTANTIATING DATA

- A. When Architect/Engineer requires substantiating information, Contractor shall submit data justifying dollar amounts in question.
- B. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.

PART 2 - PRODUCTS

Not Applicable.

PART 3 - EXECUTION

Not Applicable.

END OF SECTION

SECTION 01028 - MODIFICATION REQUIREMENTS OF CONTRACTOR

PART 1 - GENERAL

1.01 SECTION INCLUDES:

- A. Submittals.
- B. Documentation of change in Contract Sum and Contract Time.
- C. Change procedures.
- D. Construction Change Directive.
- E. Stipulated Sum change order.
- F. Execution of change orders.
- G. Correlation of Contractor submittals.

1.02 SUBMITTALS

- A. Submit name of the individual authorized to receive change documents, and be responsible for informing others in Contractor's employ or Subcontractors of changes to the Work.
- B. Change Order Forms: AIA G701 Change Order.

1.03 DOCUMENTATION OF CHANGE IN CONTRACT SUM AND CONTRACT TIME

- A. Maintain detailed records of work performed. Provide full information required for evaluation of proposed changes, and to substantiate costs of changes in the Work.
- B. Document each quotation for a change in cost or time with sufficient data to allow evaluation of the quotation.
- C. Provide additional data to support computations:
 - 1. Quantities of products, labor, and equipment.
 - 2. Taxes, insurance, and bonds.
 - 3. Overhead and profit.
 - 4. Justification for any change in Contract Time.
 - 5. Credit for deletions from Contract, similarly documented.
- D. Support each claim for additional costs, and for work performed, with additional information:
 - 1. Origin and date of claim.
 - 2. Dates and times work was performed, and by whom.
 - 3. Time records and wage rates paid.
 - 4. Invoices and receipts for products, equipment, and subcontracts, similarly documented.

1.04 CHANGE PROCEDURES

- A. The Architect/Engineer will advise of minor changes in the Work not involving an adjustment to Contract Sum/Price or Contract Time as authorized by AIA A201, 2007 Edition, Paragraph 7.4 by issuing supplemental instructions on AIA Form G710.
- B. The Architect/Engineer may issue a Proposal Request which includes a detailed description of a proposed change with supplementary or revised Drawings and specifications, a change in Contract Time for executing the change. Contractor will prepare and submit an estimate within seven (7) days.

1.05 CONSTRUCTION CHANGE DIRECTIVE

- A. Architect/Engineer may issue a document, signed by the Owner, instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
- B. The document will describe changes in the Work, and will designate method of determining any change in Contract Sum or Contract Time.
- C. Contractor shall include in his costs any and all costs associated with contract documents modification required by the Architect/Engineer as a part of modifications.
- D. Promptly execute the change in Work.

1.06 STIPULATED SUM CHANGE ORDER

- A. Based on Proposal Request and Contractor's fixed price quotation.

1.07 CHANGE ORDER

- A. Submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.
- B. Architect/Engineer will determine the change allowable in Contract Sum and Contract Time as provided in the Contract Documents pending Owner approval.
- C. Maintain detailed records of work performed.
- D. Provide full information required for evaluation of proposed changes, and to substantiate costs for changes in the Work.

1.08 EXECUTION OF CHANGE ORDERS

- A. Execution of Change Orders: Architect/Engineer will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.

1.09 CORRELATION OF CONTRACTOR SUBMITTALS

- A. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.
- B. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.
- C. Promptly enter changes in Project Record Documents.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

SECTION 01041 - PROJECT COORDINATION

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Project coordination.
- B. Construction mobilization.
- C. Schedules.
- D. Submittals.
- E. Coordination drawings.
- F. Closeout procedures.

1.02 RELATED SECTIONS

- A. Section 00800 - Supplementary Conditions
- B. Section 01011 - Summary of Project: Work sequence.
- C. Section 01700 - Contract Closeout: Contract Closeout Procedures.

1.03 CONSTRUCTION MOBILIZATION

- A. Comply with procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.
- B. Comply with instructions for use of temporary utilities and construction facilities.
- C. Coordinate field engineering and layout work.

1.04 SCHEDULES

- A. Submit preliminary progress schedule in accordance with Section 01310.
- B. After review, revise and resubmit schedule to comply with revised Project schedule. Submit revised or up-to-date schedule with each application for payment.
- C. During progress of work revise and resubmit as directed.

1.05 SUBMITTALS

- A. Provide submittals for review and transmittal to Architect/Engineer.
- B. Submit applications for payment on AIA G702 forms for review, and for transmittal to Architect/Engineer.
- C. Submit requests for interpretation of Contract Documents, and obtain instructions through the Architect/Engineer.
- D. Process requests for substitutions, and change orders.
- E. Deliver closeout submittals for review and preliminary inspection reports, for transmittal to Architect/Engineer.

1.06 COORDINATION DRAWINGS

- A. Provide information required by Architect/Engineer for preparation of coordination drawings.
- B. Review drawings prior to submission to Architect/Engineer.

1.07 CLOSEOUT PROCEDURES

- A. Notify Architect/Engineer when Work is considered ready for Substantial Completion.
- B. Comply with Architect/Engineer's instructions to correct items of work listed in executed Certificates of Substantial Completion and for access to Owner occupied areas.
- C. Notify Architect/Engineer when Work is considered finally complete.
- D. Comply with instructions for completion of items of Work determined by Architect/Engineer's final inspection.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

SECTION 01045 - CUTTING AND PATCHING REQUIREMENTS OF CONTRACTOR

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Requirements and limitations for cutting and patching of Work, including:
 - 1. Cutting, fitting, or patching that may be required to complete the work or make its several parts fit together properly.
 - 2. Uncovering work to provide for installation of ill-timed work.
 - 3. Removing and replacing defective work.
 - 4. Removing and replacing work not conforming to requirements of the Contract Documents.
 - 5. General Contractor shall be responsible for cutting and patching of construction as required to facilitate work, including work by his mechanical and electrical subcontractors. He shall assign proper trades normally associated with the materials being cut and patched to perform work.

1.02 RELATED SECTIONS

- A. Section 01010 - Summary of Work.
- B. Section 01300 - Submittals.
- C. Section 01620 - Product Delivery, Storage and Handling.
- D. Individual Product Specification Sections:
 - 1. Cutting and patching incidental to work of the section.
 - 2. Advance notification to other sections of openings required in work of those sections.

1.03 SUBMITTALS

- A. Submit written request in advance of cutting or alteration which affects:
 - 1. Structural integrity of any element of Project.
 - 2. Integrity of weather exposed or moisture resistant element.
 - 3. Efficiency, maintenance, or safety of any operational element.
 - 4. Visual qualities of sight exposed elements.
 - 5. Work of Owner or separate contractor.

B. Include in request:

1. Identification of Project.
2. Location and description of affected Work.
3. Necessity for cutting or alteration.
4. Description of proposed Work and Products to be us.
5. Alternatives to cutting and patching.
6. Effect on work of Owner or separate contractor.
7. Written permission of affected separate contractor.
8. Date and time work will be executed.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Primary Products: Those required for original installation.
- B. Product Substitution: For any proposed change in materials, submit request for substitution.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine existing conditions prior to commencing Work, including elements subject to damage or movement during cutting and patching.
- B. After uncovering existing Work, assess conditions affecting performance of work.
- C. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

- A. Provide temporary supports to ensure structural integrity of the Work. Provide devices and methods to protect other portions of Project from damage.
- B. Provide protection from elements for areas which may be exposed by uncovering work.
- C. Maintain excavations free of water.

3.03 CUTTING

- A. Execute cutting and fitting including excavation and fill to complete the Work.
- B. Uncover work to install improperly sequenced work.
- C. Remove and replace defective or non-conforming work.
- D. Provide openings in the Work for penetration of mechanical and electrical work.
- E. Employ skilled and experienced installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- F. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.

3.04 PATCHING

- A. Execute patching to complement adjacent Work.
- B. Fit Products together to integrate with other Work.
- C. Execute work by methods to avoid damage to other Work, and which will provide appropriate surfaces to receive patching and finishing.
- D. Employ original installer to perform patching for weather exposed and moisture resistant elements, and sight-exposed surfaces.
- E. Restore work with new products in accordance with requirements of Contract Documents.
- F. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- G. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire resistant material to full thickness of the penetrated element.
- H. Refinish surfaces to match adjacent finish. For continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit. When possible, do not cut-and-patch work which is exposed in occupied spaces of building, in a manner resulting in reductions of visual qualities or resulting substantial evidence of cut-and-patch work, both as judged solely by Architect. Remove and replace work judged by Architect to be cut-and-patched in a visually unsatisfactory or otherwise objectionable manner.

END OF SECTION

SECTION 01300 - SUBMITTALS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Submittal procedures.
- B. Shop Drawings.
- C. Test reports.
- D. Certificates.
- E. Erection drawings.

1.02 REFERENCES

- A. AGC (Associated General Contractors of America) publication "The Use of CPM in Construction - A Manual for General Contractors and the Construction Industry".

1.03 SUBMITTAL PROCEDURES FOR SHOP DRAWINGS

- A. All shop drawings must be reviewed by the General Contractor before submitting them to the Architect.
- B. Transmit each submittal with accepted form, containing the following:
 - 1. Date
 - 2. Project title
 - 3. Contractor's name and address
 - 4. Notification of any deviations from the contract documents.
 - 5. Identify project as "Powell County Senior Citizens Center"
 - 6. Other pertinent data as required.
- C. Identify Project, Contractor, Subcontractor, Manufacturer or supplier; pertinent drawing and detail number, and specification section number, as appropriate.
 - 1. Provide identification of product or material size, type, finish and color as appropriate.
 - 2. Field dimensions, clearly identified as such.
 - 3. All working and erection dimensions, views, as required to indicate fully all construction and fabrication methods, profiles and materials.
- D. On all shop drawings apply Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.

1.04 CERTIFICATES

- A. When specified in individual specifications sections, submit certification by the manufacturer, installation/application/subcontractor, or the Contractor to Architect/Engineer, in quantities specified for Product Data.
- B. Indicate material or Product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or Product, but must be acceptable to Architect/Engineer.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION

SECTION 01310 - CONSTRUCTION PROGRESS SCHEDULES

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Format.
- B. Content.
- C. Revisions to schedules.
- D. Submittals.

1.02 RELATED SECTIONS

- A. Section 01011 - Summary of Work.
- B. Section 01027 - Applications for Payment: Application for payment.
- C. Section 01300 - Submittals: Shop drawings.

1.03 REFERENCES

- A. AGC (Associated General Contractors of America) publication "The Use of CPM in Construction - A Manual for General Contractors and the Construction Industry".

1.04 FORMAT

- A. Prepare schedules starting with Notice to Proceed date through substantial completion, as a horizontal bar chart or Gantt chart with separate bar for each major portion of Work or operation, identifying first work day of each week.
- B. Sequence of Listings: The chronological order of the start of each item of Work.
- C. Scale and Spacing: To provide space for notations and revisions.
- D. Sheet Size: Maximum 30" x 42" OR multiples of 8½" x 11".

1.05 CONTENT

- A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.
- B. Identify each item by specification section number.
- C. Identify work of separate stages and other logically grouped activities.
- D. Provide sub-schedules for each stage of Work.
- E. Provide sub-schedules to define critical portions of the entire schedule.
- F. Include conferences and progress meetings in schedule.
- G. Show accumulated percentage of completion of each item, and total percentage of Work completed, to coincide with schedule of values in each application for payment.

- H. Provide separate schedule of submittal dates for shop drawings, product data, and samples, including Owner furnished products and dates reviewed submittals will be required from Architect/Engineer. Indicate decision dates for selection of finishes.
- I. Include scheduling for fabrication of structural steel.
- J. Include scheduling of erection sequence of building structural steel, precast walls and delivery to site.
- K. Include scheduling of erection sequence of building precast walls and delivery to site.

1.06 REVISIONS TO SCHEDULES

- A. Indicate progress of each activity to date of submittal, and projected completion date of each activity.
- B. Identify activities modified since previous submittal, major changes in scope, and other identifiable changes.
- C. Provide narrative report to define problem areas, anticipated delays, and impact on Schedule. Report corrective action taken, or proposed, and its effect including the effect of changes on schedules of separate contractors.

1.07 SUBMITTALS

- A. Submit initial schedules within 15 days after date of Owner-Contractor Agreement. After review, resubmit required revised data within seven days.
- B. Submit revised Progress Schedules with each Application for Payment.
- C. Submit the number of opaque reproductions which Contractor requires, plus two copies which will be retained by Architect/Engineer.

1.08 DISTRIBUTION

- A. Distribute copies of reviewed schedules to Project site file, Subcontractors, suppliers, and other concerned parties.
- B. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in schedules.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

SECTION 01400 - QUALITY CONTROL

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Quality assurance - control of installation.
- B. Tolerances
- C. Mock-up.
- D. Manufacturers' field services.

1.02 RELATED SECTIONS

- A. Section 01300 - Submittals: Submission of manufacturers' instructions and certificates.
- B. Section 01410 - Testing Services.
- C. Section 01620 - Product Delivery, Storage and Handling.
- D. Section 01650 - Starting of Systems

1.03 QUALITY ASSURANCE - CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, Products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- F. Secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.
- G. Perform Work by persons qualified to product required and specified quality.

1.04 TOLERANCES

- A. Monitor fabrication and installation tolerance control of Products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- C. Adjust Products to appropriate dimensions; position before securing Products in place.

1.05 MOCK-UP

- A. Tests will be performed under provisions identified in this section and identified in the respective Product specification sections.
- B. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.
- C. Accepted mock-ups shall be a comparison standard for the remaining Work.
- D. Where mock-up has been accepted by Architect/Engineer and is specified in product specification sections to be removed; remove mock-up and clear area when directed to do so.

1.06 MANUFACTURERS' FIELD SERVICES

- A. When specified in individual specification sections, require material or Product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment and additional products as specified, as applicable, and to initiate instructions when necessary.
- B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.
- B. Examine and verify specific conditions described in individual specification sections.
- C. Verify that utility services are available, of the correct characteristics, and in the correct locations.

3.02 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

END OF SECTION

SECTION 01500 - CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS REQUIREMENTS OF CONTRACTOR

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Temporary Controls: Barriers, enclosures and fencing, protection of the Work, and water control.
- B. Construction Facilities: Access roads, parking and progress cleaning.

1.02 RELATED SECTIONS

- A. Section 01510 - Temporary Utilities.
- B. Section 01540 - Security.
- C. Section 01550 - Access Roads and Parking Areas.
- D. Section 01580 - Project Identification and Signs.
- E. Section 01700 - Project Closeout: Final cleaning.

1.03 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations.
- B. Provide protection for plants designated to remain. Replace damaged plants.
- C. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.04 WATER CONTROL

- A. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.

1.05 PROTECTION OF INSTALLED WORK

- A. Protect installed Work and provide special protection where specified in individual specification sections.
- B. Provide temporary and removable protection for installed Products. Control activity in immediate work area to prevent damage.
- C. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- D. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- E. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is

necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

F. Prohibit traffic from landscaped areas.

1.06 PROGRESS CLEANING AND WASTE REMOVAL

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
- C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
- D. Collect and remove waste materials, debris, and rubbish from site periodically and dispose off-site.
- E. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

SECTION 01580 - PROJECT IDENTIFICATION AND SIGNS REQUIREMENTS OF CONTRACTOR

PART 1 - GENERAL

There will be one (1) sign for this project.

1.01 SECTION INCLUDES

- A. Project identification sign.

1.02 RELATED SECTIONS

- A. Section 01010 - Summary of Work.

1.03 QUALITY ASSURANCE

- A. Design sign and structure to withstand 60 miles/hr wind velocity.
- B. Sign Painter: Experienced as a professional sign painter for minimum three years.
- C. Finishes, Painting: Adequate to withstand weathering, fading, and chipping for duration of construction.

1.04 SUBMITTALS

- A. Section 01300 - Submittals: Shop drawings.
- B. Show content, layout, lettering, color, foundation, structure, sizes, and grades of members.

PART 2 - PRODUCTS

2.01 SIGN MATERIALS

- A. Structure and Framing: New wood, structurally adequate.
- B. Sign surfaces: Exterior grade plywood with medium density overlay, minimum 3/4 inch thick, standard large sizes to minimize joints.
- C. Rough Hardware: Galvanized.
- D. Paint and Primers: Exterior quality, two coats; sign background of color as selected.
- E. Lettering: Exterior quality paint, contrasting colors as selected.

2.02 PROJECT IDENTIFICATION SIGN

- A. One painted sign of construction, design, and content shown on Drawings, location designated.

- B. Content:
 - 1. Project title, logo and name of Owner as indicated on Contract Documents.
 - 2. Names and titles of authorities.
 - 3. Names and titles of Architect/Engineer and Consultants.
 - 4. Name of Prime Contractor and major Subcontractors.
- C. Graphic Design, Colors, Style of Lettering: Designated by Architect/Engineer and approved by Owner.

2.03 PROJECT INFORMATIONAL SIGNS

- A. Painted informational signs of same colors and lettering as Project Identification sign, or standard products; size lettering to provide legibility at 100-foot distance.
- B. Provide at each field office, and directional signs to direct traffic into and within site. Relocate as Work progress requires.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install project identification sign within 30 days after date fixed by Owner-Contractor Agreement.
- B. Erect at designated location.
- C. Erect supports and framing on secure foundation, rigidly braced and framed to resist wind loadings.
- D. Install sign surface plumb and level, with butt joints. Anchor securely.
- E. Paint exposed surfaces of sign, supports, and framing.

3.02 MAINTENANCE

- A. Maintain signs and supports clean, repair deterioration and damage.

3.03 REMOVAL

- A. Remove signs, framing, supports, and foundations at completion of Project and restore the area.

END OF SECTION

SECTION 01620 - PRODUCT DELIVERY, STORAGE & PROTECTION

PART 1 - GENERAL

1.01 APPLICABILITY

- A. This Section applies to all products furnished under this Agreement. Shipments of equipment or materials to be used by the Contractor or its subcontractors shall be delivered to the site only during regular working hours. All shipping papers and shipments shall be addressed and consigned to the Contractor giving the name of the Project with address. Under no circumstances will Owner accept shipments directed to it or the Architect/Engineer unless otherwise specified.

1.02 DELIVERY

- A. Products shall not be delivered to the Owner or the Architect/Engineer.
- B. Products shall not be delivered to the project site until related shop drawings have been reviewed by the Architect/Engineer.
- C. Products shall not be delivered to the project site until appropriate storage facilities are in place (on-site storage space is very limited).
- D. Products shall be delivered to the site in manufacturer's original, unopened, labeled containers.
- E. The Contractor shall not drop, roll or skid products off delivery vehicles. Hand carry or use suitable materials-handling equipment.

1.03 STORAGE AND PROTECTION

- A. General:
 - 1. The Contractor shall store and protect products in accordance with the manufacturer's recommendations and the requirements specified herein. No on-site existing storage facilities are available for use by the Contractor. All on-site facilities for storage shall be furnished by the Contractor.
 - 2. The Contractor shall not block or restrict the use of public right-of way, access roads or private property with stored materials.
 - 3. The Contractor shall not store products where they will interfere with operations of the Owner.
 - 4. The Contractor shall protect all products from damage or deterioration by weather.

5. The Contractor shall not store any products directly on the ground.
6. The Contractor shall not store any products in drainage ditches or areas where water may stand.
7. The Contractor shall label containers to identify materials inside using the terminology found in these Specifications.

B. Uncovered Storage:

1. The following types of materials may be stored out of doors without cover:
 - a. Masonry units
 - b. Reinforcing steel
 - c. Piping
 - d. Precast concrete items
 - e. Castings
2. The above-mentioned materials shall be stored on wood blocking.

C. Fully Protected Storage:

1. The Contractor shall store all products not named above in buildings or trailers which have a concrete or wooden floor, a roof; and fully enclosed walls on all sides.
2. The Contractor shall provide heated storage space for materials which would be damaged by freezing.
3. The Contractor shall protect mechanical and electrical equipment from being contaminated by dust and dirt.
4. The Contractor shall maintain temperature and humidity at levels recommended by manufacturer(s) for electrical and electronic equipment.

END OF SECTION

SECTION 01650 - STARTING OF SYSTEMS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Starting systems.
- B. Demonstration and instructions.
- C. Testing, adjusting, and balancing.

1.02 RELATED SECTIONS

- A. Section 01400 - Quality Control: Manufacturers field reports.
- B. Section 01700 - Contract Closeout: System operation and maintenance data and extra materials.

1.03 STARTING SYSTEMS

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Notify Owner seven days prior to start-up of each item.
- C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions which may cause damage.
- D. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- E. Verify that wiring and support components for equipment are complete and tested.
- F. Execute start-up under supervision of applicable manufacturer's representative or Contractors' personnel in accordance with manufacturers' instructions.
- G. When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.

1.04 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of Products to Owner's personnel prior to date of Substantial Completion.
- B. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.
 - 1. Warranty period to begin at start-up of season.
- C. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owners' personnel in detail to explain all aspects of operation and maintenance.
- D. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at scheduled time at designated location.
- E. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.
- F. The amount of time required for instruction on each item of equipment and system is that specified in individual sections.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

SECTION 01700 - PROJECT CLOSEOUT REQUIREMENTS OF CONTRACTOR

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Closeout procedures.
- B. Final cleaning.
- C. Adjusting.
- D. Project record documents.
- E. Operation and maintenance data.
- F. Spare parts and maintenance products.
- G. Warranties and bonds.

1.02 RELATED SECTIONS

- A. Section 01650 - Starting of Systems: System start-up, testing, adjusting, and balancing.

1.03 CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Architect/Engineer's review.
- B. Provide submittals to Architect/Engineer that are required by governing or other authorities.
- C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.
- D. Deliver all close-out documents to the Architect within forty-five (45) days of the date of Substantial Completion. Indemnify the Architect for failure to perform this requirement including legal fees incurred by the Architect in enforcing this requirement. Failure to deliver all required close-out documents to the Architect within forty-five (45) days from sign-off of AIA Document G704, "Certificate of Substantial Completion," shall invoke costs of the Architect's services to be borne by the Contractor.
- E. Submit Certificate of Substantial Completion: AIA Document G704, 2017 Edition.
- F. Submit Contractor's Affidavit of Payment of Debts and Claims: AIA Document G706, 1994 Edition.

- G. Submit Contractor's Affidavit of Release of Liens: AIA Document G706A, 1994 Edition.
- H. Submit certification prior to submission of final application for payment attesting those certain products meet required manufacturer's approval.

1.04 FINAL CLEANING

- A. Execute final cleaning prior to final project assessment. Use experienced workmen or professional cleaners for final cleaning.
- B. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- C. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
- D. Replace filters of operating equipment.
- E. Clean debris from roofs, gutters, downspouts, and drainage systems.
- F. Clean site; sweep paved areas, rake clean landscaped surfaces.
- G. Remove waste and surplus materials, rubbish, and construction facilities from the site weekly (or more often as required by accumulation). Remove waste materials, rubbish and debris from the site and legally dispose of at public or private dumping areas off-site at least once a week. Site to be approved by Owner.
- H. Each subcontractor has the responsibility for protecting equipment and finishes at the job site from damages resulting from work under his control, for all cleaning required as a result of his failure to protect equipment and finishes, and for removal of protective covers.
- I. Safety Standards: Maintain project in accordance with the OSHA safety standards, as stipulated under the Occupational Safety and Health Act of 1970 and printed May 29, 1971 in the Federal Register.
- J. Fire Protection: Store volatile waste in covered metal containers and remove from premises daily.
- K. Pollution Control: Conduct cleanup and disposal operations to comply with local ordinances and anti-pollution laws.
 - 1. Disposal of volatile fluid wastes (such as mineral spirits, oil, or paint thinner) in storm or sanitary sewer systems or into streams or waterways is not permitted.

- L. Vacuum clean interior building areas when ready to receive finish painting and continue vacuum cleaning on an as-needed basis until building is ready for acceptance or occupancy.
- M. Repair, patch and touch-up marred surfaces to match adjacent finishes. Coordinate with requirements specified under the various sections of these specifications.
- N. Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not fall on wet, newly-painted surfaces.

1.05 ADJUSTING

- A. Adjust operating Products and equipment to ensure smooth and unhindered operation.

1.06 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of the following record documents in clean, dry, legible condition; record actual revisions to the Work:
 - 1. Drawings
 - 2. Specifications
 - 3. Addenda
 - 4. Change Orders and other modifications to the Contract.
 - 5. Reviewed Shop Drawings, Product Data, and Samples.
 - 6. Manufacturer's instruction for assembly, installation, adjusting, maintenance and operation.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress. Label each document "Project Record."
- E. Specifications: Legibly mark and record at each Product section description of actual Products installed, including the following:
 - 1. Manufacturer's name and product model and number.
 - 2. Product substitutions or alternates utilized.
 - 3. Changes made by Addenda and modifications.
- F. Record Drawings: Legibly mark each item to record actual construction including:
 - 1. Measured depths of foundations in relation to finish first floor datum.
 - 2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - 3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 - 4. Field changes of dimension and detail.

5. Details not on original Contract drawings.
 6. Review applied changes to C.A.D. drawings.
- G. Submit documents to Architect/Engineer prior to claim for final Application for Payment.
1. The Contractor shall submit to the Architect one set of "Record" drawings which accurately reflect the actual installation of any and all materials, piping, conduit, etc., which were not installed exactly in accordance with the contract drawings.
 2. Contractor shall submit to the Architect two (2) (corrected) final record copies of shop drawings marked "for job use" which reflect all changes required in previous submittals including these marked "Approved as Noted," or similarly revised by the Engineer.

1.07 OPERATION AND MAINTENANCE DATA

- A. Submit data bound in 8½ x 11-inch (A4) text pages, three D side ring binders with durable plastic covers.
- B. Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS."
- C. Internally subdivide the binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.
- D. Contents: Prepare a Table of Contents for each volume, with each Product or system description identified, typed on white paper, in three parts as follows:
 1. Part 1: Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, Subcontractors, and major equipment suppliers.
 2. Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
 - a. Significant design criteria.
 - b. List of equipment.
 - c. Parts list for each component.
 - d. Operating instructions.
 - e. Maintenance instructions for equipment and systems.
 - f. Maintenance instructions for special finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
 3. Part 3: Project documents and certificates, including the following:
 - a. Shop drawings and product data.
 - b. Air and water balance reports.
 - c. Certificates.
 - d. Originals of warranties.

- E. Submit 1 draft copy of completed volumes 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Architect/Engineer comments. Revise content of all document sets as required prior to final submission.
- F. Submit three (3) sets of revised final volumes to Architect/Engineer within thirty (30) days of Architect/Engineer review.

1.08 SPARE PARTS AND MAINTENANCE PRODUCTS

- A. Provide spare parts, maintenance, and extra Products in quantities specified in individual specification sections.
- B. Deliver to Project site and place in location as directed by Owner; obtain receipt prior to final payment.

1.09 WARRANTIES AND BONDS

- A. Provide notarized copies.
- B. Execute and assemble transferable warranty documents from Subcontractors, suppliers, and manufacturers.
- C. Provide Table of Contents and assemble in three D side ring binder with durable plastic cover.
- D. Submit one (1) original and two (2) copies prior to final Application for Payment. All such documents shall indicate the name and location of the project and the name of the purchaser.
- E. For items of Work delayed beyond date of Substantial Completion, provide updated submittal within 10 days after acceptance, listing date of acceptance as start of warranty period.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

Division V – Metals

SECTION 05120 - STRUCTURAL STEEL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

- 1. Structural steel.
- 2. Grout.

- B. Related Sections:

- 1. Division 1 Section "Quality Requirements" for independent testing agency procedures and administrative requirements.
- 2. Division 5 Section "Architecturally Exposed Structural Steel Framing" for additional requirements for architecturally exposed structural steel.
- 3. Division 5 Section "Steel Deck" for field installation.
- 4. Division 5 Section "Metal Fabrications" for steel lintels and shelf angles not attached to structural-steel frame, miscellaneous steel fabrications, and other metal items not defined as structural steel.
- 5. Division 5 Section "Metal Stairs."
- 6. Division 9 painting Sections for surface-preparation and priming requirements.

1.3 DEFINITIONS

- A. Structural Steel: Elements of structural-steel frame, as classified by AISC 303, "Code of Standard Practice for Steel Buildings and Bridges."

1.4 PERFORMANCE REQUIREMENTS

- A. Connections: Provide details of connections required by the Contract Documents to be selected or completed by structural-steel fabricator, to withstand loads indicated and comply with other information and restrictions indicated.

1.5 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Show fabrication of structural-steel components.
 - 1. Include details of cuts, connections, splices, camber, holes, and other pertinent data.
 - 2. Include embedment drawings.
 - 3. Indicate welds by standard AWS symbols, distinguishing between shop and field welds, and show size, length, and type of each weld. Show backing bars that are to be removed and supplemental fillet welds where backing bars are to remain.
 - 4. Indicate type, size, and length of bolts, distinguishing between shop and field bolts. Identify pretensioned and slip-critical high-strength bolted connections.
 - 5. For structural-steel connections indicated to comply with design loads, include structural design data .
- C. Welding Procedure Specifications (WPSs) and Procedure Qualification Records (PQRs): Provide according to AWS D1.1/D1.1M, "Structural Welding Code - Steel," for each welded joint , including the following:
 - 1. Power source (constant current or constant voltage).
 - 2. Electrode manufacturer and trade name, for demand critical welds.
- D. Qualification Data: For qualified Installer AND fabricator.
- E. Welding certificates.
- F. Paint Compatibility Certificates: From manufacturers of topcoats applied over shop primers, certifying that shop primers are compatible with topcoats.
- G. Mill test reports for structural steel, including chemical and physical properties.
- H. Product Test Reports: For the following:
 - 1. Bolts, nuts, and washers including mechanical properties and chemical analysis.
 - 2. Direct-tension indicators.
 - 3. Tension-control, high-strength bolt-nut-washer assemblies.
 - 4. Shear stud connectors.
 - 5. Shop primers.
 - 6. Nonshrink grout.
- I. Source quality-control reports.

1.6 QUALITY ASSURANCE

- A. Fabricator Qualifications: A qualified fabricator that participates in the AISC Quality Certification Program and is designated an AISC-Certified Plant, Category STD., OR AWS SHOP CERTIFIED OR employ an independent special inspection agency to verify the fabrication of all structural members. This inspection agency shall have AWS D1.1 qualifications and be approved by the Engineer and Owner. The Special Inspection agency (for the steel fabricator) must submit reports of acceptance for all shop fabricated items as required in KBC-2007, section 1704.2 and 1704.3. The cost of this shall be the sole responsibility of the Steel Fabricator. Any material sent to the site without a report of acceptance from the fabricator's special inspector will be inspected by the owner's special inspector. The cost of these additional tests will be deducted from the contractor's application for payment. If the lack of inspections from the fabricator persists, then owner's special inspector will be sent to the fabricator's shop daily to inspect all of the material for this project and the costs for these inspections will be deducted from the contractor's application for payment (NO EXCEPTIONS).
- B. Installer Qualifications: A qualified installer with a minimum of 5 years experience on projects of similar (or larger) scale, with regard to size and complexity.
- C. Shop-Painting Applicators: Qualified according to AISC's Sophisticated Paint Endorsement P1 or SSPC-QP 3, "Standard Procedure for Evaluating Qualifications of Shop Painting Applicators."
- D. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."
- E. Comply with applicable provisions of the following specifications and documents:
 - 1. AISC 303.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store materials to permit easy access for inspection and identification. Keep steel members off ground and spaced by using pallets, dunnage, or other supports and spacers. Protect steel members and packaged materials from corrosion and deterioration.
 - 1. Do not store materials on structure in a manner that might cause distortion, damage, or overload to members or supporting structures. Repair or replace damaged materials or structures as directed.
- B. Store fasteners in a protected place in sealed containers with manufacturer's labels intact.
 - 1. Fasteners may be repackaged provided Owner's testing and inspecting agency observes repackaging and seals containers.
 - 2. Clean and relubricate bolts and nuts that become dry or rusty before use.

3. Comply with manufacturers' written recommendations for cleaning and lubricating ASTM F 1852 fasteners and for retesting fasteners after lubrication.

1.8 COORDINATION

- A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' recommendations to ensure that shop primers and topcoats are compatible with one another.
- B. Coordinate installation of anchorage items to be embedded in or attached to other construction without delaying the Work. Provide setting diagrams, sheet metal templates, instructions, and directions for installation.

PART 2 - PRODUCTS

2.1 STRUCTURAL-STEEL MATERIALS

- A. W-Shapes: ASTM A 992/A 992M .
- B. Channels, Angles, M , S-Shapes: ASTM A 36/A 36M.
- C. Plate and Bar: ASTM A 36/A 36M.
- D. Corrosion-Resisting Structural-Steel Shapes, Plates, and Bars: ASTM A 588/A 588M, Grade 50 (345).
- E. Cold-Formed Hollow Structural Sections: ASTM A 500, Grade B, structural tubing.
- F. Corrosion-Resisting Cold-Formed Hollow Structural Sections: ASTM A 847/A 847M, structural tubing.
- G. Steel Pipe: ASTM A 53/A 53M, Type E or S, Grade B.
 1. Weight Class: As indicated on drawings.
 2. Finish: Painted, except where indicated to be galvanized.
- H. Steel Castings: ASTM A 216/A 216M, Grade WCB with supplementary requirement S11.
- I. Steel Forgings: ASTM A 668/A 668M.
- J. Welding Electrodes: Comply with AWS requirements.

2.2 BOLTS, CONNECTORS, AND ANCHORS

- A. High-Strength Bolts, Nuts, and Washers: **ASTM A 325**, Type 1, heavy-hex steel structural bolts; **ASTM A 563, Grade C**, heavy-hex carbon-steel nuts; and **ASTM F 436** Type 1, hardened carbon-steel washers; all with plain finish.
- B. Tension-Control, High-Strength Bolt-Nut-Washer Assemblies: ASTM F 1852, Type 1, round head assemblies consisting of steel structural bolts with splined ends, heavy-hex carbon-steel nuts, and hardened carbon-steel washers.
 - 1. Finish: Plain.
- C. Shear Connectors: ASTM A 108, Grades 1015 through 1020, headed-stud type, cold-finished carbon steel; AWS D1.1/D1.1M, Type B.
- D. Unheaded Anchor Rods: ASTM F 1554, Grade 55, weldable.
 - 1. Configuration: Hooked.
 - 2. Nuts: **ASTM A 563** heavy-hex carbon steel.
 - 3. Plate Washers: ASTM A 36/A 36M carbon steel.
 - 4. Washers: **ASTM F 436**, Type 1, hardened carbon steel.
 - 5. Finish: Plain.
- E. Headed Anchor Rods: ASTM F 1554, Grade 55, weldable, straight.
 - 1. Nuts: **ASTM A 563 (ASTM A 563M)** heavy-hex carbon steel.
 - 2. Plate Washers: ASTM A 36/A 36M carbon steel.
 - 3. Washers: **ASTM F 436 (ASTM F 436M)**, Type 1, hardened carbon steel.
 - 4. Finish: Plain.
- F. Threaded Rods: ASTM A 36/A 36M .
 - 1. Nuts: **ASTM A 563** heavy-hex carbon steel.
 - 2. Washers: **ASTM F 436**, Type 1, hardened carbon steel.
 - 3. Finish: Plain.
- G. Clevises and Turnbuckles: Made from cold-finished carbon steel bars, ASTM A 108, Grade 1035.
- H. Eye Bolts and Nuts: Made from cold-finished carbon steel bars, ASTM A 108, Grade 1030.
- I. Sleeve Nuts: Made from cold-finished carbon steel bars, ASTM A 108, Grade 1018.

2.3 PRIMER

- A. Primer: Comply with Division 9 painting Sections.

- B. Primer: SSPC-Paint 25, Type I, zinc oxide, alkyd, linseed oil primer.
- C. Primer: SSPC-Paint 25 BCS, Type I, zinc oxide, alkyd, linseed oil primer.
- D. Primer: SSPC-Paint 23, latex primer.
- E. Primer: Fabricator's standard lead- and chromate-free, nonasphaltic, rust-inhibiting primer complying with MPI#79 and compatible with topcoat.
- F. Galvanizing Repair Paint: ASTM A 780.
- G. Primer: SSPC-Paint 20 shall be used for all exposed exterior steel.

2.4 GROUT

- A. Metallic, Shrinkage-Resistant Grout: ASTM C 1107, factory-packaged, metallic aggregate grout, mixed with water to consistency suitable for application and a 30-minute working time.

2.5 FABRICATION

- A. Structural Steel: Fabricate and assemble in shop to greatest extent possible. Fabricate according to AISC's "Code of Standard Practice for Steel Buildings and Bridges" and AISC 360.
 - 1. Camber structural-steel members where indicated.
 - 2. Fabricate beams with rolling camber up.
 - 3. Identify high-strength structural steel according to ASTM A 6/A 6M and maintain markings until structural steel has been erected.
 - 4. Mark and match-mark materials for field assembly.
 - 5. Complete structural-steel assemblies, including welding of units, before starting shop-priming operations.
- B. Thermal Cutting: Perform thermal cutting by machine to greatest extent possible.
 - 1. Plane thermally cut edges to be welded to comply with requirements in AWS D1.1/D1.1M.
- C. Bolt Holes: Cut, drill, or punch standard bolt holes perpendicular to metal surfaces.
- D. Finishing: Accurately finish ends of columns and other members transmitting bearing loads.
- E. Cleaning: Clean and prepare steel surfaces that are to remain unpainted according to SSPC-SP 2, "Hand Tool Cleaning."

- F. Shear Connectors: Prepare steel surfaces as recommended by manufacturer of shear connectors. Use automatic end welding of headed-stud shear connectors according to AWS D1.1/D1.1M and manufacturer's written instructions.
- G. Steel Wall-Opening Framing: Select true and straight members for fabricating steel wall-opening framing to be attached to structural steel. Straighten as required to provide uniform, square, and true members in completed wall framing.
- H. Holes: Provide holes required for securing other work to structural steel and for other work to pass through steel framing members.
 - 1. Cut, drill, or punch holes perpendicular to steel surfaces. Do not thermally cut bolt holes or enlarge holes by burning.
 - 2. Baseplate Holes: Cut, drill, mechanically thermal cut, or punch holes perpendicular to steel surfaces.
 - 3. Weld threaded nuts to framing and other specialty items indicated to receive other work.

2.6 SHOP CONNECTIONS

- A. High-Strength Bolts: Shop install high-strength bolts according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts" for type of bolt and type of joint specified.
 - 1. Joint Type: Pretensioned (TORQUE CONTROL BOLTS).

2.7 SHOP PRIMING

- A. Shop prime steel surfaces except the following:
 - 1. Surfaces embedded in concrete or mortar. Extend priming of partially embedded members to a depth of **2 inches (50 mm)**.
 - 2. Surfaces to be field welded.
 - 3. Surfaces to be high-strength bolted with slip-critical connections.
 - 4. Surfaces to receive sprayed fire-resistive materials (applied fireproofing).
 - 5. Galvanized surfaces.
- B. Surface Preparation: Clean surfaces to be painted. Remove loose rust and mill scale and spatter, slag, or flux deposits. Prepare surfaces according to the following specifications and standards:
 - 1. SSPC-SP 2, "Hand Tool Cleaning."
 - 2. SSPC-SP 3, "Power Tool Cleaning."
- C. Priming: Immediately after surface preparation, apply primer according to manufacturer's written instructions and at rate recommended by SSPC to provide a

minimum dry film thickness of 1.5 mils (0.038 mm). Use priming methods that result in full coverage of joints, corners, edges, and exposed surfaces.

2.8 GALVANIZING

- A. Hot-Dip Galvanized Finish: Apply zinc coating by the hot-dip process to structural steel according to ASTM A 123/A 123M.
 - 1. Fill vent and drain holes that will be exposed in the finished Work unless they will function as weep holes, by plugging with zinc solder and filing off smooth.
 - 2. Galvanize lintels, shelf angles and welded door frames attached to structural-steel frame and located in exterior walls.

2.9 SOURCE QUALITY CONTROL

- A. Testing Agency: Owner will engage an independent testing and inspecting agency to perform shop tests and inspections and prepare test reports.
 - 1. Provide testing agency with access to places where structural-steel work is being fabricated or produced to perform tests and inspections.
- B. Correct deficiencies in Work that test reports and inspections indicate does not comply with the Contract Documents.
- C. Bolted Connections: Shop-bolted connections will be inspected according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."
- D. Welded Connections: In addition to visual inspection, shop-welded connections will be tested and inspected according to AWS D1.1/D1.1M and the following inspection procedures, at testing agency's option:
 - 1. Liquid Penetrant Inspection: ASTM E 165.
 - 2. Magnetic Particle Inspection: ASTM E 709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration will not be accepted.
 - 3. Ultrasonic Inspection: ASTM E 164.
 - 4. Radiographic Inspection: ASTM E 94.
- E. In addition to visual inspection, shop-welded shear connectors will be tested and inspected according to requirements in AWS D1.1/D1.1M for stud welding and as follows:
 - 1. Bend tests will be performed if visual inspections reveal either a less-than-continuous 360-degree flash or welding repairs to any shear connector.
 - 2. Tests will be conducted on additional shear connectors if weld fracture occurs on shear connectors already tested, according to requirements in AWS D1.1/D1.1M.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify, with steel Erector present, elevations of concrete- and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedments for compliance with requirements.
 - 1. Prepare a certified survey of bearing surfaces, anchor rods, bearing plates, and other embedments showing dimensions, locations, angles, and elevations.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Provide temporary shores, guys, braces, and other supports during erection to keep structural steel secure, plumb, and in alignment against temporary construction loads and loads equal in intensity to design loads. Remove temporary supports when permanent structural steel, connections, and bracing are in place unless otherwise indicated.
 - 1. Do not remove temporary shoring supporting composite deck construction until cast-in-place concrete has attained its design compressive strength.

3.3 ERECTION

- A. Set structural steel accurately in locations and to elevations indicated and according to AISC 303 and AISC 360.
- B. Base Bearing and Leveling Plates: Clean concrete- and masonry-bearing surfaces of bond-reducing materials, and roughen surfaces prior to setting plates. Clean bottom surface of plates.
 - 1. Set plates for structural members on wedges, shims, or setting nuts as required.
 - 2. Weld plate washers to top of baseplate.
 - 3. Snug-tighten anchor rods after supported members have been positioned and plumbed. Do not remove wedges or shims but, if protruding, cut off flush with edge of plate before packing with grout.
 - 4. Promptly pack grout solidly between bearing surfaces and plates so no voids remain. Neatly finish exposed surfaces; protect grout and allow to cure. Comply with manufacturer's written installation instructions for shrinkage-resistant grouts.
- C. Maintain erection tolerances of structural steel within AISC's "Code of Standard Practice for Steel Buildings and Bridges."

- D. Align and adjust various members that form part of complete frame or structure before permanently fastening. Before assembly, clean bearing surfaces and other surfaces that will be in permanent contact with members. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.
 - 1. Level and plumb individual members of structure.
 - 2. Make allowances for difference between temperature at time of erection and mean temperature when structure is completed and in service.
- E. Splice members only where indicated.
- F. Do not use thermal cutting during erection
- G. Do not enlarge unfair holes in members by burning or using drift pins. Ream holes that must be enlarged to admit bolts.
- H. Shear Connectors: Prepare steel surfaces as recommended by manufacturer of shear connectors. Use automatic end welding of headed-stud shear connectors according to AWS D1.1/D1.1M and manufacturer's written instructions.

3.4 FIELD CONNECTIONS

- A. High-Strength Bolts: Install high-strength bolts according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts" for type of bolt and type of joint specified.
 - 1. Joint Type: Pretensioned.
 - 2. "Code of Standard Practice for Steel Buildings and Bridges" for mill material.

3.5 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to inspect field welds and high-strength bolted connections.
- B. Bolted Connections: Bolted connections will be inspected according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."
- C. Welded Connections: Field welds will be visually inspected according to AWS D1.1/D1.1M.
 - 1. In addition to visual inspection, field welds will be tested and inspected according to AWS D1.1/D1.1M and the following inspection procedures, at testing agency's option:
 - a. Liquid Penetrant Inspection: ASTM E 165.

- b. Magnetic Particle Inspection: ASTM E 709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration will not be accepted.
 - c. Ultrasonic Inspection: ASTM E 164.
 - d. Radiographic Inspection: ASTM E 94.
- D. In addition to visual inspection, test and inspect field-welded shear connectors according to requirements in AWS D1.1/D1.1M for stud welding and as follows:
 - 1. Perform bend tests if visual inspections reveal either a less-than-continuous 360-degree flash or welding repairs to any shear connector.
 - 2. Conduct tests on additional shear connectors if weld fracture occurs on shear connectors already tested, according to requirements in AWS D1.1/D1.1M.
- E. Correct deficiencies in Work that test reports and inspections indicate does not comply with the Contract Documents.

3.6 REPAIRS AND PROTECTION

- A. Galvanized Surfaces: Clean areas where galvanizing is damaged or missing and repair galvanizing to comply with ASTM A 780.
- B. Touchup Painting: Immediately after erection, clean exposed areas where primer is damaged or missing and paint with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.
 - 1. Clean and prepare surfaces by SSPC-SP 2 hand-tool cleaning or SSPC-SP 3 power-tool cleaning.
- C. Touchup Painting: Cleaning and touchup painting are specified in Division 9 painting Sections.

END OF SECTION 05120

Division VI – Wood and Plastic

SECTION 061760 - METAL-PLATE-CONNECTED WOOD TRUSSES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes wood roof trusses and truss accessories.
- B. Related Sections include the following:
 - 1. Division 6 Section "Rough Carpentry" for roof sheathing and subflooring and dimension lumber for supplementary framing and permanent bracing.
 - 2. Division 6 Section "Miscellaneous Carpentry" for roof sheathing and subflooring and dimension lumber for supplementary framing and permanent bracing.

1.3 DEFINITIONS

- A. Metal-Plate-Connected Wood Trusses: Planar structural units consisting of metal-plate-connected members fabricated from dimension lumber and cut and assembled before delivery to Project site.
- B. Lumber grading agencies, and the abbreviations used to reference them, include the following:
 - 1. NELMA - Northeastern Lumber Manufacturers Association.
 - 2. NLGA - National Lumber Grades Authority.
 - 3. SPIB - Southern Pine Inspection Bureau.
 - 4. WCLIB - West Coast Lumber Inspection Bureau.
 - 5. WWPA - Western Wood Products Association.

1.4 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Provide metal-plate-connected wood trusses capable of withstanding design loads within limits and under conditions indicated.
 - 1. Design Loads: As indicated.
 - 2. Maximum Deflection Under Design Loads:

- a. Roof Trusses: Vertical deflection of **1/240** of span.
- b. Roof Trusses: Horizontal deflection at reactions of 0.5 **inches**.

1.5 SUBMITTALS

- A. Product Data: For metal-plate connectors, metal framing anchors, bolts, and fasteners.
- B. Shop Drawings: Show location, pitch, span, camber, configuration, and spacing for each type of truss required; species, sizes, and stress grades of lumber; splice details; type, size, material, finish, design values, orientation, and location of metal connector plates; and bearing details. All shop drawings, calculations and erection plans shall bear the seal of the licensed professional engineer licensed to practice in Kentucky, responsible for the design of the trusses. Truss shop drawings (signed and sealed) shall be submitted to H.B.C. (by General Contractor).
 - 1. For installed products indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
 - 2. Show design loadings for each truss type.
 - 3. Show all bracing and/or bridging on erection plan as required to prevent compression buckling of individual truss members.
 - 4. Submit erection plans showing the truss layout, proper handling and erection instructions along with all temporary and permanent bracing or bridging requirements.
- C. Product Certificates: For metal-plate-connected wood trusses, signed by officer of truss fabricating firm.
- D. Qualification Data: For metal-plate manufacturer/fabricator and Installer.
- E. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the American Lumber Standards Committee Board of Review.
- F. Research/Evaluation Reports: For the following, showing compliance with building code in effect for Project:
 - 1. Metal-plate connectors.
 - 2. Metal framing anchors.

1.6 QUALITY ASSURANCE

- A. Metal Connector-Plate Manufacturer Qualifications: A manufacturer that is a member of TPI and that complies with TPI quality-control procedures for manufacture of connector plates published in TPI 1.
 - 1. Manufacturer's responsibilities include providing professional engineering services needed to assume engineering responsibility.
 - 2. Engineering Responsibility: Preparation of Shop Drawings and comprehensive engineering analysis by a qualified professional engineer, licensed to practice in the state the project is located.
- B. Fabricator Qualifications: Shop that participates in a recognized quality-assurance program that involves inspection by SPIB, Timber Products Inspection, TPI, or other independent testing and inspecting agency acceptable to Architect and authorities having jurisdiction.
- C. Source Limitations for Connector Plates: Obtain metal connector plates through one source from a single manufacturer.
- D. Comply with applicable requirements and recommendations of the following publications:
 - 1. TPI 1, "National Design Standard for Metal Plate Connected Wood Truss Construction."
 - 2. TPI DSB, "Recommended Design Specification for Temporary Bracing of Metal Plate Connected Wood Trusses."
 - 3. TPI HIB, "Commentary and Recommendations for Handling, Installing & Bracing Metal Plate Connected Wood Trusses."
- E. Wood Structural Design Standard: Comply with applicable requirements in AFPA's "National Design Specifications for Wood Construction" and its "Supplement."

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Comply with TPI recommendations to avoid damage and lateral bending. Provide for air circulation around stacks and under coverings.
- B. Inspect trusses showing discoloration, corrosion, or other evidence of deterioration. Discard and replace trusses that are damaged or defective.

1.8 COORDINATION

- A. Time delivery and erection of trusses to avoid extended on-site storage and to avoid delaying progress of other trades whose work must follow erection of trusses.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Metal Connector Plates:
 - a. Alpine Engineered Products, Inc.
 - b. CompuTrus, Inc.
 - c. Eagle Metal Products.
 - d. Jager Industries, Inc.
 - e. Mitek Industries, Inc.
 - f. Robbins Engineering, Inc.
 - g. TEE-LOK Corporation.
 - h. Truswal Systems Corporation.
 - 2. Metal Framing Anchors:
 - a. Alpine Engineered Products, Inc.
 - b. Cleveland Steel Specialty Co.
 - c. Harlen Metal Products, Inc.
 - d. KC Metals Products, Inc.
 - e. Silver Metal Products, Inc.
 - f. Simpson Strong-Tie Company, Inc.
 - g. Southeastern Metals Manufacturing Co., Inc.
 - h. United Steel Products Company, Inc.

2.2 DIMENSION LUMBER

- A. Lumber: DOC PS 20 and applicable rules of lumber grading agencies certified by the American Lumber Standards Committee Board of Review.
 - 1. Factory mark each piece of lumber with grade stamp of grading agency.
 - 2. Provide dressed lumber, S4S, manufactured to actual sizes required by DOC PS 20 for moisture content specified.
 - 3. Provide dry lumber with 19 percent maximum moisture content at time of dressing.
 - 4. Provide dry lumber with no less than 7 percent moisture content at time of dressing.
- B. Grade and Species: Provide dimension lumber of any species for truss chord and web members, graded visually or mechanically, and capable of supporting required loads

without exceeding allowable design values according to AFPA's "National Design Specifications for Wood Construction" and its "Supplement."

- C. Grade and Species: Provide visually graded dimension lumber for truss chord and web members, of the following grade and any of the following species:
 - 1. Grade for Chord Members: No. 2 or better.
 - 2. Grade for Web Members: No. 2 or better
 - 3. Species: Southern pine; SPIB.
 - 4. Species: Mixed southern pine; SPIB.
- D. Grade and Species: Provide dimension lumber of any species for truss chord and web members, graded as follows and of the following minimum design values for size of member required according to AFPA's "National Design Specifications for Wood Construction" and its "Supplement":
 - 1. Grading Method: mechanical.
 - 2. Design Values: Modulus of elasticity of at least 1,500,000 psi and an extreme fiber stress in bending of at 1200 psi .
- E. Kiln-dry material after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or does not comply with requirements for untreated material.
- F. Mark each treated item with the treatment quality mark of an inspection agency approved by the American Lumber Standards Committee Board of Review.

2.3 METAL CONNECTOR PLATES

- A. General: Fabricate connector plates to comply with TPI 1 from metal complying with requirements indicated below:
- B. Hot-Dip Galvanized Steel Sheet: ASTM A 653/A 653M, G60 (Z180) coating designation; Designation SS, Grade 33, and not less than 0.036 inch (0.9 mm) thick.
- C. Electrolytic Zinc-Coated Steel Sheet: ASTM A 591/A 591M, 80Z (24G) coating designation; ASTM A 570/A 570M, Structural Steel (SS), Grade 33, and not less than 0.047 inch (1.2 mm) thick.
- D. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792/A 792M, AZ50 (AZ150) coating designation; Structural Steel (SS), Grade 33, and not less than 0.036 inch (0.9 mm) thick.
- E. Stainless-Steel Sheet: ASTM A 666, Type 304, and not less than 0.035 inch (0.88 mm) thick.

2.4 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.
 - 1. Where trusses are exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M
- B. Nails, Wire, Brads, and Staples: FS FF-N-105.
- C. Power-Driven Fasteners: CABO NER-272.
- D. Wood Screws: ASME B18.6.1.
- E. Lag Bolts: **ASME B18.2.1.** (ASME B18.2.3.8M).
- F. Bolts: Steel bolts complying with **ASTM A 307, Grade A** (ASTM F 568M, Property Class 4.6); with **ASTM A 563** (ASTM A 563M) hex nuts and, where indicated, flat washers.
- G. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.
 - 1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5.

2.5 METAL FRAMING ANCHORS

- A. General: Provide framing anchors made from metal indicated, of structural capacity, type, and size indicated, and as follows:
 - 1. Research/Evaluation Reports: Provide products acceptable to authorities having jurisdiction and for which model code research/evaluation reports exist that show compliance of metal framing anchors, for application indicated, with building code in effect for Project.
 - 2. Allowable Design Loads: Provide products with allowable design loads, as published by manufacturer, that meet or exceed those indicated. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.
- B. Galvanized Steel Sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A 653/A 653M, **G60** (Z180) coating designation.
- C. Stainless-Steel Sheet: ASTM A 666, Type 304.

1. Use for exterior locations and where indicated.
- D. Truss Tie-Downs (Hurricane or Seismic Ties): Bent strap tie for fastening roof trusses to wall studs below, 2-1/2 inches (63 mm) wide by 0.062 inch (1.6 mm) thick. Tie fits over top of truss and fastens to both sides of truss, inside face of top plates, and both sides of stud below.
- E. Roof Truss Clips: Angle clips for bracing bottom chord of roof trusses at non-load-bearing walls, 1-1/4 inches (32 mm) wide by 0.050 inch (1.3 mm) thick. Clip is fastened to truss through slotted holes to allow for truss deflection.
- F. Floor Truss Hangers: U-shaped hangers, full depth of floor truss, with 1-3/4-inch- (44-mm-) long seat; formed from metal strap 0.062 inch (1.6 mm) thick with tabs bent to extend over and be fastened to supporting member.

2.6 MISCELLANEOUS MATERIALS

- A. Galvanizing Repair Paint: SSPC-Paint 20 or DOD-P-21035, with dry film containing a minimum of 94 percent zinc dust by weight.

2.7 FABRICATION

- A. Cut truss members to accurate lengths, angles, and sizes to produce close-fitting joints.
- B. Fabricate metal connector plates to sizes, configurations, thicknesses, and anchorage details required to withstand design loads for types of joint designs indicated.
- C. Assemble truss members in design configuration indicated; use jigs or other means to ensure uniformity and accuracy of assembly with joints closely fitted to comply with tolerances in TPI 1. Position members to produce design camber indicated.
 1. Fabricate wood trusses within manufacturing tolerances in TPI 1.
- D. Connect truss members by metal connector plates located and securely embedded simultaneously in both sides of wood members by air or hydraulic press.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install wood trusses only after supporting construction is in place and is braced and secured.
- B. Before installing, splice trusses delivered to Project site in more than one piece.

- C. Hoist trusses in place by lifting equipment suited to sizes and types of trusses required, exercising care not to damage truss members or joints by out-of-plane bending or other causes.
- D. Install and brace trusses according to TPI recommendations and as indicated.
- E. Install trusses plumb, square, and true to line and securely fasten to supporting construction.
- F. Space trusses **24 inches** o.c. (max.); adjust and align trusses in location before permanently fastening.
- G. Anchor trusses securely at bearing points; use metal framing anchors. Install fasteners through each fastener hole in metal framing anchor according to manufacturer's fastening schedules and written instructions.
- H. Securely connect each truss ply required for forming built-up girder trusses.
 - 1. Anchor trusses to girder trusses as indicated.
- I. Install and fasten permanent bracing during truss erection and before construction loads are applied. Anchor ends of permanent bracing where terminating at walls or beams.
 - 1. Install and fasten strongback bracing vertically against vertical web of parallel-chord floor trusses at centers indicated.
- J. Install wood trusses within installation tolerances in TPI 1.
- K. Do not cut or remove truss members.
- L. Replace wood trusses that are damaged or do not meet requirements.
 - 1. Do not alter trusses in field.

3.2 REPAIRS AND PROTECTION

- A. Repair damaged galvanized coatings on exposed surfaces with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.
- B. Protective Coating: Clean and prepare exposed surfaces of metal connector plates. Brush apply primer, when part of coating system, and one coat of protective coating.
 - 1. Apply materials to provide minimum dry film thickness recommended by coating system manufacturer.

END OF SECTION 061760

SECTION 06200 - FINISH CARPENTRY AND MILLWORK

PART 1 - SCOPE

- A. This Section includes all labor, materials, equipment and related items required to complete the work of finish carpentry and millwork as shown on the Drawings and specified herein.

PART 2 - MATERIALS

- A. Lumber Standards and Grade-Marking. Each piece of lumber and each board, exclusive of moldings and trim, shall comply with Product Standard PS-20, latest edition, and with specific grading requirements of the association recognized as covering the species used and under whose grading rule it is produced. Each piece of lumber and each board shall be identified by the grade mark of a recognized association or independent inspection agency. Such association or independent inspection agency shall be certified by the Board of Review, American Lumber Standards Committee, Washington, D.C., to grade the species.
- B. Moldings and trim shall conform to details on the Drawings. However, stock moldings and trim of same sizes and with approximately the same profiles as those detailed may be used if all other requirements are met, subject to approval by the Architect.
- C. Plywood shall be softwood plywood, unless otherwise specified under individual item specifications, and shall conform to requirements of "Product Standard PS-1, latest edition, for American Plywood Association." Plywood's for particular applications in this project shall be as specified under Art.3, below.
1. Each standard size panel shall be stamped or branded to show group, type and grade.
- D. Moisture content of various materials shall meet the following requirements at time of installation:
1. Boards:
 - a. 8" or less in width Not more than 19%
 - b. Wider than 8" Not more than 15%
 2. Finish Lumber and Millwork Not more than 12%
- E. Dressed lumber shall be surfaced four sides (S4S) to conform to Product Standard PS-20 unless, in addition to being dressed, it has been notched, ship lapped or patterned.
- F. Dimensions of lumber specified or called for by the Drawings are nominal, except those trim dimensions shown are actual.

PART 3 - GRADES AND SPECIES

- A. Exterior wood trim 2" or greater nominal thickness and 2" or greater nominal width shall be of sizes and profiles shown on the Drawings, shall be S4S, and shall be one of the following species, provided the grade for each is not lower than the minimum shown.

Fir, Douglas, WCLB Rules "A" - Appearance Framing

Pine, Southern Yellow, SPIB Rules "A" - Appearance Framing

At the Contractor's option, other species of comparable appearance grade may be used in lieu of the above, if approved by the Architect. Running lengths of 10' or less in all applications shall be in single pieces.

- B. Exterior wood trim 2" or less nominal thickness shall be of sizes and profiles shown on the Drawings, shall be S4S, shall be same specie specified above for 2" or greater exterior trim, and shall be one of the following, provided the grade for each is not lower than the minimum shown:

Fir, Douglas, WCLB Rules Select Merchantable Boards

Pine, Southern Yellow, SPIB Rules No. 1 Boards

At the Contractor's option, other species of comparable appearance grade may be used in lieu of the above, if approved by the Architect. Running lengths of 10' or less in all applications shall be in single pieces.

- C. Exterior and interior miscellaneous trim, door and fixed window frames, etc., may be one of the following species, provided the grade for each is not lower than the minimum shown:

Fir, Douglas, WCLB Rules "D" Finish

Pine, Southern Yellow, SPIB Rules "C" Finish

At the Contractor's option, other species of comparable appearance grade maybe used in lieu of the above, if approved by the Architect. Running lengths of 10' or less in all applications shall be in single pieces and may be finger-jointed.

- D. Plywood's shall be of the types and minimum grades specified hereunder for specific applications listed. All plywoods shall be from Group 1 Species as listed by the American Plywood Association.
- E. Rough hardware needed for the proper installation of all finish carpentry and millwork shall be provided. Nails, screws, bolts and similar items shall be of proper types and ample sizes to fasten and hold the various members and items securely in place.
- F. Other materials shall be as specified hereunder.

PART 4 - STORAGE AND PROTECTION

- A. All lumber shall be piled in a manner which ensures proper ventilation and drainage, and shall be covered to protect it from the elements.
- B. Millwork and wood trim shall be protected against dampness during and after delivery. It shall be stored in well-ventilated buildings and where not exposed to extreme changes in temperature or humidity. Wood doors shall be stored in flat positions, one above another on solid, level supports, with air circulation excluded from top and bottom surfaces.
- C. Improper storage resulting in damage to millwork or trim, or warping of doors, shall be cause for their rejection.

PART 5 - GENERAL

- A. Finish Carpentry. Work of finish carpentry shall be laid out as shown on the Drawings, and shall be cut and fitted as necessitated by conditions encountered. All work shall be plumbed, leveled, and properly jointed and secured with sufficient nails, screws, bolts, etc. to ensure proper alignment and rigidity.
- B. Any piece of wood or other material with a defect or defects that prevent it from serving its intended purpose satisfactorily, including warped, split, or otherwise defective material, will be rejected and shall be replaced with an acceptable piece.

PART 6 - EXTERIOR AND INTERIOR TRIM

- A. Miscellaneous exterior and interior softwood trim, including facias, moldings, casings, etc., shall be of species and grades hereinbefore specified, as approved by the Architect and shall be furnished in longest practicable lengths.
- B. Joints in all work shall be tight and formed to conceal shrinkage. Door and window trim shall be in long lengths and jointed only where solid fastenings can be made. End joints in all built-up members shall be well distributed so that no joint occurs over another. External and internal corners shall be mitered. Where necessary, woodwork shall be scribed to adjacent work.
 - 1. Joints in running trim, including continuous wood fascia members, shall be scarfed at 45 degrees, except where butt joints may be specifically permitted by the Architect, and shall be drawn up tightly for inconspicuous joints. External exposed corners of trim shall be mitered.

End of Section

Division VII – Thermal and Moisture Protection

SECTION 07631 - GUTTERS AND DOWNSPOUTS

PART 1 - GENERAL

1.01 WORK INCLUDED - STORE #3

- A. Prefabricated aluminum eave gutters and downspouts, with baked enamel finish, complete with required connecting pieces, roof aprons, end caps, anchorages, etc. as required for a complete installation.
- B. Precast concrete splash pads.

1.02 REFERENCES

- A. ASTM B209 - Aluminum Alloy Sheet and Plate

1.03 SUBMITTALS

- A. Submit shop drawings of gutters and downspouts.
- B. Clearly indicate general construction, configurations, jointing methods and locations, fastening methods and locations and installation details.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Alcoa
- B. Reynolds Metals
- C. Kaiser
- D. Substitutions: Reviewed equal.

2.02 MATERIALS

- A. Gutters shall be made of 3005-H25 Aluminum Sheet.
- B. Gutter shall be 6" .032" nominal with 3" x 4" downspouts .027".
- C. Expansion joint to be aluminum, lined with neoprene.
- D. Downspout Clip .014"
- E. Gutter hangers shall be strap hangers.
- F. All Accessories used shall be by the same manufacturer.

2.03 FABRICATION

- A. Form gutters and downspouts of profiles and sizes indicated on Drawings and as required to properly collect and remove water. Fabricate complete with required connection pieces.
- B. Form sections square, true and accurate in size, in maximum possible lengths and free of distortions and defects detrimental to appearance or performance. Hem exposed edges. Allow for expansion at joints.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Before starting work, verify governing dimensions at building; examine, clean and repair, if necessary, any adjoining work on which this work is in any way dependent for its proper installation.
- B. Upon completion, the contractor shall clean all aluminum work.
- C. Dissimilar materials
 - 1. Care must be exercised in placing aluminum in contact with metals or materials not compatible with aluminum.
 - 2. Dissimilar materials shall be painted or otherwise protected when they are in contact with aluminum or when drainage from them passes over aluminum.

PART 4 - RIDGE VENT

- A. When indicated on the Drawings, furnish and install at building roofs manufacturer's standard, continuous, ridge-type with minimum high impact copolymer vent such as shingle vent II Series SHFV203 as manufactured by Air Vent, Inc., Peroia, Illinois or reviewed equal with minimum net free area of 18 sq. inches per linear foot, and shall include end and connector plugs, weather baffles, joint covers, and aluminum screw shank nails as required by the installations or reviewed equal.
- B. Installation shall be in accordance with manufacturer's printed instructions.
- C. Colors to match roof.
- D. Slant Vents
- E. Furnish and install where shown on drawings, manufacturer's standard slant vent such as RV-61, net free area, 61 square inches, heavy-duty polypropylene construction with aluminum screen, nominal 19½"x16¼" size by the solar group, Taylorsville, Mississippi or reviewed equal.
- F. Color to match roof.

End of Section

SECTION 07900 - JOINT SEALERS

PART 1 - SCOPE

- A. This Section includes all labor, materials, equipment, and related items required for the work of caulking as shown on the Drawings and as specified herein. Work under this Section includes but is not necessarily restricted to the following:
 - 1. Caulking of exterior or interior expansion or control joints in concrete or masonry.
 - 2. Other joints, exterior or interior, in the building construction shown, specified, or required to be caulked.

PART 2 - SUBMITTAL

- A. Contractor shall submit to the Architect, in duplicate, for approval the following items prior to furnishing any materials at the job site.
 - 1. Sample cards of all exposed caulking and sealant for color approval. Unless otherwise directed, apply samples in minimum 3" runs on cards.
 - 2. One lineal foot of each type of backer material proposed.

PART 3 - PRODUCT HANDLING

- A. Deliver caulking, and related accessories to the job site in factory sealed, unopened containers bearing manufacturer's name and product designation.
- B. Store materials in unopened containers, following manufacturer's recommendations for storage temperature and shelf life.
- C. Follow manufacturer's recommendation for handling products containing toxic substances. Keep flammable materials away from heat, sparks, and open flames. Use recommended solvents and cleaning agents for cleaning tools and equipment.

PART 4 - ENVIRONMENTAL CONDITIONS

- A. Schedule caulking operations so that working joints are most likely to be normal size. Apply materials within manufacturer's recommended surface and ambient temperature range.

PART 5 - PROTECTION

- A. Use masking tape where practicable to control lap of materials onto adjacent surfaces or to facilitate tooling. Remove tape immediately after caulking operation.

PART 6 - MATERIALS

- A. General. All caulking, primers, and accessories shall be non-staining to adjacent exposed materials. Products having similar application and usage shall be of the same manufacturer and type. Unless otherwise specified, colors shall be selected from approved manufacturer's standard color sections. Use gun consistency compounds unless otherwise required by job conditions.
- B. Exterior caulking shall be a one or two-component polysulfide base, elastic, synthetic rubber compound, conforming to Federal Spec. TT-S-00230, and shall be "Sonolastic" as manufactured by the Sonneborn Building Products, Inc., "Synthacalk" as manufactured by the Pecora Chemical Corp., or "Rubber Calk 500" as manufactured by the Products Research & Chemical Corp or an approved equal.
 - 1. Colors shall be from manufacturer's standards as selected by the Architect.
- C. Interior caulking for general use shall be a one-component acrylic latex compound, and shall be "Sonolac" as manufactured by the Sonneborn Building Products, Inc. "AC-20" as manufactured by the Pecora Chemical Corp., or "Latex Caulk" as manufactured by DAP, Inc.
- D. Primers shall be as manufactured and recommended for each substrate by the manufacturer of each caulking compound used in the work.
- E. Backer materials shall be as recommended for and compatible with each caulking used, and shall be as follows unless otherwise required to meet specific job conditions.
 - 1. Backer rod for use in all joints requiring backer for caulking shall be a soft, closed cell polyethylene foam meeting requirements of AASHO Specifications M153-54, Type I and III, and shall be as manufactured by the Dow Corning Corp., Sonneborn Building Products, Inc., or Williams Products, Inc.
- F. Release material, where required, shall be polyethylene film.

PART 7 - MIXING

- A. Job mix multi-component sealants with suitable power operated equipment, following specific directions of sealant manufacturer.
- B. Base and accelerator components of multi-part sealants shall have batch control numbers clearly indicated on containers. Control numbers for mixed components shall be identical.

PART 8 - CONDITION OF SURFACES

- A. Inspect all surfaces to receive caulking materials, and report all defects. Starting work implies acceptance of surfaces as satisfactory. Verify that joints and spaces to be caulked are of proper width.

- B. Concrete surfaces shall be thoroughly cured.
- C. Apply no caulking materials in contact with surfaces contaminated with oil, grease, bituminous materials, form release agents, bond breakers, deleterious curing compounds, water repellents, and other special surface treatments. Aluminum surfaces shall be free of lacquer. Costs incurred by removal of such contaminants shall be borne by the trades responsible for their presence.

PART 9 - PREPARATION

- A. Thoroughly clean all joints, removing all foreign matter such as dirt, dust, moisture, frost, rust, paint, lacquer, and protective coatings. Blow all joints free of loose particles.
- B. Use no cleaning solvents which leave residue. Wipe joints free of solvent using clean, dry white cloths or white lint less paper. Do not permit solvent to air dry.
- C. Follow manufacturer's directions for products and surfaces.

PART 10 - INSTALLATION

- A. Unless otherwise required by these specifications, install materials in strict accordance with manufacturer's specifications and recommendations, using approved equipment.
- B. Usage of various materials shall be as specified under Article 6 above.
- C. Prime surfaces as recommended by the manufacturer's immediately prior to caulking or sealing. Make preliminary tests to ensure that primers will not stain exposed materials or deteriorate backer materials.
- D. Unless otherwise required by caulking manufacturer's specifications and recommendations, use backer material to control caulking and sealant depth as follows (depths measured at bond face).
 - 1. Polysulfide and Polyurethane Sealants. For joints up to 1/2" wide and less, make depth equal to width but not less than 1/4". Joints over 1/2" wide shall be 3/8" deep.
 - 2. Acrylic Sealant. For joints 1/2" wide and less, make depth equal to width but not less than 1/4". Joints over 1/2" wide shall be 3/8" deep.
 - 3. Do not twist or stretch preformed backer materials during installation.
- E. At joints subject to movement, where required by nature of backer material used or where sealant contacts back of joint, use release material between backer material or back of joint and sealer to confine adhesion to surfaces of materials being joined. Follow manufacturer's recommendation exactly.

- F. Neatly tool joints to slightly concave surface using tooling agent recommended by sealant manufacturers. Repair any air pockets exposed by tooling. Tool so as to compress material and improve adhesion to surfaces joined.

PART 11 - PATCHING

- A. Patch or replace defective or damaged sealants as directed by the Architect. Be responsible for damage to adjacent surfaces caused by caulking and sealing operations.

PART 12 - CLEANING

- A. Clean adjacent surfaces soiled by caulking and sealing operations. Remove wet material before it "sets". Follow manufacturer's recommendations for cleaning procedures. Cleaning agents shall not stain or be injurious to exposed surfaces nor shall they be potentially dangerous to glass and metal surfaces due to wash-off by rain.

END OF SECTION

Division VIII – Doors and Windows

SECTION 08100 - METAL DOORS AND FRAMES

PART 1 - RELATED DOCUMENTS

- A. General provisions of Contract, General and Special Conditions, and General Requirements apply to this Section.

PART 2 - DESCRIPTION OF WORK

- A. Provide labor, materials, equipment, and services necessary for proper and complete installation of all hollow metal work.
- B. Include all view windows and side lights indicated on Drawings.
- C. Work Specified in Other Sections.
 - 1. Finish Hardware is specified in another Division 8 Section.

PART 3 - LABEL CONSTRUCTION

Where Label Construction is indicated in Door and Frame Schedule, materials and construction of doors and frames shall be in accordance with and bear indicated resistive rating label of Underwriters' Laboratories, Inc.

PART 4 - SUBMITTALS

Submit Shop Drawings for all work, indicating materials, uses, gauges, details of construction, connections to other work, fastenings, and anchors, to Architect for his review. Do not start fabrication until these Drawings are approved.

PART 5 - MATERIALS

- A. Manufacturers offering products complying with requirements include:
 - Steelcraft Mfg. Co.
 - Republic Steel Corporation
- B. Materials used shall be of best quality of their respective kinds.
- C. Steel in general shall be cold rolled stretcher level, prime quality steel, of U.S. Standard gauge as specified under the various headings.
- D. Doors, frames and framed openings exposed to the exterior shall be fabricated of zinc coated steel in the gauges scheduled. The steel shall be hot dipped so as to provide a ductile coating, tightly adherent to the base steel. The zinc coating shall be an A60 coating in accordance with ASTM specification A525 (.6 oz. of zinc per sq. ft. of steel total coverage.)

PART 6 - HOLLOW METAL STEEL DOORS, POLYURETHANE CORE

- A. Physical Properties:
 - "R" Factor: 11.1
 - "U" Factor: .09
 - Compression Strength: 3600 P.S.F.
- B. Doors shall be equal to those manufactured by The Steelcraft Manufacturing Company, Cincinnati, Ohio, and designated as:
LF-18 (1-3/4", 18 gauge steel)
- C. Doors shall be fabricated of:
 - 1. Cold rolled steel, interior.
 - 2. Galvanized steel with a zinc coating of .6 ozs. per square foot total, exterior.
- D. Door shall be flush with edge seams filled and ground smooth.
- E. Doors shall have 1/8" bevel in 2" on hinge and ground smooth.
- F. Doors shall have vertical mechanical interlocking seams on hinge and lock edges.
- G. Doors shall be provided with top and bottom inverted 14 gage steel channels spot welded within the door.
- H. Doors shall be mortised and adequately reinforced for all hardware.
 - 1. Mortised hardware reinforcements shall be drilled and tapped at the factory.
 - 2. Surface applied hardware shall be field drilled by others.
- I. Doors shall be reinforced internally with a 14 gauge steel reinforcement for surface closers when specified.
- J. Out swinging exterior doors shall be provided with top caps for protection against weather and with a polyurethane core.
- K. Doors shall be phosphatized and receive one coat of baked on prime paint.

PART 7 - FRAMES

- A. Fabricate frames of 16 ga. steel. Manufacturers offering products complying with the requirements include:
 - Steelcraft Mfg. Co.
 - Republic Steel Corp.
 - Fenestra, Inc.
- B. All frames shall have welded and mitered corners, equivalent to Steelcraft Type D-16. (Issue A).

- C. Frames in stud walls can be KD frames.
- D. Provide suitable anchors for jambs as required by wall construction. Provide a minimum of six (6) jamb anchors and two (2) base anchors per frame. Provide anchors as required for labeled frames.
- E. Reinforcing channels, where called for, shall be 12 gauge reinforcing channel in head.

PART 8 - HARDWARE REINFORCEMENTS

- A. Accurately mortise, reinforce, drill, and tap at factory all work to receive hardware, except do drilling and tapping for door checks and brackets at building.
- B. Reinforcements shall be of ample size and thickness to stiffen work against strain of service required. Reinforcements for locks and escutcheons shall be box type with spring lead contacts for lock cases.
- C. Provide cover boxes in back of all hardware cutouts in combination type frames.

PART 9 - FINISH

- A. All steel hollow metal work shall be phosphatized and receive one coat baked on prime coat.
- B. Each coat shall be baked on and sanded smooth.

PART 10 - INSTALLATION

- A. Set frames in their proper locations, plumb and true and securely braced in position.
- B. Receive, store and protect and be responsible for all doors to be installed hereunder. Report immediately to Contractor shortages, damage, improper preparation, defective finishes and warped doors. Do not install any material not perfect in every respect.
- C. Inspect openings and frames to receive doors. Report damage or discrepancy affecting proper installation of units to Contractor, and have corrective work done in a suitable and satisfactory manner.
- D. Install doors in openings as indicated on Drawings in conformance with shop drawings and hardware schedule. Install doors so they hang plumb and true, with proper clearances using items of hardware scheduled for openings.
- E. Accurately set all frames and thoroughly and rigidly anchor and fasten in place in building construction. Weld drywall anchors to frames.
- F. Check frames before and after walls are constructed to see that they are properly erected.

End of Section

Division 14

SECTION 14210 - ELECTRIC TRACTION PASSENGER ELEVATORS

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Electric traction passenger elevators.

1.2 RELATED SECTIONS

A. Section 015000 – Temporary Facilities and Controls: Protection of floor openings and personnel barriers; temporary power and lighting.

B. Section 033000 – Cast-in-Place Concrete: Elevator pits.

C. Section 036000 – Grouts (Grouting): Grouting door frames and sills.

D. Section 042000 – Masonry Units (Unit Masonry): Setting sleeves, inserts, and anchoring devices in masonry for guide-rail brackets.

E. Section 051200 – Metal Stairs Structural Steel (Structural Steel Framing): Support steel, divider beams, and hoist beams.

F. Section 055000 – Gypsum Metal Fabrications: Pit ladders, supports for entrances in drywall hoistways.

G. Section 061053 – Miscellaneous Rough Carpentry: Temporary platform assembly.

H. Section 071600 – Cementitious Waterproofing: Waterproofing of elevator pit.

I. Section 092900 – Gypsum Board: Hoistway walls.

J. Section 099000 – Paints and Coatings (Painting and Coating): Field painting of elevator entrances over primer.

K. Section 283100 – Detection and Alarm (Fire Detection and Alarm): Heat, smoke, and products of combustion sensing devices, fire alarm signal lines to contacts in machine space.

L. Section 23000 – Heating, Ventilating, and Air Conditioning Equipment (Heating, Ventilating, and Air-Conditioning (HVAC)): Heating, cooling, and ventilation of control and machinery space.

M. Section 260500 – Wiring Methods (Common Work Results for Electrical): Light outlets, convenience outlets, light switches, and conduits.

N. Section 262400 – Switchboards, Panelboards, and Control Centers (Switchboards and Panelboards): Disconnect switches.

O. Section 265000 – Lighting: Light fixtures.

P. Section 221429 – Sump Pumps: For sump pumps, sumps, and sump covers in elevator pits.

Q. Section 271500 – Communications Horizontal Cabling: For Telephone service for elevators and for Internet connection to elevator controllers for remote monitoring.

R. Section 273000 – Telephone and Intercommunication Equipment (Voice Communications): Telephone outlets and elevator telephones.

S. Section 31000 – Earthwork: Excavation of elevator pit.

1.3 REFERENCES

- A. ANSI/ASME A17.1/CAN/CSA B44 – Safety Code for Elevators and Escalators.
- B. ADAAG – Americans with Disabilities Act Accessibility Guidelines.
- C. ANSI/NFPA 70 – National Electrical Code.
- D. ANSI/NFPA 80 – Fire Doors and Windows.
- E. ANSI/UL 10B – Fire Tests of Door Assemblies.
- F. CAN/CSA C22.1 – Canadian Electrical Code.
- G. Model and Local Building Codes
- H. ISO 9001: 2000 - Quality Management Systems - Requirements.

1.4 DESIGN REQUIREMENTS

- A. Arrange elevator components in control closet or machinery space so equipment can be removed for repairs or replaced with minimal disturbance to other equipment and components.
- B. Where permitted by code, provide all elevator equipment including controls, drives, transformers, and rescue features within the elevator hoistway.

1.5 SUBMITTALS

- A. Comply with Section 013300 (01 33 00) – Submittal Procedures.
- B. Product Data: Submit manufacturer/installer's product data, including,
 - a. Descriptive brochures or detail drawings of car and hall fixtures, cab ceilings, and product features.
 - b. Power Information: Horsepower, starting current, running current, machine and control heat release, and electrical requirements.
- C. Shop Drawings: Submit manufacturer/installer's shop drawings, including plans, elevations, sections, and details, indicating location of equipment, loads, dimensions, tolerances, materials, components, fabrication, fasteners, hardware, finish, options, accessories, and other information to render totally functional elevators.
- D. Samples: Submit manufacturer/installer's samples of standard colors and finishes of finish materials.
- E. Operation and Maintenance Manual: Submit manufacturer/installer's operation and maintenance manual; including operation, maintenance, adjustment, and cleaning instructions; trouble shooting guide; renewal parts catalogs; and electrical wiring diagrams.
- F. Warranty: Submit manufacturer/installer's standard warranty.

1.6 QUALITY ASSURANCE

- A. Manufacturer/Installer's Qualifications: Specialize in manufacturing and installing elevator equipment, with a minimum of 10 years successful experience.

B. Regulatory Requirements:

a. Elevator design, clearances, construction, workmanship, materials, and installation, unless specified otherwise, shall be in accordance with ANSI/ASME A17.1, handicap accessibility, Americans with Disabilities Act, and other codes having legal jurisdiction.

b. ANSI/ASME A17.1 shall govern, except where codes having legal jurisdiction include more rigid requirements or conflict with ANSI/ASME A17.1.

c. Elevator shall follow design and manufacturing procedures certified in accordance with ISO 9001-2000 to meet product and service requirements for quality assurance for new products.

d. Where product is in variance to the published ANSI/ASME A17.1 model code, provide a 3rd party AECO certification demonstrating equivalent function, safety, and performance.

C. Pre-installation Meeting:

a. Convene pre-installation meeting before start of installation of elevators.

b. Require attendance of parties directly affecting work of this section, including Contractor, Architect, and elevator manufacturer/installer.

c. Review examination, installation, field quality control, adjusting, cleaning, protection, and coordination with other work.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Delivery: Deliver materials to site in manufacturer/installer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer/installer.

B. Storage: Store materials in clean, dry area indoors in accordance with manufacturer/installer's instructions.

C. Handling: Protect materials during handling and installation to prevent damage.

1.8 PROJECT CONDITIONS

A. Temporary Electrical Power:

a. Owner will arrange for temporary 220 VAC, single-phase, 60 Hz., GFCI-protected electricity to be available for installation of elevator components.

b. Comply with Section 015100 – Temporary Utilities.

B. Installation of the Elevator:

a. General Contractor will provide permanent three-phase power prior to installation start.

b. General Contractor will provide clear, rollable access to a 20' x 10' secure and dry storage area prior to delivery.

c. General Contractor will provide a clean, dry, and complete hoistway along with temporary installation platform and all required OSHA-compliant barricades prior to delivery.

C. Temporary Use of Elevator:

a. Owner will negotiate with manufacturer/installer for temporary use of elevator, if required.

b. Temporary use of elevator shall be in accordance with terms and conditions of manufacturer/installer's temporary acceptance form.

1.9 SCHEDULING

A. Coordinate elevator work with work of other trades, for proper time and sequence to avoid construction delays.

1.10 WARRANTY

A. Manufacturer/installer shall guarantee materials and workmanship of equipment installed under these specifications and make good, defects not due to ordinary wear or to improper use, which may develop within 1 year after completion of installation or acceptance thereof by beneficial use, whichever is earlier.

1.11 MAINTENANCE SERVICE

A. Elevator maintenance service shall be performed by elevator manufacturer/installer.

B. Elevators shall receive regular maintenance on each unit for period of 12 months after completion of work specified herein or acceptance thereof by beneficial use, whichever is earlier.

C. Trained employees shall make periodic examinations and perform work including necessary adjusting, greasing, oiling, and replacing parts to keep elevators in operation, except parts that require replacement because of accidents, vandalism, misuse, or negligence by parties other than manufacturer/installer.

D. Manufacturer/installer shall perform all Work, except emergency minor adjustment call-back service, during regular working hours. Manufacturer/installer shall provide emergency minor adjustment call-back service, during regular working hours.

E. Should Owner request that examinations, cleaning, lubrication, adjustments, repairs, replacements, or emergency minor adjustment call-back service, unless specified herein, be performed on other than manufacturer/installer's regular working hours of regular working days, manufacturer/installer shall absorb straight-time labor charges and Owner will compensate manufacturer/installer for overtime premium, travel time, and expense at normal billing rates.

F. Elevator Control System:

a. Include built-in remote diagnostic module to relay constant status of elevators and control system to a 24-hour, 7-days-a-week central-monitoring facility.

b. Remote Monitoring Device: Transmit information on current status of elevators, including malfunctions, system errors, and shutdown.

G. Maintenance Options

Regular Maintenance: During Regular Working Hours

Callback Service: During Regular Working Hours

Maintenance Period: 12

PART 2 – PRODUCTS

2.1 MANUFACTURER/INSTALLER

A. Schindler Elevator Corporation, Website www.us.schindler.com.

B. Elevator shall be installed by elevator manufacturer.

2.2 ELEVATOR SYSTEM AND COMPONENTS

A. Electric Traction Passenger Elevators: Basis of design is the Schindler 3100 Gearless Traction Elevator.

B. Elevator Equipment Summary:

- a. Application: Machine Room Less (MRL)
- b. Counterweight Location: Side
- c. Machine Location: Top of the hoistway mounted on car and counterweight guide rails
- d. Control Space Location: Top landing entrance frame or entrance frame at one floor below the top landing
- e. Service: General Purpose Passenger
- f. Quantity: 1 Unit
- g. Capacity: 2100 lbs
- h. Speed: 100 fpm
- i. Travel: 30' 0"
- j. Landings: 3
- k. Front Openings: 2
- l. Rear Openings: 1
- m. Rear Door Hand: N/A
- n. Operation: Microprocessor Single Car Automatic Operation
- p. Clear Inside Dimensions: 5' 9-5/16" Wide X 4' 4-7/8" Deep
- q. Cab Height: 7' 9"
- r. Guide Rails: Equivalent to 12 lb. per foot
- s. Entrance Type and Width: Two Speed Side Opening 3' 0" Wide X 7' 0" High doors
- t. Entrance Height: 7'-0"
- u. Power Supply: 208 Volts 3 Phase 60 Hz

C. Performance:

- a. Car Speed: -10% to +5% of contract speed under any loading condition or direction of travel.
- b. Car Capacity: Safely lower, stop and hold up to 125% of rated load per code.

D. Ride Quality:

- a. Vertical Vibration (maximum): 25 mg
- b. Horizontal Vibration (maximum): 15 mg
- c. Vertical Jerk (maximum): 2 ft/sec³
- d. Acceleration (maximum): 1.6 ft/sec²

- e. In Car Noise: 53-60 dB(A)
- f. Stopping Accuracy: $\pm 5\text{mm}$
- g. Starts per hour (maximum): 180

E. Elevator Operation:

a. Simplex Collective Operation: Using a microprocessor based controller, operation shall be automatic by means of the car and hall buttons. When all calls have been answered, the car shall park at the last landing served.

b. Group Automatic Operation with Demand-Based Dispatching: Provide reprogrammable group automatic system that assigns cars to hall calls based on a dispatching algorithm designed to minimize passenger waiting time.

F. Operating Features - Standard:

- a. Door Light Curtain Protection
- b. Static AC Drive
- c. Phase Monitor Relay
- d. Cab Overload with Indicator
- e. Load-weighing
- f. Central Alarm
- g. Remote Monitoring
- h. Firefighter's Operation
- i. Automatic Evacuation

l. When the main line power is lost for longer than 5 seconds the emergency battery power supply provides power automatically to the elevator controller. If the car is at a floor when the power fails, it remains at that floor, opens its doors, and shuts down. If the car is between floors, it is raised or lowered to the first available landing, opens its doors, and shuts down.

- j. Independent Service

G. Operating Features - Optional:

2.3 EQUIPMENT: CONTROL COMPONENTS AND CONTROL SPACE

A. Controller: Provide microprocessor based control system to perform all of the functions of safe elevator operation, as well as perform car and group operational control.

a. All high voltage (110v or above) contact points inside the inspection and test panel shall be protected from accidental contact in a situation where the access panels are open.

b. The controller shall be distributed throughout the elevator system located in the overhead, cab and inspection and test panel. The inverter will be mounted in the overhead adjacent to the hoist machine and an inspection and test panel will be located in the door jamb at the top floor or one floor below the top floor. No elevator equipment mechanical rooms or closets are required.

c. Provide multi-bus control architecture to reduce cabling, material and waste.

B. Drive: Provide a Variable Voltage Variable Frequency AC Closed Loop drive system. Provide stable start without high peak current, quickly reaching a low energy consumption level.

C. Inspection and Test Panel: Integrated control equipment, main inspection and test panel in door frame at top level served or at one floor below the top level served.

2.4 EQUIPMENT: HOISTWAY COMPONENTS

A. Machine:

- a. Gearless asynchronous AC motor with integral drive sheave, service and emergency brakes.
- b. Design machine to enable direct power transfer, thereby avoiding loss of power.
- c. Design machine to be compact, lightweight and durable to optimize material usage and save space.
- d. Mount to structural support channels on top of guide rail system as applicable in hoistway overhead.

B. Governor:

- a. Tension type over-speed governor with remote manual reset.
- b. Mount to structural support channels as applicable in hoistway overhead.

C. Buffers, Car and Counterweight: Compression spring type buffers to meet code.

D. Hoistway Operating Devices:

- a. Emergency Stop switch in the pit.
- b. Terminal stopping switches.
- c. Emergency stop switch on the machine.

E. Positioning System: System consisting of proximity sensors and door zone vanes.

F. Guide Rails and Attachments: Provide Tee-section steel rails with brackets and fasteners. Side counterweight arrangements shall have a dual purpose bracket that combines both counterweight guide rails, and one of the car guide rails to building fastening.

G. Suspension System: Non circular Elastomeric coated suspension media with high tensile grade steel cords.

H. Governor rope: Steel wire rope with 6 mm diameter.

2.5 EQUIPMENT: HOISTWAY ENTRANCES

A. Hoistway Doors and Frames:

- a. UL rated with required fire rating.
- b. Doors: Rigid flush panel construction with reinforcement ribs.
- c. Frames: Securely fasten at corners to form unit frame. Frames shall be bolted.

B. Finish:

- b. Exposed Areas of Corridor Frames: Stainless Steel - All Floors
- c. Exposed Areas of Corridor Frames:
 - I. 1st Floor: Painted Primer

II. 2nd Floor: Painted Primer

III. Typical Floors: Painted Primer

d. Doors: Stainless Steel - All Floors

e. Doors: Stainless Steel - All Floors

f. Doors:

I. 1st Floor: Painted Primer

II. 2nd Floor: Painted Primer

III. Typical Floor: Painted Primer

g. Sills: Aluminum - All Floors

h. Sills: Aluminum - All Floors

C. Entrance Markings and Jamb Plates: Provide standard entrance jamb tactile markings on both jambs, at all floors. Plate Mounting: Refer to manufacturer drawings.

2.6 EQUIPMENT: CAR COMPONENTS

A. Car Frame and Safety: Provide car frame with adequate bracing to support the platform and car enclosure. The safety shall be integral to the car frame and shall be flexible guide clamp type.

B. Platform: Provide platform of steel construction with plywood subfloor and aluminum threshold.

C. Car Guides: Provide sliding guide shoes mounted to top and bottom of both car and counterweight frame. Arrange each guide shoe assembly to maintain constant contact on the rail surfaces. Provide retainers in areas with Seismic design requirements.

D. Provide central guiding system to reduce mechanical friction and energy consumption.

E. Steel Cab:

a. Fire rating: Provide Class B fire rating for cab, or Class A fire rating where required by local Code.

b. Design cab to comply with LEED Indoor Environmental Quality requirements through use of Low-Emitting Materials on walls, ceiling and subflooring.

c. Car wall finish: Steel Plastic Laminate Finish selected from manufacturer's standard selections.

d. Base and frieze: Aluminum.

e. Car front finish: Brushed stainless steel.

f. Car door finish: Brushed stainless steel.

g. Ceiling: Canopy ceiling, finished in #4 Stainless Steel With Down Lit Led Lighting. Provide lighting consisting of four compact fluorescent energy saving lights located in two semi-oval lateral cutouts located on the center-sides of the cab ceiling, Lexan lens cover.

h. Handrail: Rectangular Brushed Aluminum - Straight End. Locate on Side Walls.

i. Flooring: By others. Not to exceed 3/8" finished depth.

j. Ventilation: Provide one-speed fan in canopy.

k. Emergency Car Lighting: Provide an emergency power unit employing a 12 volt sealed rechargeable battery and static circuits to illuminate the elevator car and provide current to the alarm bell in the event of building power failure.

l. Emergency Siren: Provide siren mounted on top of the car that is activated when the Alarm button in the car operating panel is engaged.

m. Emergency Exit Switch: Provide an electrical contact to open the safety circuit when the emergency car top exit is opened. When the exit door is opened, the top exit switch shall signal the control and the car will be unable to move.

n. Emergency Exit Lock: Provide an emergency exit lock where required by local code.

o. Emergency Exit Guard: Provide emergency exit guard on top of car when required for hoistway wall to platform clearance exceeds 12" or for multiple cars in hoistway.

2.7 DOOR OPERATOR AND REOPENING DEVICES

A. Door Operator: Provide a closed loop VVVF high performance door operator with frequency controlled drive for fast and reliable operation to open and close the car and hoistway doors simultaneously.

B. In case of interruption or failure of electric power, the doors can be readily opened by hand from within the car, in accordance with applicable code. Provide emergency devices and keys for opening doors from the landing as required by local code.

C. Doors shall open automatically when the car has arrived at or is leveling at the respective landings. Doors shall close after a predetermined time interval or immediately upon pressing of a car button. Provide door open button in the car operating panel. Momentary pressing of this button shall reopen the doors and reset the time interval.

D. Provide door hangers and tracks for each car and hoistway door. Contour tracks to match the hanger sheaves. Design hangers for power operation with provisions for vertical and lateral adjustment. Hanger sheaves shall have polyurethane tires and pre-lubricated sealed for life bearings.

E. Electronic Door Safety Device: Equip car doors with concealed transmitter and receiver infrared beam devices to detect presence of object in process of passing through hoistway entrance and car doorway (light curtain device).

a. Use multi-beam scanning without moving parts to detect obstructions in door opening.

b. Detector Device: Prevent doors from closing, or if they have already started closing, cause doors to reopen and remain open while object is within detection zone.

c. Horizontal Beams: Minimum of 33 infra red beams to fill doorway from ground level to a height of 6 feet.

2.8 EQUIPMENT: SIGNAL DEVICES AND FIXTURES

A. Car Operating Panel: Provide a car operating panel with all push buttons, key switches and message indicators for elevator operation.

a. Full height car operating panel shall be surface-mounted on front return.

b. Comply with handicap requirements.

c. Push Buttons: Mechanical, illuminating using long-lasting LEDs for each floor served.

d. Emergency Buttons: Provide in accordance with code. Emergency alarm button, door open and door close buttons.

B. Features of the Car Operating Panel Shall Include:

a. Audible chime to signal that the car is either stopping at or passing a floor served by the elevator.

b. Raised markings and Braille provided to the left hand side of each push button.

c. Car Lantern: Provide LED illuminated car lantern with direction arrows to comply with local code when hall lanterns are not provided.

d. Door open and close push buttons.

e. Firefighter's hat and Phase 2 Key-switch

f. Inspection key-switch.

g. Key-switch for optional Independent Service Operation

h. Illuminated alarm button with raised marking.

i. Elevator Data Plate marked with elevator capacity and car number.

j. Help Button: Activation of help button will initiate two-way communication between car and a location inside the building, switching over to alternate location if call is unanswered, where personnel are available to take the appropriate action. Visual indicators are provided for call initiation and call acknowledgement.

k. Certificate Frame.

C. Hall Fixtures: Provide hall fixtures with necessary push buttons and key switches for elevator operation.

a. Push buttons: Metallic tactile push buttons, up button and down button at intermediate floors, single button at each terminal floor.

b. Height: Comply with handicap requirements.

c. Illumination: Illuminating using long-lasting low power LEDs.

D. Hall Lanterns and Position Indicators.

a. LED illuminated direction arrows with audible and visible call acknowledgement.

E. Hoistway access switches: Provide key-switch at top and/or bottom floor in entrance jamb as required by local code.

F. Firefighter's Phase 1 Service: Key switch in brushed stainless steel cover plate.

G. Fixture Cover Plates: For push buttons, hall lanterns and position indicators, resistant white back-printed glass, no screws required for mounting. Provide stainless steel cover plates for Firefighter's Phase I switch and hoistway access switches, with tamper resistant screws in same finish.

H. Mounting: Mount hall fixtures in entrance frames.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine hoistways, hoistway openings, and pits before starting elevator installation.
- B. Verify hoistway, pit, overhead, and openings are of correct size, within tolerances, and are ready for work of this section.
- C. Verify walls are plumb where openings occur and ready for entrance sill installation. Traditional sill angle or concrete sill support shall not be required.
- D. Verify hoistway is clear and plumb, with variations not to exceed -0 to +1 inch at any point. Verify projections greater than 4" must be beveled not less than 75 degrees from horizontal. No negative tolerance is permitted for minimum hoistway dimensions.
- E. Verify minimum 2-hour fire-resistance rating of hatch walls.
- F. Notify Architect in writing of dimensional discrepancies or other conditions detrimental to proper installation or performance of elevators.
- G. Do not proceed with elevator installation until unsatisfactory conditions have been corrected in a manner acceptable to manufacturer/installer.

3.2 INSTALLATION

- A. Install elevators in accordance with manufacturer/installer's instructions and ANSI/ASME A17.1.
- B. Set entrances in vertical alignment with car openings, and aligned with plumb hoistway lines.

3.3 FIELD QUALITY CONTROL

- A. Perform tests of elevator as required by ANSI/ASME A17.1 and governing codes.

3.4 ADJUSTING

- A. Adjust elevators for proper operation in accordance with manufacturer/installer's instructions.
- B. Adjust elevators for smooth acceleration and deceleration of car so not to cause passenger discomfort.
- C. Adjust doors to prevent opening of doors at landing on corridor side, unless car is at rest at that landing, or is in leveling zone and stopping at that landing.
- D. Adjust automatic floor leveling feature at each floor to within 1/4 inch of landing.
- E. Repair minor damages to finish in accordance with manufacturer/installer's instructions and as approved by Architect.
- F. Remove and replace damaged components that cannot be successfully repaired as determined by Architect.

3.5 CLEANING

- A. Clean elevators promptly after installation in accordance with manufacturer/installer's instructions.
- B. Do not use harsh cleaning materials or methods that could damage finish.

3.6 PROTECTION

A. Protect installed elevators from damage during construction in accordance with the negotiated temporary use agreement between Owner and manufacturer's installer.

END OF SECTION

October 9, 2024

GEOTECHNICAL REPORT

STEARNS ELEVATOR ADDITION

STEARNS, KY





October 9, 2024

Mr. Marty Friedman
MSE of Kentucky
via email: martin.friedman@mselex.com

Subject: **Geotechnical Report**
Stearns Elevator Addition
Bridge Street, Stearns, Kentucky
CETCO Project No. 1776-24-0138

Dear Mr. Friedman:

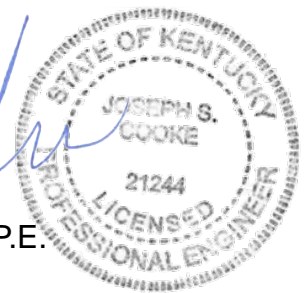
CETCO appreciates the opportunity to provide our services to you and the Owner (McCreary County Heritage Foundation). As follows, we are providing our geotechnical report. Our services were provided in general accordance with our proposal number CET 1776-24-0301, dated, August 28, 2024. Also, please note the report appendix which contains many detailed findings as well as our standard of care for providing our services.

We appreciate the opportunity to provide our geotechnical services to you and the project team. Please do not hesitate to contact us for questions or comments about the information contained herein.

Cordially,
CETCO

Hunter Hawkins, SI
Staff Geologist

Joseph S. Cooke, P.E.
Principal
Licensed KY 21244



Attachments: Geotechnical Report and Appendix
cc: Ray Moncrief, McCreary Co. Heritage



*Cooke Engineering and
Testing Company*

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Stearns Historic Project - Elevator Addition

STEARNS, KENTUCKY

GEOTECHNICAL REPORT SUMMARY

We provided our services in general accordance with our previous discussions and our proposal number 1776-24-0301, dated August 28, 2024. CETCO has consulted with your office and discussed the need for CETCO to provide geotechnical services including sampling and exploration with soil test borings, a site field services by our office, lab testing and analysis and providing a geotechnical report. These services included providing our opinion of the conditions encountered for the purpose of design and development for the new construction at the historic site, specifically the elevator addition. The project plans may change and CETCO should be advised on any changes from the information presented in our report. The site is located off of Henderson Street in Stearns, Kentucky. Potential concept plans indicate a relatively small elevator addition to the existing multistory historic building. This introductory section, which has previously been discussed with your office, provides a brief summary for quick reference. The report that follows provides much greater details for design and construction purposes.

Three borings were used to explore the subsurface materials. In general, we encountered a "thin" layer of previously placed sandy/clayey fill overlying mostly brown lean clay. Siltstone bedrock were encountered in all borings from 3 to 7 feet, with underlying shale bedrock at approximately 12 to 14 feet deep at the site. The native clay soils were typically stiff to very stiff at most samples, but one boring encountered soft and very moist to wet soils.

The site is suitable for the development. Once the pad is leveled and filled properly, we believe shallow spread footings and a conventional "pit" (4 to 5 feet deep foundations) for elevator equipment can be used. Some rock removal is expected, especially for the pit excavation. However, our borings encountered an upper soft zone of bedrock that could likely be slowly removed with a large excavator (based on our drilling conditions encountered-see the boring logs). Footings should not bear on the old fill (which was about 1 to 5 feet deep). The material should be removed and the footing trench can be backfilled with compacted stone up to the bottom of footing depths. These conditions and methods are common in many areas of Kentucky. Details for these issues and recommendations for design and construction as well as our other recommendations are discussed in the report.

1 PROJECT BACKGROUND

1.1 CETCO SCOPE OF SERVICES

Our scope of services included conducting an exploration of the subsurface conditions for the proposed new elevator addition. This included using three soil test borings, observing site and site area conditions and providing geotechnical analysis. We have completed our field work, analysis and we are issuing the geotechnical report as follows.

1.2 PROVIDED INFORMATION

We were provided information for the project as follows:

Provided Document	Source
Building drawings are in the “initial” stage. The provided sketches shows the potential addition layouts of the site.	MSE
Historic blueprints of the older buildings (several).	MSE

The following information summarizes our understanding of the project conditions

Condition	Specifics
Building/Structure Information	The project would likely consist of a rectangular addition on the western side of the existing “apartment” building. The addition is at least 16 x 25 feet in size. The structural composition is likely a combination structural masonry and steel frame, with some stud walls. Shallow spread footings for outer walls and a “pit” area (at least 4 to 5 feet deep) for the elevator equipment are likely. The remaining floor area will be a slab-on-grade floor.
Site Grading and Building Loading Conditions	<p>The site has been previously graded (former building area). The overall site slopes gradually downward to the south. Less than 5 feet of mass cut and fill is expected. Again, the elevator pit will require at least 4 to 5 feet of excavation. Of note: the overall site is greater than 6 to 10 feet “below” the areas to the west and north (large depressed area).</p> <p>We have assumed building foundation loads of less than 5 kips per linear foot.</p>

If any of the aforementioned information is incorrect or requires modification, please let CETCO know. Changes to our reporting, recommendations and opinions may be required.

1.3 PUBLISHED SITE AND AREA INFORMATION

We have reviewed the following published/public domain site information.

AREA TOPOGRAPHY AND PHYSIOGRAPHY

The site is located at the southwestern tip of the Eastern Kentucky Coal Field Region of Kentucky. This area is described as a well dissected upland with hilly to mountainous topography. The overall area can have resistant Pennsylvanian-age sandstones with steep and generally stable slopes, but also have soft shale or siltstone bedrock with “unstable” slopes. This region is dissected by headstreams of the Cumberland River and often contain springs, entrenched rivers and sinking streams. The valleys of the Cumberland River, which marks McCreary County’s northeast boundary, are commonly the lowest elevations just under 750 feet. Ridge tops, arches, and chimney rocks are common in this area and are generally the highest elevations over 2100 feet. The immediate site vicinity ranged from 1340 to 1400 feet according to provided topography, our site GPS measurements and published mapping.

SITE GEOLOGY

The Kentucky Geologic Survey public information was reviewed including the USGS mapped geologic information for the site (the Whitley City Geological Quadrangle, 1964). Available geologic mapping indicates the site vicinity is underlain by the Corbin Sandstone member of the Grundy Formation. Corbin Sandstone can be described as light gray to brown, coarse to medium grained, and weathers brown and pink. These massive beds can form rounded outcrops or ledges and cliffs similar to beds of the Breathitt Formation. The Breathitt Formation, is mapped northeast and southwest of the site location. This formation consists of siltstone and sandstone. Siltstone is light brown to dark brown and weathers to thin shaly layers, and sandstone is similar to that of the Corbin Sandstone member. In the southeastern part of the formation, shale and siltstone is common with discontinuous beds of sandstone. The Lee formation, also apart of the Breathitt Group, consists of shale, siltstone and sandstone. Shale is described as light gray, dark gray or brown. The lee formation is what we observed in our borings, where we encountered siltstone overlying shale bedrock. Geologic mapping is shown on the following page.

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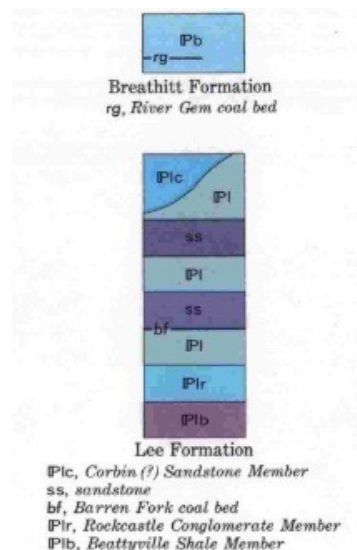


Image from the KGS website showing Original Geological Quadrangle.
Site location is in the black rectangle.

Mine and Oil/Gas Mapping

Kentucky mine mapping information systems was reviewed for the site and site area. Historically, majority of the mining in the immediate site vicinity appeared to be “strip” contour mining. Several nearby strip mined areas have operated up until 1987 and have been inactive since. There are also underground coal mines mapped south and west of the site, however there are no indications that any mining occurred below the site according to available permits and maps reviewed. Based on our observations and information reviewed, it is our opinion that the mining risk associated with former mines (subsidence, mine run-offs, waste fills present, etc.) is low compared to areas one or more miles away from the site. It should always be noted that “illegal”, “non-permit” or “un-mapped” mines are always possible in any mining area. We cannot ascertain such unknown risks.

Oil/Gas Wells: The area of McCreary County has a history of oil and gas production. These wells are usually 1500 or more feet below the ground surface and pose little to no threat to top of ground stability. The majority risk is due to the presence of any actual well on a property. No such wells are mapped at the site or within the close vicinity.

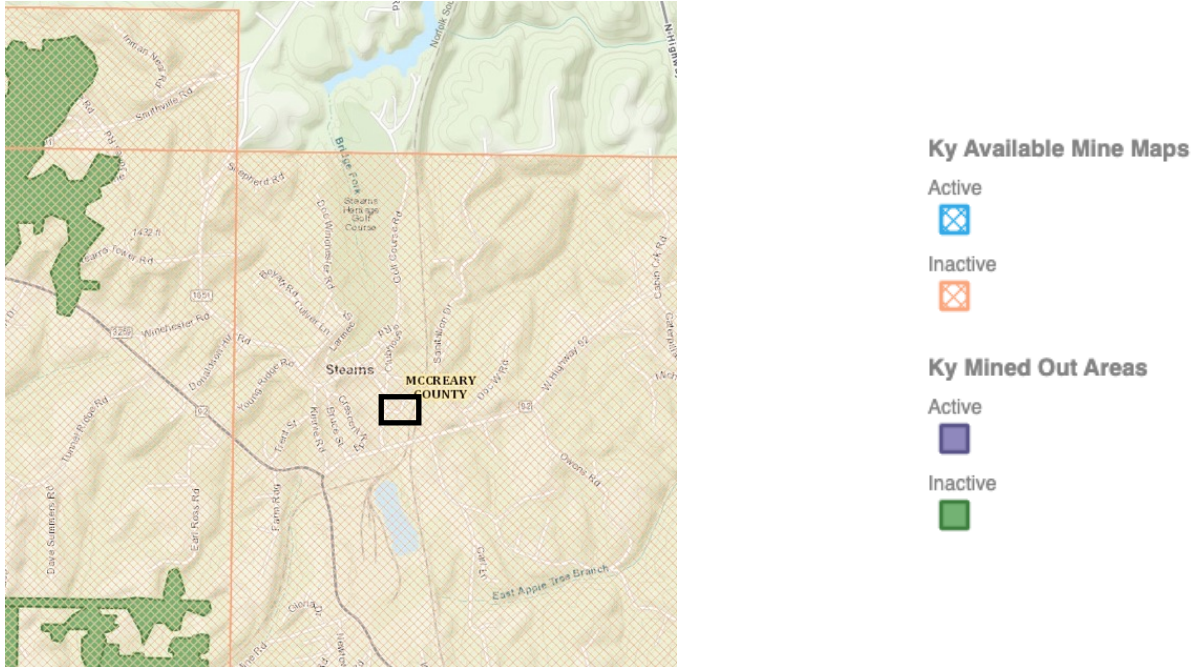


Image from the Kentucky Mine Maps website showing inactive areas previously mined. Site location is in the black rectangle

AERIAL MAPPING

Aerial information back as far as 1997 was readily available for the site. Images showing site progression. Photo on the left is the aerial from 1997, showing the building and site vicinity had minimal changes up to that point. The 2012 aerial shows the building addition area included a former building present (a fire destroyed the building), and it was demolished sometime between 2012 and 2015. The railroad can be seen on the right side of all aerals. The 2023 aerial shows site conditions as they currently appear.



1997 : Aerial from
Google Earth



2012 : Aerial from
Google Earth



2023 : Aerial from
Google Earth



SITE SOIL SURVEY MAPPING

The Soil Survey of the site area was also reviewed. The site and close vicinity have been previously graded, however the soil survey lists the site as Wernock-Sequoia complex consisting of silty clay residuum overlaying weathered siltstone bedrock mapped from 35 to 45 inches deep. Issues that affect the site include depth to soft bedrock, slope construction and shrink-swell. We are providing recommendations to address these issues. Also, the soil survey lists the site as having “high risks” for corrosion of concrete and moderate risk for corrosion of steel. Typically, the main risk for corrosion would be for steel reinforcement in concrete foundations and slabs. The primary means to address this risk is to specify at least 3 inches of concrete cover over all steel reinforcement for concrete exposed to soil.

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2 CETCO FINDINGS

We provided a site and area reconnaissance, logged soil test borings and explored the site using those borings. The following sections discuss our findings. Mr. Hunter Hawkins, SI, Staff Geologist, provided our field services including a site reconnaissance and logging of the borings in the field, during the exploration on September 11, 2024. Mr. Joe Cooke, PE, our Principle Engineer, also observed site conditions and observed recovered soil samples.

2.1 CURRENT SITE SURFACE CONDITIONS AND OBSERVATIONS

The site is located off of Bridge Street and South KY-1651 in Stearns, Kentucky. The proposed addition is located at the southwest portion of the existing building. The area is gently sloping downward to the south. Based on our GPS equipment, there is around 1 to 2 feet topographic relief within the proposed addition area and the greater site area (addition footprint and out to about 20 to 50 feet feet) is part of a previous low-lying cut for the previous building. This previous cut was at least 6 to 10 feet from the surrounding street grade elevations to the west and north. The site previously had a building, however it was demolished sometime between 2012 and 2015 (a fire reportedly destroyed the building).

There was a thin layer of grass/topsoil overlaying most of the site. The area closest to the existing building had visible DGA, and there were portions of the previous building slab and gravel exposed near the western portion of the proposed addition. There are basement walls/ from the building boundary walls and demolition west of the existing building, which appear to be approximately 8 foot tall. Just beyond these walls to the west is South KY-1651. South of the addition is Bridge Road and this is within about 2 to 4 feet slightly below the site elevations. North of the site is Henderson Street. East of the site and building are few commercial businesses and Big South Fork Scenic Railway beyond.

The ground surface appeared to be “firm” and did not appreciably rut under the weight of the drill rig during our drilling operations.

The following page shows photos of the area at the time of our field work.

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Project Site Photos

Description	Photo
<p>Photo example taken from the southern portion of the site showing boring locations marked in orange. Facing north.</p>	
<p>Photo example of the existing building on the left side of the picture, facing south toward Bridge Street.</p>	

Description	Photo
<p>Photo overview showing the proposed boring locations (orange markings), building in the background and the west edge which is above the below-grade area (foreground). Facing northeast.</p>	
<p>Photo overview of the proposed addition, facing east.</p>	

Description	Photo
<p>Photo example showing the railroad tracks in the background, with the scenic railway sign next to the proposed addition. Facing southeast.</p>	
<p>Example view showing South KY-1651, west of the site. Facing northwest.</p>	

2.2 SUBSURFACE INFORMATION SUMMARY

A total of 3 soil boring tests were utilized to explore the subsurface conditions at the site. The borings were drilled in locations to provide an indication of the site subsurface conditions with proximity to the proposed elevator addition. The boring location plan in the appendix shows the approximate drilling locations.

SUBSURFACE CONDITIONS: At our sampling locations, we encountered a thin layer of previously placed fill (aka: old fill) and some former building remnants (3 inch thick concrete slab, some wood pieces and some gravel), overlying native soils. The native soils were generally grayish brown in coloring, overlying weathered siltstone and shale bedrock. Below is a table summarizing the soil conditions at the site. Detailed findings are in the Appendix boring logs and laboratory testing pages.

Strata	Thickness	Notes
Topsoil	Less than 1 inch	Only B-3 showed topsoil
DGA (Crushed Stone)	5 inches	All borings showed DGA
Concrete	3 inches	B-1 and B-2 showed this strata
Previously placed fill: Appeared to be mostly "clean fill" generally sampled as brown shades of lean clay with some gravel, organics, and generally "moist" and "firm".	1-5 feet	B-1 had about 5 feet of fill, and B-2 had about 1 foot of fill. B-3 did not encounter any fill.
Native soils - Upper Strata: mostly clay, slightly sandy, brownish orange and gray in coloring and generally "moist" and "stiff" to "very stiff".	1-3 feet	
Native soils-Lower Strata: weathered, slightly layered, clay-like siltstone. Sampled as hard soil and slightly moist.	1-5 feet	
Upper Bedrock: Brownish gray and orange layered siltstone bedrock	5-8 feet	
Bedrock: gray weathered shale	N/A	

BEDROCK AND GROUNDWATER CONDITIONS: Soft weathered siltstone was encountered around 4-7 feet at the site, and Layered siltstone bedrock was generally encountered around 7 to 9 feet at the site. Shale bedrock was encountered below from 12 to 14 feet. Split spoon refusal was encountered in all three borings and is interpreted at the top of more competent siltstone bedrock. However, softer bedrock material was observed (somewhat shallow depth) above the more competent rock. The table on the next page shows depths to top of soft bedrock and depths to split spoon refusal.

Boring Number	Depth to Top of Soft Rock (feet)	Depth to Split Spoon Refusal (feet)
B-1	7-8	9.8
B-2	3	7.1
B-3	2-3	6.9

Table showing Depths to Bedrock

Free water conditions were not encountered in any of the borings. However, B-1 showed muddy and wet soil conditions at about 6 feet deep.

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3 OPINIONS AND DISCUSSION

SUMMARY: In general, the project site is suitable for the proposed new building addition and site improvements. This includes the use of shallow spread footings, an elevator “pit” and conventional building slab-on-grade floors.

3.1 PRIMARY GEOTECHNICAL ISSUES

The following issues are our opinion of the primary geotechnical-related issues at the site. Other issues are likely present, but we believe the following represent the greatest impact to the project budget, schedule, design and construction. Our recommendations address these issues.

- Relatively Shallow Depth to Bedrock
- Previously Placed Fill and Construction is an Urban Area (including old fill)
- Silty Clay Soils

Relatively Shallow Depth to Soft Bedrock

Our borings encountered the top of slightly layered siltstone **bedrock as shallow as 2 to 3 feet deep** (boring B-3) but no deeper than about 7 feet deep (boring B-1) at the site. Excavations at or near this depth will encounter siltstone bedrock. The upper 2 to 5 feet of this material appears to be relatively soft, until reaching layered siltstone around 6 to 8 feet deep. **Large excavators and dozers can likely remove this upper zone of material. However, the geology and our experience in the area indicate layers or harder siltstone and beds of sandstone if encountered, will be difficult to remove.**

Previously Placed Fill and Construction is an Urban Area (including old fill)

Our borings encountered previously placed fill (old fill), as thick as 5 feet deep, at the site (most likely 2-3 feet deep on average). The fill is likely a derivative of the previous grading that took place when constructing the original building and/or razing the same building. The fill appears to be relatively “clean” and “stiff” material, therefore the fill can likely be “re-usable”. **Former building remnants such as a thin concrete slab, gravel and some wood pieces were also observed.**

Foundations should not bear on this material, which may require a few feet of undercutting in foundation trenches (down to firm or better native soils). These can simply be backfilled up to the bottom of footing elevations with compacted gravel (DGA or #2 stone).

Lastly, any construction around or near previous site development (former building, remaining building remnants, etc.) will likely encounter unsuitable debris that will require removal and **pockets of wet/soft soils are likely.**

Silty Clay

The soils classifies as “lean clay”. However, the soils contain significant portions of silt and has a Plasticity Index of as low as 8 (silty). Silty soils tend to become unstable easily. Moisture greatly affects the silt portion of the soils. As such, they may pump or rut when dry or wet. Also, construction traffic can destabilize the soils. Care should be take to minimize construction traffic. Our earthwork recommendations provide guidance for the site soils.

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4 RECOMMENDATIONS

The following recommendations are provided to assist in the planning, design and construction of the project.

4.1 SITE PREPARATION

The site grading and proposed construction will likely require minimal mass grading. The primary excavation will also likely be the new foundations and also the main elevator pit. The following recommendations (Sections 4.1 and 4.2) are based on this information.

We recommend that site grading should take place between about late April to early November. Earthwork taking place outside this time period will likely encounter wet conditions and weather conditions that will provide little to no assistance with drying the soils. Additionally, the following bulleted items are critical to prepare the site for earthwork and additional construction.

- The existing concrete slab and any former building remnants (wood pieces, gravel, concrete, any utility lines-old utility backfill etc.) should be removed from the construction area. These materials should be wasted from the site.
- Topsoil and organic materials should be removed (stripped) from the construction area and all structural fill areas. These materials should be wasted from the site or used as topsoil in landscape areas
- Areas ready to receive new fill should be proofrolled with a loaded dump truck or similar equipment judged acceptable by CETCO;
- Proofrolling should not be performed on wet subgrade. If possible, perform proof rolls after suitable dry weather periods of time;
- The on-site new slab can likely be supported by the upper “old fill” layer if the layer passes a proof roll;
- CETCO should determine amounts of undercutting (if any) for any area which pumps or ruts. CETCO should also determine acceptable backfill materials and backfill methods. In general any backfill should be accomplished in general accordance with section 4.2;
- Remove deleterious materials or materials that are unsuitable for use in supporting the overlying new fill. The backfill should be consistent with the requirements listed in section 4.2;

- CETCO should observe the proofrolling operations and make recommendations for any unstable or unsuitable conditions encountered.

4.2 EARTHWORK

The site has been previously graded and is somewhat “level/flat”. We are providing the following recommendations for any mass earthwork/filling. After the subgrade has been approved to receive new fill, the fill may commence with the following procedures and guidelines recommended:

Mass Earthwork

- Based on our observations and laboratory testing, the on-site soils appear to be suitable for use as structural fill;
- Fill placement guidelines:
 - Structural fill should be placed in maximum 8-inch thick loose lifts;
 - Maximum particle size of the soil should be limited to 8 inches in any dimension;
 - Materials should have a plasticity index (PI) of less than 20.
- Quality control testing guidelines:
 - Density testing of newly placed clay soils should be performed. The rate of testing should be at least 3 per lift and at least one per 10,000 square feet of soil placement. Soil should be compacted to at least 95 percent of standard Proctor (ASTM D698) maximum dry density. **Moisture content should be from minus 3 to plus 1 percent of optimum moisture content (range is such due to the silty nature of the on-site clay soils);**
 - Soil should never be placed “dry” (dusty). CETCO should observe fill placement to determine acceptable soil moisture;
- Observation of fill “stability” is critical. The roller and earthwork equipment traversing over the new fill should be observed to document minimal movement occurs. This includes sheepfoot roller action observed to ensure the compactor is “walking out” of each lift;
- CETCO should observe and document fill placement and compaction operations.

Backfill Construction

These materials are placed in more confined areas than mass earthwork materials and therefore cannot be placed in full compliance with the previous recommendations. The following are general recommendations for backfill areas:

- Gravel/granular materials are recommended for confined fill areas;
- Fill lift thicknesses will vary dependent on compaction equipment available and material types, but in no case should exceed 8 inches;
- For crushed stone/aggregate backfills in trenches or wall backfill, the lift thickness should not exceed 4 inches;
- Observation of stability and moisture should be similar to those mentioned previously;
- CETCO should provide addition recommendations for backfill.

Again, we recommend that site grading be started in the period from about late April to about November in order to prevent additional undercutting due to wet conditions. Drying of the site soils during other portions of the year is typically difficult.

Site Drainage

Site drainage (water flow into, along and from the site) is key to minimize damaging effects of water flow. Excess water ponding can destabilize soils. Excessive water flow can erode soils and destabilize soils, especially at or near slopes.

For shallow groundwater seepage (less than 5 feet deep or so), the water encroaching upon construction excavations can be removed by placing a sump near the source of seepage and then pumping from the sump. Should heavy seepage occur, or should there be evidence of soil particle migration such as silting of the sump, then the geotechnical engineer should be contacted.

The following are general guidelines for site drainage.

- For all earthwork operations, positive surface drainage is prudent to keep water from ponding on the surface and to assist in maintaining surface stability;
- The surface should be sealed prior to expected wet weather. This can usually be accomplished with rubber-tired construction equipment or a steel-drum roller;

- During construction, water should not be allowed to pond in excavations or undercutting will likely be required;
- During the life of the project, slope the subgrade and other site features so that surface water flows away from the site structures;
- For excavations during construction, most free water from the subsurface conditions could likely be removed via sump pumps and open channel flow (ditches) at or near the source of seepage. However, if normal dewatering measures prove insufficient, CETCO should be retained to provide recommendations on the issue;

4.3 SITE SEISMIC DESIGN

The Kentucky Building Code (KBC), as updated was reviewed to determine the Site Seismic Classification. Based on our review of geologic data, our experience, and subsurface conditions encountered, we recommend a Seismic SITE CLASS "C" for the site.

A detailed geotechnical earthquake engineering analysis was not performed. However, based on a review of published literature and our experience with similar subsurface conditions, we believe the potential for slope instability, liquefaction (sandy soils at the site are very clayey), and surface rupture due to faulting or lateral spreading resulting from earthquake motions is low.

4.4 FOUNDATIONS

The following recommendations are also based on the previously described project information, typical commercial building types, the subsurface conditions encountered in the borings, the results of laboratory testing, empirical correlations for the soil types encountered, and CETCO's analyses and experience.

Shallow Spread Footings

The site conditions encountered and/or newly/properly compacted engineered fill can support the proposed elevator addition with shallow spread footings. **A maximum allowable net bearing pressure of 3,000 pounds per square foot (psf) is recommended for footings bearing on firm or better native soils or compacted engineered fill.**

Again, foundations should not bear on the old fill materials. This will require undercutting footing excavation bottoms down to firm or better native soils. The section can be backfilled up to bottom of footing elevations with compacted DGA.

Additional design considerations for project foundations are outlined as follows:

- Design footings with a minimum dimension of 24 inches wide;
- Place all exterior footing bottoms to at least 24 inches below finished exterior grade (due to frost/freezing considerations);

Shallow Foundation Construction Considerations

Please note that shallow bedrock was observed in our borings. Most of the shallow spread footings for the building addition walls will likely encounter mostly soil conditions. However, the elevator pit and elevator foundations are likely at least 4 to 5 feet deep. These may encounter the upper portions of the siltstone bedrock. **The rock appears to be somewhat soft bedrock at these depths and could likely be removed using a large trackhoe excavator (based on our borings). However, harder rock may require the use of a hoe-ram or similar rock removal equipment. The rock should be removed down to at least 6 inches below the bottom of footing depth and then backfilled with loose DGA to provide a “cushion” and somewhat similar bearing conditions to firm or better soils (like the remaining portions of the building).**

The soils encountered in this exploration may lose strength if they become wet during construction. Therefore, we recommend the foundation subgrades be protected from exposure to water. The following guides address protection of footing subgrades and our recommended remediation for any soft soils encountered.

- To protect against “moisture loss” or “soil drying” during warmer months, foundation concrete should be placed the same day as excavation.
- Remove any soils disturbed by exposure prior to foundation concrete placement.
- Level or suitably bench the foundation bearing area.
- Remove loose soil, debris, and excess surface water from the bearing surface prior to concrete placement.
- CETCO must observe all foundation excavations and provide recommendations for treatment of any unsuitable conditions encountered.
- CETCO should be retained to evaluate actual conditions.

4.5 FLOOR SLABS

Normal conventional type slabs can be supported by the site soils upon passing a proof roll test. Further, the subgrade should be prepared according to the recommendations contained

within this report. The following features are recommended as part of the floor slab construction:

- If possible, avoid construction of slabs during the hottest/driest months (typically July, August or September) due to potential “dry soil” conditions.
- Keep the crushed stone or gravel moist, but not wet, immediately prior to slab concrete placement to minimize curling of the slab due to differential curing conditions between the top and bottom of the slab.
- Retain CETCO to review the actual subgrade conditions prior to slab construction and make recommendations for any unsuitable conditions encountered.

4.6 POST-REPORT GEOTECHNICAL CONSULTING

CETCO services as “geotechnical engineer of record” include answering questions pertaining to the materials presented in this report and the appendix. However, if conditions arise during construction that are different than those encountered during our exploration or if additional recommendations are needed, CETCO should be retained to provide that guidance. Construction observation and testing are beyond the typical scope of the geotechnical engineer, but are essential to completing the geotechnical engineer’s anticipated completion of their recommendations. CETCO should always be contracted as the testing/inspection firm for any project that applies their geotechnical report information. This always saves time, risk and project costs.

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5 NOTES ON THE REPORT

The assessment of site environmental conditions or the presence of contaminants in the soil, rock, surface water or groundwater of the site was beyond the scope of this exploration.

The recommendations provided are based in part on project information provided to us and they only apply to the specific project and site discussed in this report. If the project information section in this report contains incorrect information or if additional information is available, you should convey the correct or additional information to us and retain us to review our recommendations. We can then modify our recommendations if they are inappropriate for the proposed project.

Regardless of the thoroughness of a geotechnical exploration, there is always a possibility that conditions between borings/test pits will be different from those at specific boring/test pit locations and that conditions will not be as anticipated by the designers or contractors. In addition, the construction process may itself alter soil conditions. Therefore, experienced geotechnical personnel should observe and document the construction procedures used and the conditions encountered. Unanticipated conditions and inadequate procedures should be reported to the design team along with timely recommendations to solve the problems created. We recommend that the owner retain CETCO to provide this service based upon our familiarity with the project, the subsurface conditions and the intent of the recommendations.

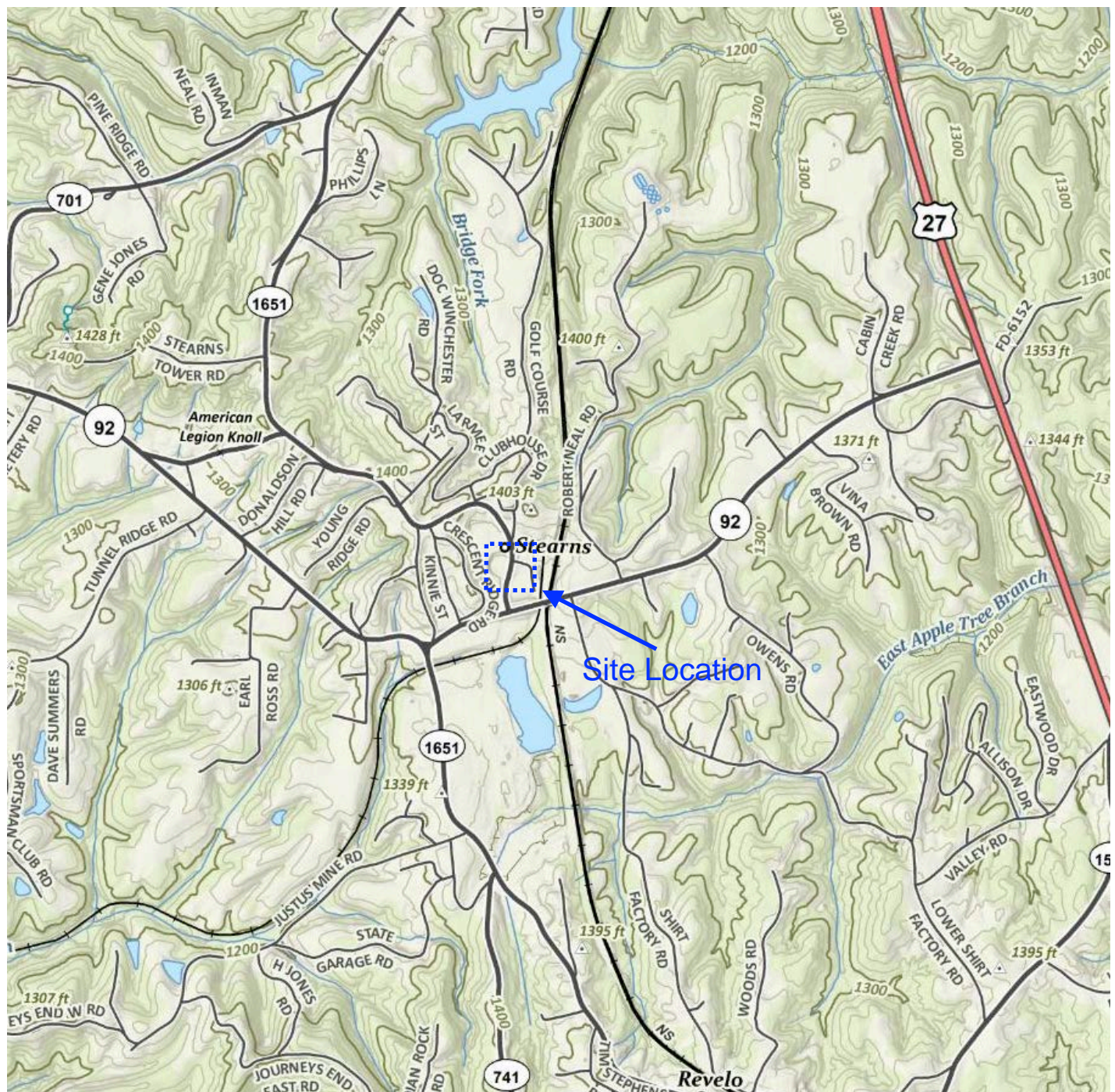
We recommend that this complete report be provided to the various design team members, the contractors and the project owner. Potential contractors should be informed of this report in the "instructions to bidders" section of the bid documents. The report should not be included or referenced in the actual contract documents.

We wish to remind you that our exploration services include storing the samples collected and making them available for inspection for 30 days. The samples are then discarded unless you request otherwise.



APPENDIX

**SITE LOCATION PLAN
BORING LOCATION PLAN
TEST BORING LOGS
FIELD STANDARDS
LABORATORY TESTING
LABORATORY STANDARDS**



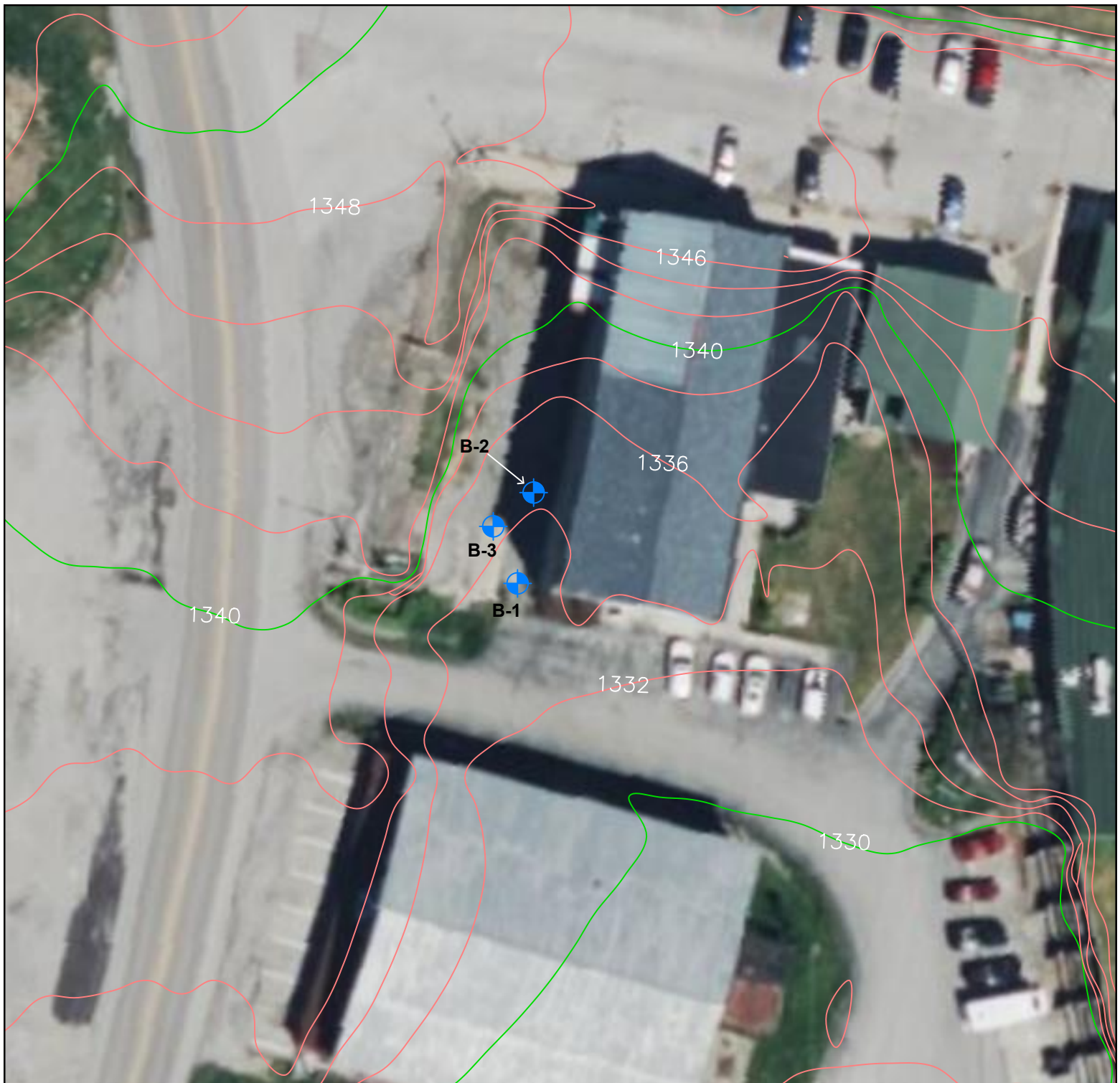
Site location plan adapted from Kentucky Geological Survey, with further adaptations from CETCO professionals.



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SITE LOCATION PLAN
for Stearns Elevator
Stearns, Kentucky

CETCO Project: 1776-24-0138
Date: September 24, 2024
Drawn by: Mason Ross
Checked by: Joe Cooke, PE
Drawing: 1 of 1



Legend

-  Boring B-X
-  10' Contour
-  2' Contour

Boring location plan adapted from Google Earth and GeoSync, with further adaptations from CETCO professionals. Drilling locations were collected on-site using GPS equipment.



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BORING LOCATION PLAN

For Stearns Elevator
Stearns, Kentucky

CETCO Project	1776-24-0138
Date:	September 25, 2024
Drawn by:	Mason Ross
Checked by:	Joe Cooke, PE
Drawing:	1 of 1
Scale:	NTS



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BORING NUMBER B-1

PAGE 1 OF 1

CLIENT McCreary Co. Heritage Foundation

PROJECT NAME Stearns Historic Project - Elevator Addition

PROJECT NUMBER 1776-24-0138

PROJECT LOCATION Stearns, Kentucky

DATE STARTED 9/11/24 COMPLETED 9/11/24

GROUND ELEVATION 1334 ft HOLE SIZE 4

DRILLING CONTRACTOR Strata Group

GROUND WATER LEVELS:

DRILLING METHOD Hollow Stem Auger

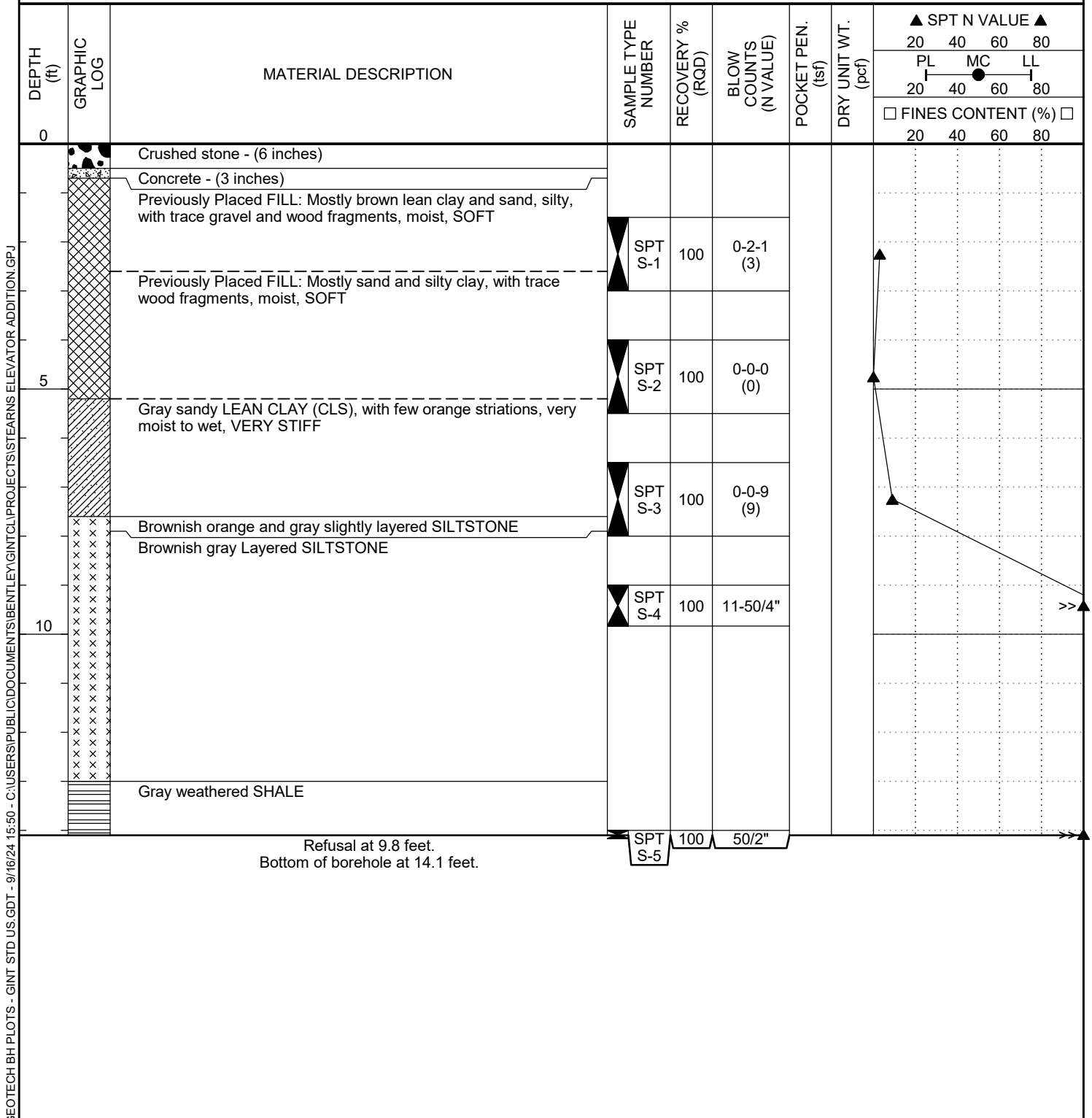
AT TIME OF DRILLING ---

LOGGED BY Hunter Hawkins CHECKED BY Joe Cooke, PE

AT END OF DRILLING --- Tools were muddy upon completion

NOTES Mostly Sunny, 70's

AFTER DRILLING ---





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BORING NUMBER B-2

PAGE 1 OF 1

CLIENT McCreary Co. Heritage Foundation

PROJECT NAME Stearns Historic Project - Elevator Addition

PROJECT NUMBER 1776-24-0138

PROJECT LOCATION Stearns, Kentucky

DATE STARTED 9/11/24 COMPLETED 9/11/24

GROUND ELEVATION 1335 ft HOLE SIZE 4

DRILLING CONTRACTOR Strata Group

GROUND WATER LEVELS:

DRILLING METHOD Hollow Stem Auger

AT TIME OF DRILLING ---

LOGGED BY Hunter Hawkins CHECKED BY Joe Cooke, PE

AT END OF DRILLING --- Dry upon completion

NOTES Mostly Sunny, 70's

AFTER DRILLING ---

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	POCKET PEN. (tsf)	DRY UNIT WT. (pcf)	▲ SPT N VALUE ▲			
								20	40	60	80
0		Crushed stone - (5 inches)						PL	MC	LL	
		Concrete - (3 inches)						20	40	60	80
		Previously Placed FILL: Mostly brown lean clay, silty, moist, SOFT						□ FINES CONTENT (%) □			
		Brownish orange and gray LEAN CLAY (CL), silty, slightly moist, VERY STIFF	SPT S-1	100	5-9-14 (23)						
		Brownish orange and gray slightly layered SILTSTONE									
5		Brownish gray Layered SILTSTONE	SPT S-2	100	20-50/3"						>>
			SPT S-3	100	11-26-50/1"						>>
			SPT S-4	100	50/3"						>>
10		Gray weathered SHALE									
		Refusal at 7.1 feet. Bottom of borehole at 14.1 feet.	SPT S-5	100	50/1"						>>



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BORING NUMBER B-3

PAGE 1 OF 1

CLIENT McCreary Co. Heritage Foundation

PROJECT NAME Stearns Historic Project - Elevator Addition

PROJECT NUMBER 1776-24-0138

PROJECT LOCATION Stearns, Kentucky

DATE STARTED 9/11/24 COMPLETED 9/11/24

GROUND ELEVATION 1334 ft HOLE SIZE 4

DRILLING CONTRACTOR Strata Group

GROUND WATER LEVELS:

DRILLING METHOD Hollow Stem Auger

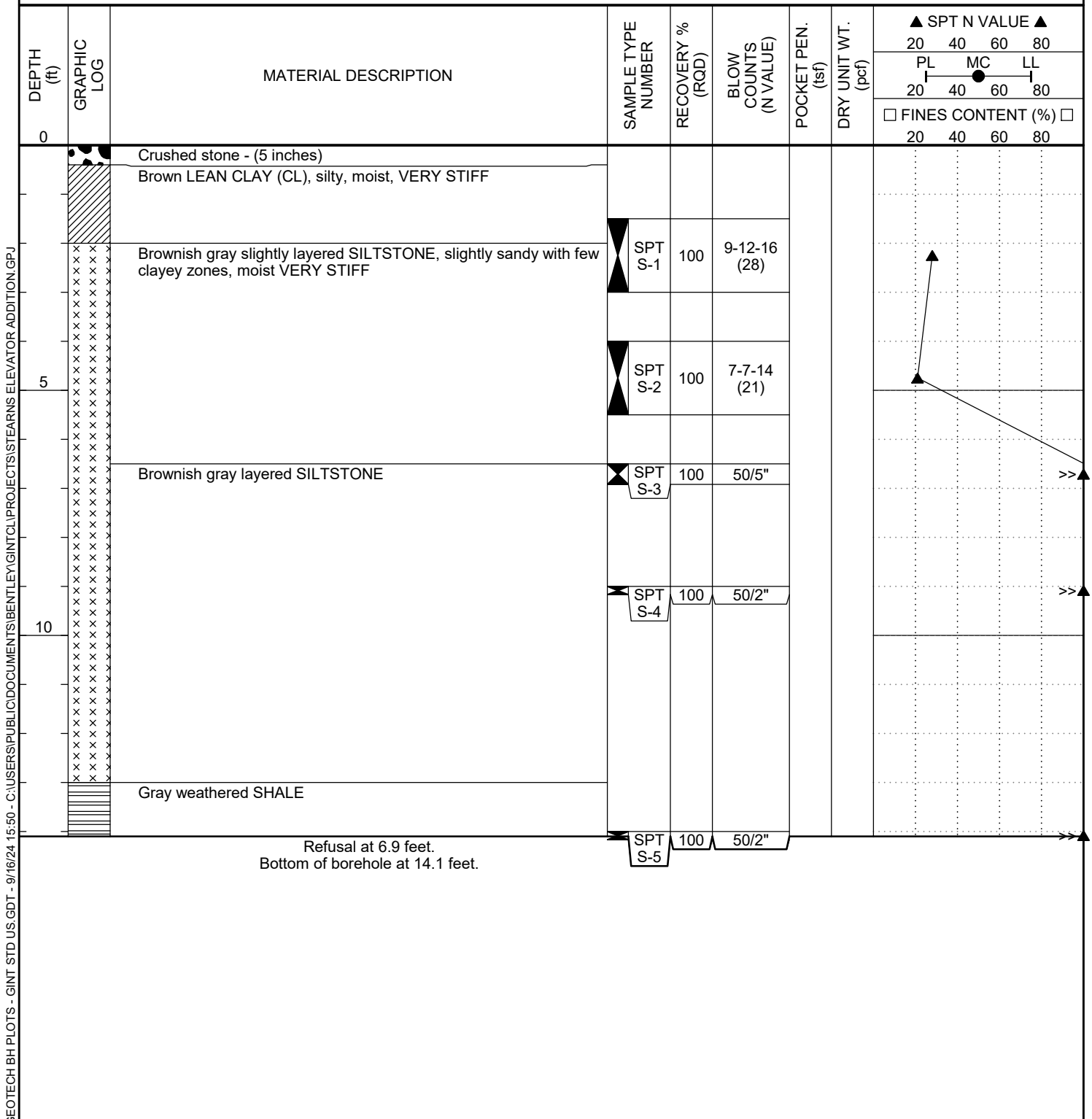
AT TIME OF DRILLING ---

LOGGED BY Hunter Hawkins CHECKED BY Joe Cooke, PE

AT END OF DRILLING --- Dry upon completion

NOTES Mostly Sunny, 70's

AFTER DRILLING ---





Laboratory Testing Summary Table

Project Name: Stearns Elevator Date: October 2, 2024

Project Location: Stearns, KY Reviewed by: Joe Cooke, PE

Client: McCreary Co. Heritage CETCO Project Number: 1776-24-0138

Sample ID	Depth (ft)	Natural Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	% Finer than #200 Sieve
B-1	1.5-3.0	24.5	29	18	11	51.0
B-1	4.0-5.5	25.1				
B-1	6.5-8.0	25.2	22	14	8	75.0
B-1	9.0-9.8	10.5				
B-2	1.5-3.0	12.1				
B-2	4.0-4.8	12.5				
B-2	6.5-7.6	14.4				
B-3	1.5-3.0	13.0				
B-3	4.0-5.5	19.9				
B-3	6.5-6.9	9.9				

Atterberg Limits Chart

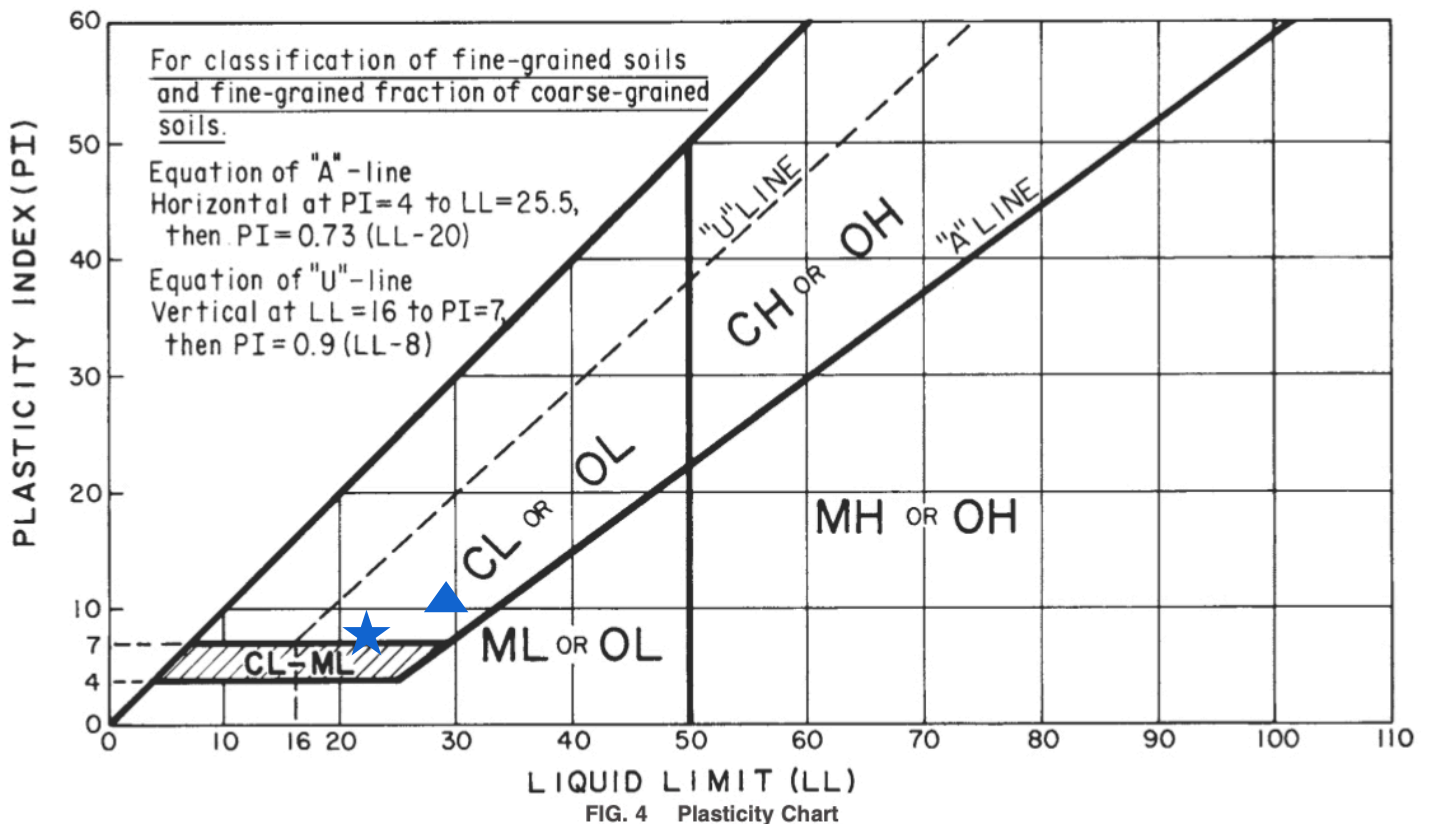
Project Name: Stearns Elevator Date: October 2, 2024

Project Location: Stearns, KY Reviewed by: Joe Cooke, PE

Client: McCreary Co. Heritage CETCO Project Number: 1776-24-0138

"Atterberg Limits", ASTM D4318

Sample ID		Depth (ft)	Natural Moisture Content (%)	Liquid Limit	Plastic Limit	Plasticity Index	% Finer than #200 Sieve
B-1, 1.5'-3.0'	▲	1.5-3.0	24.5	29	18	11	51.0
B-1, 6.5'-8.0'	★	6.5-8.0	25.2	22	14	8	75.0





LABORATORY STANDARDS AND PROCEDURES

Soil Classification: Soil classifications provide a general guide to the engineering properties of various soil types and enable the engineer to apply past experience to current problems. In our investigations, samples obtained during drilling operations are examined in our laboratory and visually classified by an engineer. The soils are classified according to consistency (based on number of blows from standard penetration tests or "by hand" stiffness), color and texture. These classification descriptions are included on our "Boring Logs" or "Test Pit Logs"

The classification system discussed above is primarily qualitative and for detailed soil classification two laboratory tests are necessary: grain size tests and plasticity tests. Using these test results the soil can be classified according to the AASHTO or Unified Classification Systems (ASTM D2487). Each of these classification systems and the in-place physical soil properties provides an index for estimating the soil's behavior. The soil classification and physical properties obtained are presented in this report.

Atterberg Limits: Portions of the samples are taken for Atterberg Limits testing to determine the plasticity characteristics of the soil. The plasticity index (PI) is the range of moisture content over which the soil deforms as a plastic material. It is bracketed by the liquid limit (LL) and the plastic limit (PL). The liquid limit is the moisture content at which the soil becomes sufficiently "wet" to flow as a heavy viscous fluid. The plastic limit is the lowest moisture content at which the soil is sufficiently plastic to be manually rolled into tiny threads. The liquid limit and plastic limit are determined in accordance with ASTM D4318.

Moisture Content: The Moisture Content is determined according to ASTM D2216.

Percent Finer Than 200 Sieve: Selected samples of soils are washed through a number 200 sieve to determine the percentage of material less than 0.074 mm in diameter.

"Proctor" (Moisture-Density Test): Often called by its original author's name, the "Proctor" test is a moisture-density relationship test to determine "maximum dry density" and "optimum moisture content" curves using a set amount of force of "compaction" at variable moisture contents in a pre-determined mold size. The test is typically ASTM D698, method A, for standard effort. For a "modified" effort (higher amount of force), ASTM D 1557, again method A, is usually used. Due to high amounts of clay as well as typical compaction construction equipment used, the standard Proctor (ASTM D698) is the most common method used. For materials with larger grain sizes, methods B, C and D of each ASTM method can be used.

CBR: California Bearing Ratio (CBR) testing is often performed on soils to assist in pavement design. The test involves compacting soil into an approximate "0.075 cubic foot" volume at specified density and moisture content and then soaking the compacted sample with a surcharge weight (for a time period of usually at least 96 hours). Then, the sample is "loaded" using a fixed strain penetration piston and the penetration resistance and stress is recorded (as stress in pounds per square inch-psi) at 0.1 inches and 0.2 inches penetration. The resistant stress is then compared (as a "ratio") to the standard resistant stress, hence the value is reported as unit-less. The test is typically conducted in general accordance with ASTM D1883.

Rock Strength Tests: To obtain strength data for rock materials encountered, unconfined compression tests are performed on selected samples. In the unconfined compression test, a cylindrical portion of the rock core is subjected to increasing axial load until it fails. The pressure required to produce failure is recorded, corrected for the length to diameter ratio of the core and reported.

FIELD SERVICES STANDARDS AND PROCEDURES

Field Operations: The general field procedures employed by CETCO are summarized in ASTM D420 which is entitled "Investigating and Sampling Soils and Rocks for Engineering Purposes." This recommended practice lists recognized methods for determining soil and rock distribution and ground water conditions. These methods include geophysical, in situ methods and test pits as well as borings.



Borings are drilled to obtain subsurface samples using one of several alternate techniques depending upon the subsurface conditions. These techniques typically include:

- a. Continuous 2-1/2 or 3-1/4 inch I.D. hollow stem augers;
- b. Wash borings using roller cone or drag bits (mud or water);
- c. Continuous flight augers (ASTM D 1425).

These drilling methods are not capable of penetrating through material designated as "refusal materials." Refusal, thus indicated, may result from hard cemented soil, soft weathered rock, coarse gravel or boulders, thin rock seams, or the upper surface of sound continuous rock. Core drilling procedures are required to determine the character and continuity of refusal materials.

The subsurface conditions encountered during drilling are reported on a field test boring record by our field personnel (typically engineers). The record contains information concerning the boring method, samples attempted and recovered, indications of the presence of various materials such as coarse gravel, cobbles, etc., and observations between samples. Therefore, these boring records contain both factual and interpretive information. The field boring records are on file in our office.

The soil and rock samples plus the field boring records are reviewed by a geotechnical engineer. The engineer classifies the soils in general accordance with the procedures outlined in ASTM D2488 and prepares the final boring records which are the basis for all evaluations and recommendations.

The final boring records represent our interpretation of the contents of the field records based on the results of the engineering examinations and tests of the field samples. These records depict subsurface conditions at the specific locations and at the particular time when drilled. Soil conditions at other locations may differ from conditions occurring at these boring locations. Also, the passage of time may result in a change in the subsurface soil and ground water conditions at these boring locations. The lines designating the interface between soil or refusal materials on the records and on profiles represent approximate boundaries. The transition between materials may be gradual. The final boring records are included with this report.

The detailed data collection methods used during this study are discussed on the following pages.

Soil Test Borings: Soil test borings were made at the site at locations shown on the attached Boring Plan. Soil sampling and penetration testing were performed in accordance with ASTM D1586.

The borings were made by mechanically twisting a hollow stem steel auger into the soil. At regular intervals, the drilling tools were removed and soil samples obtained with a standard 1.4 inch I.D., 2 inch O.D., split tube sampler. The sampler was first seated 6 inches to penetrate any loose cuttings, then driven an additional foot with blows of a 140-pound hammer falling 30 inches. The number of hammer blows required to drive the sampler the final foot was recorded and is designated the "penetration resistance". The penetration resistance, when properly evaluated, is an index to the soil strength and foundation supporting capability.

Representative portions of the soil samples, thus obtained, were placed in glass jars and transported to the laboratory. In the laboratory, the samples were examined to verify the driller's field classifications. Test Boring Records are attached which graphically show the soil descriptions and penetration resistances.

Core Drilling: Refusal materials are materials that cannot be penetrated with the soil drilling methods employed. Refusal, thus indicated, may result from hard cemented soil, soft weathered rock, coarse gravel or boulders, thin rock seams or the upper surface of sound continuous rock. Core drilling procedures are required to determine the character and continuity of refusal materials.

Prior to coring, casing is set in the drilled hole through the overburden soils, if necessary, to keep the hole from caving. Refusal materials are then cored according to ASTM D2113 using a diamond-studded bit fastened to the end of a hollow

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double tube core barrel. This device is rotated at high speeds, and the cuttings are brought to the surface by circulating water. Core samples of the material penetrated are protected and retained in the swivel-mounted inner tube. Upon completion of each drill run, the core barrel is brought to the surface, the core recovered is measured, the samples are removed and the core is placed in boxes for storage.

The core samples are returned to our laboratory where the refusal material is identified and the percent core recovery and rock quality designation is determined by a soils engineer or geologist. The percent core recovery is the ratio of the sample length obtained to the depth drilled, expressed as a percent. The rock quality designation (RQD) is obtained by summing up the length of core recovered, including only the pieces of core which are four inches or longer, and dividing by the total length drilled. The percent core recovery and RQD are related to soundness and continuity of the refusal material. Refusal material descriptions, recoveries, and RQDs are shown on the "Test Boring Records".

Water Level Readings: Water table readings are normally taken in conjunction with borings and are recorded on the "Boring Logs". These readings indicate the approximate location of the hydrostatic water table at the time of our field investigation. Where impervious soils are encountered (clayey soils) the amount of water seepage into the boring is small, and it is generally not possible to establish the location of the hydrostatic water table through water level readings. The ground water table may also be dependent upon the amount of precipitation at the site during a particular period of time. Fluctuations in the water table should be expected with variations in precipitation, surface run-off, evaporation and other factors.

The time of boring water level reported on the boring records is determined by field crews as the drilling tools are advanced. The time of boring water level is detected by changes in the drilling rate, soil samples obtained, etc. Additional water table readings are generally obtained at least 24 hours after the borings are completed. The time lag of at least 24 hours is used to permit stabilization of the ground water table which has been disrupted by the drilling operations. The readings are taken by dropping a weighted line down the boring or using an electrical probe to detect the water level surface.

Occasionally the borings will cave-in, preventing water level readings from being obtained or trapping drilling water above the caved-in zone. The cave-in depth is also measured and recorded on the boring records.

Rock Classification: Rock classifications (if any) provide a general guide to the engineering properties of various rock types and enable the engineer to apply past experience to current situations. In our explorations, rock core samples obtained during drilling operations are examined in our laboratory and visually classified by an engineer. The rock cores are classified according to relative hardness and RQD (see Guide to Rock Classification Terminology), color, and texture. These classification descriptions are included on our Boring Records.

Test Pits: Occasionally, our field sampling includes the use of "test pits". Similarly to soil test borings, our classifications on the materials observed and sampled are performed in general accordance with ASTM standards. These excavations are performed by excavators of various sizes and the width/length/depth of the excavations vary as well. Typically, only the soil or "loose" rock areas can be sampled or excavated. The samples taken are usually taken at highly variable depths and the engineer or field personnel have extreme discretion on the sample sizes and locations. These are typically sealed in "zip lock" type baggies and transported back to our office for lab testing and further classification. Visual descriptions of rock materials (sand, gravel, cobbles, boulders, etc.) are provided on both samples taken and observations of spoils removed and sides of excavations. Typically, photos of both the mass excavation and spoil pile are provided on the test pit logs in our reports. Groundwater levels are noted and can include water flow at the excavation bottom or at points of depth in the excavation sides. "Refusal" usually means that the excavator cannot remove additional materials at the excavation bottom. Some excavations may also have very large boulders than cannot be removed by the excavator used. Depths indicated on the logs are usually measured with steel tape or cloth tape. Final complete details of the test pit findings and opinions are provided in the "Test Pit Logs" in our reports. Lastly, test pit excavations have no set standards and are performed at our engineers discretion.