

**NOT FOR BID**



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# **CHRISTINA SCHOOL DISTRICT**

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700 N. Lombard St,  
Wilmington, DE 19801

## **Bancroft School Demolition – Phase IV PROJECT MANUAL**

**BSA+A PROJECT #20.021**

Contract #: CHR-23021E-BANDEMO

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**NOT FOR BID**

**November 29, 2023**

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**ABHA | BSA+A**

**NOT FOR BID**

**Issued for Bid**

Christina School District  
Bancroft School Demolition – Phase IV

Contract #: CHR-23021E-BANDEMO

ARCHITECT  
ABHA | BSA+A  
965 Justison St.  
Wilmington, DE 19801  
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STRUCTURAL ENGINEER  
DCI ENGINEERS  
2 Mill Road, Suite 100  
Wilmington, DE 19806  
Newark, DE 19713  
302.448.2000  
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CONSTRUCTION MANAGER  
Whiting-Turner Contracting Co.  
131 Continental Dr #404  
Newark, DE 19713  
302.292.0676

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**November 29, 2023**

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**END OF SECTION**



SECTION 00 11 10 – INVITATION TO BID

Sealed bids for Christina School District Contract No. **CHR-23021E-BANDEMO** will be received by the Christina School District at **Eden Support Service Center, 925 Bear Corbitt Rd, Bear, DE 19701 on Thursday, January 18th, 2024 at 2:00 PM** at which time they will be publicly opened and read aloud. Bidder bears the risk of late delivery. Any bids received after the stated time will be returned unopened. Below are the bid packages being offered:

**02C Building Demolition**

Project involves Demolition and Abatement of the Bancroft School at 700 North Lombard Street Wilmington, DE.

Attention is called to construction schedule as detailed in the Bid Documents.

A **Mandatory Pre-Bid Meeting** will be held at **The Whiting Turner Construction Office in the Pyle School, 501 North Lombard St. Wilmington, DE 19801 on Wednesday, January 3rd, 2024 at 3:00 PM** for the purpose of establishing the listing of subcontractors and to answer questions. A tour of the Bancroft School will follow the prebid meeting.

Sealed bids shall be addressed to the Christina School District. The outer envelope should clearly indicate: "CSD CONTRACT NO. CHR-23021E-BANDEMO INCLUDING THE BID PACKAGE # – SEALED BID – DO NOT OPEN."

All bids will be received and publicly read **Eden Support Service Center, 925 Bear Corbitt Rd, Bear, DE 19701 on Thursday, January 18th, 2024 at 2:00 PM** Time and place for opening of bids may be extended from that described above on not less than two calendar days notice by certified delivery, email, or other verifiable electronic means to those bidders who obtained copies of the plans and specifications.

Construction documents will be available for review beginning 12/20/23, please contact: Dom Muzzi, [dom.muzzi@whiting-turner.com](mailto:dom.muzzi@whiting-turner.com), and David Thorp, [david.thorp@whiting-turner.com](mailto:david.thorp@whiting-turner.com) to receive a link to download the bid documents.

Bidders will not be subject to discrimination on the basis of race, creed, color, sex, sexual orientation, gender identity or national origin in consideration of this award, and Minority Business Enterprises, Disadvantaged Business Enterprises, Women-Owned Business Enterprises and Veteran-Owned Business Enterprises will be afforded full opportunity to submit bids on this contract. Each bid must be accompanied by a bid security equivalent to ten percent of the bid amount and all additive alternates. The successful bidder must post a performance bond and payment bond in a sum equal to 100 percent of the contract price upon execution of the contract. The Owner reserves the right to reject any or all bids and to waive any informalities therein. The Owner may extend the time and place for the opening of the bids from that described in the advertisement, with not less than two calendar days notice by certified delivery, facsimile machine or other electronic means to those bidders receiving plans.

END OF SECTION 00 11 10

**SECTION 00 21 13**

**INSTRUCTIONS TO BIDDERS**

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**ARTICLE 1: GENERAL**

**1.1 DEFINITIONS**

1.1.1 Whenever the following terms are used, their intent and meaning shall be interpreted as follows:

1.2 STATE: The State of Delaware.

1.3 AGENCY: Contracting State Agency as noted on cover sheet.

1.4 DESIGNATED OFFICIAL: The agent authorized to act for the Agency.

1.5 BIDDING DOCUMENTS: Bidding Documents include the Bidding Requirements and the proposed Contract Documents. The Bidding Requirements consist of the Advertisement for Bid, Invitation to Bid, Instructions to Bidders, Supplementary Instructions to Bidders (if any), General Conditions, Supplementary General Conditions, General Requirements, Special Provisions (if any), the Bid Form (including the Non-collusion Statement), and other sample bidding and contract forms. The proposed Contract Documents consist of the form of Agreement between the Owner and Contractor, as well as the Drawings, Specifications (Project Manual) and all Addenda issued prior to execution of the Contract.

1.6 CONTRACT DOCUMENTS: The Contract Documents consist of the, Instructions to Bidders, Supplementary Instructions to Bidders (if any), General Conditions, Supplementary General Conditions, General Requirements, Special Provisions (if any), the form of agreement between the Owner and the Contractor, Drawings (if any), Specifications (Project Manual), and all addenda.

1.7 AGREEMENT: The form of the Agreement shall be AIA Document A132, Standard Form of Agreement between Owner and Contractor where the basis of payment is a STIPULATED SUM. In the case of conflict between the instructions contained therein and the General Requirements herein, these General Requirements shall prevail.

1.8 GENERAL REQUIREMENTS (or CONDITIONS): General Requirements (or conditions) are instructions pertaining to the Bidding Documents and to contracts in general. They contain, in summary, requirements of laws of the State; policies of the Agency and instructions to bidders.

1.9 SPECIAL PROVISIONS: Special Provisions are specific conditions or requirements peculiar to the bidding documents and to the contract under consideration and are supplemental to the General Requirements. Should the Special Provisions conflict with the General Requirements, the Special Provisions shall prevail.

1.10 ADDENDA: Written or graphic instruments issued by the Owner/Architect prior to the execution of the contract which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections.

1.11 BIDDER OR VENDOR: A person or entity who formally submits a Bid for the material or Work contemplated, acting directly or through a duly authorized representative who meets the requirements set forth in the Bidding Documents.

1.12 SUB-BIDDER: A person or entity who submits a Bid to a Bidder for materials or labor, or both for a portion of the Work.

- 1.13 BID: A complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.
- 1.14 BASE BID: The sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base, to which Work may be added or from which Work may be deleted for sums stated in Alternate Bids (if any are required to be stated in the bid).
- 1.15 ALTERNATE BID (or ALTERNATE): An amount stated in the Bid, where applicable, to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents is accepted.
- 1.16 UNIT PRICE: An amount stated in the Bid, where applicable, as a price per unit of measurement for materials, equipment or services or a portion of the Work as described in the Bidding Documents.
- 1.17 SURETY: The corporate body which is bound with and for the Contract, or which is liable, and which engages to be responsible for the Contractor's payments of all debts pertaining to and for his acceptable performance of the Work for which he has contracted.
- 1.18 BIDDER'S DEPOSIT: The security designated in the Bid to be furnished by the Bidder as a guaranty of good faith to enter into a contract with the Agency if the Work to be performed or the material or equipment to be furnished is awarded to him.
- 1.19 CONTRACT: The written agreement covering the furnishing and delivery of material or work to be performed.
- 1.20 CONTRACTOR: Any individual, firm or corporation with whom a contract is made by the Agency.
- 1.21 SUBCONTRACTOR: An individual, partnership or corporation which has a direct contract with a contractor to furnish labor and materials at the job site, or to perform construction labor and furnish material in connection with such labor at the job site.
- 1.22 CONTRACT BOND: The approved form of security furnished by the contractor and his surety as a guaranty of good faith on the part of the contractor to execute the work in accordance with the terms of the contract.
- 1.23 CUSTOM FABRICATION: As defined in 29 Del. C. § 6902, the term "custom fabrication" means the offsite fabrication, assembly, or other production of non-standard goods or materials, including components, fixtures or parts thereof, specifically for a public works project. Such goods and materials shall include those used in the following trades or systems: (1) Plumbing or pipe fitting systems, including heating, ventilating, air-conditioning, refrigeration systems, sheet metal or other duct systems; (2) Electrical systems; (3) Mechanical insulation work; (4) Ornamental iron work; and (5) Commercial signage that does not attempt or appear to direct the movement of traffic on highways or roadways or interfere with, imitate, or resemble any official traffic sign, signal or device.

**ARTICLE 2: BIDDER'S REPRESENTATION**

2.1 PRE-BID MEETING

- 2.1.1 A pre-bid meeting for this project will be held at the time and place designated. Attendance at this meeting is a pre-requisite for submitting a Bid, unless this requirement is specifically waived elsewhere in the Bid Documents.

- 2.2 By submitting a Bid, the Bidder represents that:
- 2.2.1 The Bidder has read and understands the Bidding Documents and that the Bid is made in accordance therewith.
- 2.2.2 The Bidder has visited the site, become familiar with existing conditions under which the Work is to be performed, and has correlated the Bidder's personal observations with the requirements of the proposed Contract Documents.
- 2.2.3 The Bid is based upon the materials, equipment, and systems required by the Bidding Documents without exception.

**2.3 JOINT VENTURE REQUIREMENTS**

- 2.3.1 For Public Works Contracts, each Joint Venturer shall be qualified and capable to complete the Work with their own forces.
- 2.3.2 Included with the Bid submission, and as a requirement to bid, a copy of the executed Joint Venture Agreement shall be submitted and signed by all Joint Venturers involved.
- 2.3.3 All required Bid Bonds, Performance Bonds, Material and Labor Payment Bonds must be executed by both Joint Venturers and be placed in both of their names.
- 2.3.4 All required insurance certificates shall name both Joint Venturers.
- 2.3.5 Both Joint Venturers shall sign the Bid Form.
- 2.3.6 Both Joint Venturers shall include their Federal E.I. Number with the Bid.
- 2.3.7 In the event of a mandatory Pre-bid Meeting, each Joint Venturer shall have a representative in attendance.
- 2.3.8 Due to exceptional circumstances and for good cause shown, one or more of these provisions may be waived at the discretion of the State.

**2.4 ASSIGNMENT OF ANTITRUST CLAIMS**

- 2.4.1 As consideration for the award and execution by the Owner of this contract, the Contractor hereby grants, conveys, sells, assigns and transfers to the State of Delaware all of its right, title and interests in and to all known or unknown causes of action it presently has or may now or hereafter acquire under the antitrust laws of the United States and the State of Delaware, relating to the particular goods or services purchased or acquired by the Owner pursuant to this contract.

**ARTICLE 3: BIDDING DOCUMENTS**

**3.1 COPIES OF BID DOCUMENTS**

- 3.1.1 Bidders may obtain complete sets of the Bidding Documents from the Architectural/Engineering firm designated in the Advertisement or Invitation to Bid in the number and for the deposit sum, if any, stated therein.

3.1.2 Bidders shall use complete sets of Bidding Documents for preparation of Bids. The issuing Agency nor the Architect assumes no responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

3.1.3 Any errors, inconsistencies or omissions discovered shall be reported to the Architect immediately.

3.1.4 The Agency and Architect may make copies of the Bidding Documents available on the above terms for the purpose of obtaining Bids on the Work. No license or grant of use is conferred by issuance of copies of the Bidding Documents.

### 3.2 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

3.2.1 The Bidder shall carefully study and compare the Bidding Documents with each other, and with other work being bid concurrently or presently under construction to the extent that it relates to the Work for which the Bid is submitted, shall examine the site and local conditions, and shall report any errors, inconsistencies, or ambiguities discovered to the Architect.

3.2.2 Bidders or Sub-bidders requiring clarification or interpretation of the Bidding Documents shall make a written request to the Architect at least seven days prior to the date for receipt of Bids. Interpretations, corrections and changes to the Bidding Documents will be made by written Addendum. Interpretations, corrections, or changes to the Bidding Documents made in any other manner shall not be binding.

3.2.3 The apparent silence of the specifications as to any detail, or the apparent omission from it of detailed description concerning any point, shall be regarded as meaning that only the best commercial practice is to prevail and only material and workmanship of the first quality are to be used. Proof of specification compliance will be the responsibility of the Bidder.

3.2.4 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for all permits, labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the proper execution and completion of the Work.

3.2.5 The Owner will bear the costs for all impact and user fees associated with the project.

### 3.3 SUBSTITUTIONS

3.3.1 The materials, products and equipment described in the Bidding Documents establish a standard of quality, required function, dimension, and appearance to be met by any proposed substitution. The specification of a particular manufacturer or model number is not intended to be proprietary in any way. Substitutions of products for those named will be considered, providing that the Vendor certifies that the function, quality, and performance characteristics of the material offered is equal or superior to that specified. It shall be the Bidder's responsibility to assure that the proposed substitution will not affect the intent of the design, and to make any installation modifications required to accommodate the substitution.

3.3.2 Requests for substitutions shall be made in writing to the Architect at least ten days prior to the date of the Bid Opening. Such requests shall include a complete description of the proposed substitution, drawings, performance and test data, explanation of required installation modifications due the substitution, and any other information necessary for an evaluation. The burden of proof of the merit of the proposed substitution is upon the

proposer. The Architect's decision of approval or disapproval shall be final. The Architect is to notify Owner prior to any approvals.

3.3.3 If the Architect approves a substitution prior to the receipt of Bids, such approval shall be set forth in an Addendum. Approvals made in any other manner shall not be binding.

3.3.4 The Architect shall have no obligation to consider any substitutions after the Contract award.

3.4 ADDENDA

3.4.1 Addenda will be mailed or delivered to all who are known by the Architect to have received a complete set of the Bidding Documents.

3.4.2 Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.

3.4.3 No Addenda will be issued later than 2 calendar days prior to the date for receipt of Bids except an Addendum withdrawing the request for Bids or one which extends the time or changes the location for the opening of bids.

3.4.4 Each bidder shall ascertain prior to submitting his Bid that they have received all Addenda issued, and shall acknowledge their receipt in their Bid in the appropriate space. Not acknowledging an issued Addenda could be grounds for determining a bid to be non-responsive.

**ARTICLE 4: BIDDING PROCEDURES**

4.1 PREPARATION OF BIDS

4.1.1 Submit the bids on the Bid Forms included with the Bidding Documents.

4.1.2 Submit the original Bid Form for each bid. Bid Forms may be removed from the project manual for this purpose.

4.1.3 Execute all blanks on the Bid Form in a non-erasable medium (typewriter or manually in ink).

4.1.4 Where so indicated by the makeup on the Bid Form, express sums in both words and figures, in case of discrepancy between the two, the written amount shall govern.

4.1.5 Interlineations, alterations or erasures must be initialed by the signer of the Bid.

4.1.6 BID ALL REQUESTED ALTERNATES AND UNIT PRICES, IF ANY. If there is no change in the Base Bid for an Alternate, enter "No Change". The Contractor is responsible for verifying that they have received all addenda issued during the bidding period. Work required by Addenda shall automatically become part of the Contract.

4.1.7 Make no additional stipulations on the Bid Form and do not qualify the Bid in any other manner.

4.1.8 Each copy of the Bid shall include the legal name of the Bidder and a statement whether the Bidder is a sole proprietor, a partnership, a corporation, or any legal entity, and each copy shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further give the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current Power of Attorney attached, certifying agent's authority to bind the Bidder.

4.1.9 Bidder shall complete the Non-Collusion Statement form included with the Bid Forms and include it with their Bid.

4.1.10 In the construction of all Public Works projects for the State of Delaware or any agency thereof, preference in employment of laborers, workers or mechanics shall be given to bona fide legal citizens of the State who have established citizenship by residence of at least 90 days in the State.

4.1.11 Each bidder shall include a signed Affidavit for the Bidder certifying compliance with OMB Regulation 4104 - "Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on "Large Public Works Projects." "Large Public Works" is based upon the current threshold required for bidding Public Works as set by the Purchasing and Contracting Advisory Council.

#### 4.2 BID SECURITY

4.2.1 All bids shall be accompanied by a deposit of either a good and sufficient bond to the agency for the benefit of the agency, with corporate surety authorized to do business in this State, the form of the bond and the surety to be approved by the agency, or a security of the bidder assigned to the agency, for a sum equal to at least 10% of the bid plus all add alternates, or in lieu of the bid bond a security deposit in the form of a certified check, bank treasurer's check, cashier's check, money order, or other prior approved secured deposit assigned to the State. The bid bond need not be for a specific sum, but may be stated to be for a sum equal to 10% of the bid plus all add alternates to which it relates and not to exceed a certain stated sum, if said sum is equal to at least 10% of the bid. The Bid Bond form used shall be the standard OMB form (attached).

4.2.2 The Agency has the right to retain the bid security of Bidders to whom an award is being considered until either a formal contract has been executed and bonds have been furnished or the specified time has elapsed so the Bids may be withdrawn or all Bids have been rejected.

4.2.3 In the event of any successful Bidder refusing or neglecting to execute a formal contract and bond within 20 days of the awarding of the contract, the bid bond or security deposited by the successful bidder shall be forfeited.

#### 4.3 SUBCONTRACTOR LIST

4.3.1 In accordance with Title 29, Chapter 69, Section 6962(d)(16) of the Delaware Code, each Bidder shall submit with their Bid a completed List of Sub-Contractors included with the Bid Form. **NAME ONLY ONE SUBCONTRACTOR FOR EACH TRADE.** The bidder must list **in each category** the full name and address (City & State) of the sub-contractor that the Bidder will be using to perform the work and provide material for that subcontractor category. Should the Bidder's listed subcontractor intend to provide any of their subcontractor category of work through a third-tier contractor, the Bidder shall list that third-tier contractor's full name and address (City & State). **If the Bidder intends to perform any category of work itself, it must list its full name and address.** For clarification, if the Bidder intends to perform the work themselves, the Bidder **may not** insert "not applicable", "N/A", "self" or anything other than its own full name and address (City & State). To do so shall cause the bid to be rejected. In addition, the failure to produce a completed subcontractor list with the bid submittal shall cause the bid to be rejected. If you have more than three (3) third-tier contractors to report in any subcontractor category, print out additional page(s) containing the appropriate category, complete the rest of your list of third-tier contractors for that category, notate the addition



in parentheses as (CONTINUATION) next to the subcontractor category and an asterisk (\*) next to any additional third-tier contractors, and submit it with your bid.

4.3.2

It is the responsibility of the Contractor to ensure that their Subcontractors are in compliance with the provisions of this law. Also, if a Contractor elects to list themselves as a Subcontractor for any category, they must specifically name themselves on the Bid Form and be able to document their capability to act as Subcontractor in that category in accordance with this law.

4.4

#### AFFIDAVIT OF CONTRACTOR QUALIFICATIONS

4.4.1

In accordance with Title 29, Chapter 69, Section 6962(d)(10)b.3 of the Delaware Code, each Bidder shall submit with their Bid the Affidavit of Contractor Qualifications certifying that the Bidder will abide by the contractor's qualifications outlined in the construction bid specifications for the duration of the contract term. After a contract has been awarded the successful bidder shall not substitute another subcontractor whose name was submitted on the Subcontractor Form except for the reasons in the statute and not without written consent from the awarding agency. Failure to utilize the subcontractors on the list will subject the successful bidder to penalties as outlined in the General Requirements Section 5.2 of the contract.

4.5

#### AFFIDAVIT OF CRAFT TRAINING COMPLIANCE

4.5.1

In accordance with Title 29, Chapter 69, Section 6962(c)(13) of the Delaware Code, contractors and subcontractors must provide craft training for journeyman and apprentice levels if **all** of the following apply:

- A. A project meets the prevailing wage requirement under Title 29, Chapter 69, Section 6960 of the Delaware Code.
- B. The contractor employs 10 or more total employees.
- C. The project is not a federal highway project

Failure to provide required craft training on the project may subject the successful contractor and/or subcontractor(s) to penalties as outlined in Title 29, Chapter 69, Section 6962(c)(13) of the Delaware Code.

Bidders shall submit the Affidavit of Craft Training Compliance prior to contract execution.

4.6

#### EQUALITY OF EMPLOYMENT OPPORTUNITY ON PUBLIC WORKS

4.6.1

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

- A. The Contractor will not discriminate against any employee or applicant for employment because of race, creed, sex, color, sexual orientation, gender identity or national origin. The Contractor will take affirmative action to ensure the applicants are employed, and that employees are treated during employment, without regard to their race, creed, sex, color, 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 by the contracting agency setting forth this nondiscrimination clause.

- B. 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, creed, sex, color, sexual orientation, gender identity or national origin."

4.7 PREVAILING WAGE REQUIREMENT

4.7.1 Wage Provisions: For renovation and new construction projects whose costs exceed the thresholds contained in Delaware Code, Title 29, Section 6960, the minimum wage rates for various classes of laborers and mechanics shall be as determined by the Department of Labor, Division of Industrial Affairs of the State of Delaware.

4.7.2 The employer shall pay all mechanics and labors employed directly upon the site of work, or engaged in custom fabrication work, as that term is defined in Article 1.23 herein and as also as defined in 29 Del. C. § 6902 and described in 29 Del. C. § 6960(b), regardless of where the work is performed, unconditionally and not less often than once a week and without subsequent deduction or rebate on any account, the full amounts accrued at time of payment, computed at wage rates not less than those stated in the specifications, regardless of any contractual relationship which may be alleged to exist between the employer and such laborers and mechanics.

4.7.3 As per 29 Del. C. § 6960(b), the scale of the wages to be paid must be posted by the employer in a prominent and easily accessible place at the site of the work. There may be withheld from the employer so much of accrued payments as may be considered necessary by the Department of Labor to pay laborers and mechanics employed by the employer the difference between the rates of wages required by the contract to be paid laborers and mechanics on the work and rates of wages received by such laborers and mechanics to be remitted to the Department of Labor for distribution upon resolution of any claims.

4.7.4 Every contract based upon these specifications shall contain a stipulation that sworn payroll information, as required by the Department of Labor, be furnished weekly. The Department of Labor shall keep and maintain the sworn payroll information for a period of 6 months from the last day of the work week covered by the payroll.

4.8 SUBMISSION OF BIDS

4.8.1 Enclose the Bid, the Bid Security, and any other documents required to be submitted with the Bid in a sealed opaque envelope. Address the envelope to the party receiving the Bids. Identify with the project name, project number, and the Bidder's name and address. If the Bid is sent by mail, enclose the sealed envelope in a separate mailing envelope with the notation "BID ENCLOSED" on the face thereof. The State is not responsible for the opening of bids prior to bid opening date and time that are not properly marked.

4.8.2 Deposit Bids at the designated location prior to the time and date for receipt of bids indicated in the Advertisement for Bids. Bids received after the time and date for receipt of bids will be marked "LATE BID" and returned.

4.8.3 Bidder assumes full responsibility for timely delivery at location designated for receipt of bids.

4.8.4 Oral, telephonic or telegraphic bids are invalid and will not receive consideration.

4.8.5 Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids, provided that they are then fully in compliance with these Instructions to Bidders.



4.9 MODIFICATION OR WITHDRAW OF BIDS

4.9.1 Prior to the closing date for receipt of Bids, a Bidder may withdraw a Bid by personal request and by showing proper identification to the Architect. A request for withdraw by letter or fax, if the Architect is notified in writing prior to receipt of fax, is acceptable. A fax directing a modification in the bid price will render the Bid informal, causing it to be ineligible for consideration of award. Telephone directives for modification of the bid price shall not be permitted and will have no bearing on the submitted proposal in any manner.

4.9.2 Bidders submitting Bids that are late shall be notified as soon as practicable and the bid shall be returned.

4.9.3 A Bid may not be modified, withdrawn or canceled by the Bidder during a thirty (30) day period following the time and date designated for the receipt and opening of Bids, and Bidder so agrees in submitting their Bid. Bids shall be binding for 30 days after the date of the Bid opening.

**ARTICLE 5: CONSIDERATION OF BIDS**

5.1 OPENING/REJECTION OF BIDS

5.1.1 Unless otherwise stated, Bids received on time will be publicly opened and will be read aloud. An abstract of the Bids will be made available to Bidders.

5.1.2 The Agency shall have the right to reject any and all Bids. A Bid not accompanied by a required Bid Security or by other data required by the Bidding Documents, or a Bid which is in any way incomplete or irregular is subject to rejection.

5.1.3 If the Bids are rejected, it will be done within thirty (30) calendar day of the Bid opening.

5.2 COMPARISON OF BIDS

5.2.1 After the Bids have been opened and read, the bid prices will be compared and the result of such comparisons will be made available to the public. Comparisons of the Bids may be based on the Base Bid plus desired Alternates. The Agency shall have the right to accept Alternates in any order or combination.

5.2.2 The Agency reserves the right to waive technicalities, to reject any or all Bids, or any portion thereof, to advertise for new Bids, to proceed to do the Work otherwise, or to abandon the Work, if in the judgment of the Agency or its agent(s), it is in the best interest of the State.

5.2.3 An increase or decrease in the quantity for any item is not sufficient grounds for an increase or decrease in the Unit Price.

5.2.4 The prices quoted are to be those for which the material will be furnished F.O.B. Job Site and include all charges that may be imposed during the period of the Contract.

5.2.5 No qualifying letter or statements in or attached to the Bid, or separate discounts will be considered in determining the low Bid except as may be otherwise herein noted. Cash or separate discounts should be computed and incorporated into Unit Bid Price(s).

5.3 DISQUALIFICATION OF BIDDERS

- 5.3.1 An agency shall determine that each Bidder on any Public Works Contract is responsible before awarding the Contract. Factors to be considered in determining the responsibility of a Bidder include:
- A. The Bidder's financial, physical, personnel or other resources including Subcontracts;
  - B. The Bidder's record of performance on past public or private construction projects, including, but not limited to, defaults and/or final adjudication or admission of violations of the Prevailing Wage Laws in Delaware or any other state;
  - C. The Bidder's written safety plan;
  - D. Whether the Bidder is qualified legally to contract with the State;
  - E. Whether the Bidder supplied all necessary information concerning its responsibility; and,
  - F. Any other specific criteria for a particular procurement, which an agency may establish; provided however, that, the criteria be set forth in the Invitation to Bid and is otherwise in conformity with State and/or Federal law.
- 5.3.2 If an agency determines that a Bidder is nonresponsive and/or nonresponsible, the determination shall be in writing and set forth the basis for the determination. A copy of the determination shall be sent to the affected Bidder within five (5) working days of said determination.
- 5.3.3 In addition, any one or more of the following causes may be considered as sufficient for the disqualification of a Bidder and the rejection of their Bid or Bids.
- 5.3.3.1 More than one Bid for the same Contract from an individual, firm or corporation under the same or different names.
  - 5.3.3.2 Evidence of collusion among Bidders.
  - 5.3.3.3 Unsatisfactory performance record as evidenced by past experience.
  - 5.3.3.4 If the Unit Prices are obviously unbalanced either in excess or below reasonable cost analysis values.
  - 5.3.3.5 If there are any unauthorized additions, interlineation, conditional or alternate bids or irregularities of any kind which may tend to make the Bid incomplete, indefinite or ambiguous as to its meaning.
  - 5.3.3.6 If the Bid is not accompanied by the required Bid Security and other data required by the Bidding Documents.
  - 5.3.3.7 If any exceptions or qualifications of the Bid are noted on the Bid Form.
- 5.4 ACCEPTANCE OF BID AND AWARD OF CONTRACT
- 5.4.1 A formal Contract shall be executed with the successful Bidder within twenty (20) calendar days after the award of the Contract.

- 5.4.2 Per Section 6962(d)(13)a., Title 29, Delaware Code, "The contracting agency shall award any public works contract within thirty (30) days of the bid opening to the lowest responsive and responsible Bidder, unless the Agency elects to award on the basis of best value, in which case the election to award on the basis of best value shall be stated in the Invitation To Bid. Any public school district and its board shall award public works contracts in accordance with this section's requirements except it shall award the contract within 60 days of the bid opening."
- 5.4.3 Each Bid on any Public Works Contract must be deemed responsive by the Agency to be considered for award. A responsive Bid shall conform in all material respects to the requirements and criteria set forth in the Contract Documents and specifications.
- 5.4.4 The Agency shall have the right to accept Alternates in any order or combination, and to determine the low Bidder on the basis of the sum of the Base Bid, plus accepted Alternates.
- 5.4.5 The successful Bidder shall execute a formal contract, submit the required Insurance Certificate, and furnish good and sufficient bonds, unless specifically waived in the General Requirements, in accordance with the General Requirement, within twenty (20) days of official notice of contract award. The successful Bidder shall provide, at least two business days prior to contract execution, copies of the Employee Drug Testing Program for the Bidder and all listed Subcontractors. Bonds shall be for the benefit of the Agency with surety in the amount of 100% of the total contract award. Said Bonds shall be conditioned upon the faithful performance of the contract. Bonds shall remain in affect for period of two (2) years after the date of the Certificate of Final Payment.
- 5.4.6 If the successful Bidder fails to execute the required Contract, Bond and all required information, as aforesaid, within twenty (20) calendar days after the date of official Notice of the Award of the Contract, their Bid guaranty shall immediately be taken and become the property of the State for the benefit of the Agency as liquidated damages, and not as a forfeiture or as a penalty. Award will then be made to the next lowest qualified Bidder of the Work or readvertised, as the Agency may decide.
- 5.4.7 Each bidder shall supply with its bid its taxpayer identification number (i.e., federal employer identification number or social security number) and should the vendor be awarded a contract, such vendor shall provide to the agency the taxpayer identification license numbers of such subcontractors. Such numbers shall be provided on the later of the date on which such subcontractor is required to be identified or the time the contract is executed. The successful Bidder shall provide to the agency to which it is contracting, within 30 days of entering into such public works contract, copies of all Delaware Business licenses of subcontractors and/or independent contractors that will perform work for such public works contract. However, if a subcontractor or independent contractor is hired or contracted more than 20 days after the Bidder entered the public works contract the Delaware Business license of such subcontractor or independent contractor shall be provided to the agency within 10 days of being contracted or hired.
- 5.4.8 The Bid Security shall be returned to the successful Bidder upon the execution of the formal contract. The Bid Securities of unsuccessful bidders shall be returned within thirty (30) calendar days after the opening of the Bids.

**ARTICLE 6: POST-BID INFORMATION**

- 6.1 CONTRACTOR'S QUALIFICATION STATEMENT

- 6.1.1 Bidders to whom an award of a Contract is under consideration shall, if requested by the Agency, submit a properly executed AIA Document A305, Contractor's Qualification Statement, unless such a statement has been previously required and submitted.
- 6.2 Bidders to whom an award of a Contract has been made must produce their Delaware Business License before the Contract can be executed.

**ARTICLE 7: PERFORMANCE BOND AND PAYMENT BOND**

- 7.1 BOND REQUIREMENTS
- 7.1.1 The cost of furnishing the required Bonds, that are stipulated in the Bidding Documents, shall be included in the Bid.
- 7.1.2 If the Bidder is required by the Agency to secure a bond from other than the Bidder's usual sources, changes in cost will be adjusted as provide in the Contract Documents.
- 7.1.3 The Performance and Payment Bond forms used shall be the standard OMB forms (attached).
- 7.2 TIME OF DELIVERY AND FORM OF BONDS
- 7.2.1 The bonds shall be dated on or after the date of the Contract.
- 7.2.2 The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix a certified and current copy of the power of attorney.

**ARTICLE 8: FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR**

- 8.1 Unless otherwise required in the Bidding Documents, the Agreement for the Work will be written on AIA Document A132, Standard Form of Agreement Between Owner and Contractor Where the Basis of Payment is a Stipulated Sum.

**END OF SECTION**  
**END OF INSTRUCTIONS TO BIDDERS**

SECTION 00 31 19 EXISTING CONDITION INFORMATION

A copy BATA Environmental Associates' Bancroft School – Basement Heating Oil Tank Investigation report dated 10/6/2023 is attached.

END OF SECTION 00 31 19



**Bancroft School – Basement Heating Oil Tank**

**BEA # 1063022**

**October 6, 2023**

**Inspected by Charles Rhodes of Batta Environmental on October 6, 2023**

Inspector located and reviewed the Heating oil tank at Bancroft Middle School located at 7<sup>th</sup> and Lombard St. in Wilmington Delaware. Tank was indicated to be currently in service. Tank was reportedly filled last in 2010 with **#2 Heating Oil**. The tank size is indicated as 10,000 gallons (gauge). The tank gauge is located in the boiler room and the gauge indicates approximately **800 gallons remaining**. This is consistent with the observation that there is approximately 1 foot of oil in the bottom of the tank. The tank is reported to be currently utilized to feed Boiler #1 and Boiler #2 as a combo oil/ gas burner system. Boiler #3 is a natural gas only boiler. The tank is located in the Transformer room adjacent to the Boiler Room (to the north) and the Storage Room (to the south). The oil fill and vent are located outside the building in the sidewalk below the Rm 114 windows, approximately 54 ft from the southwest corner of the building. The rectangular heating oil storage tank is approximately 10 feet wide, approximately 16 feet long and is approximately 9 foot tall. It is separated from the remainder of the transformer room by a concrete dike approximately 10 foot tall. The tank can be accessed by a 10-foot tall ladder. The tank is contained by the foundation walls to the south and west, and the Boiler Room wall to the north. The dike serves as the eastern containment wall. The floor of the basement is concrete. The top of the tank sits approximately two feet below the concrete slab for the first floor. The walls appear to be approximately one-foot thick.

The inspector indicates that removal of this tank is regulated by the Delaware regulations 8 DE Reg. 1167 (02/01/05) 20 DE Reg. 815 (04/01/17)

## 15.0 AST Removal Requirements

### 15.1 General Requirements for AST Removal

15.1.1 The AST Owner or Operator shall notify the Department of the scheduled removal of an AST utilizing a form provided by the Department not later than ten (10) days prior to the removal of an AST.

15.1.2 An AST and ancillary piping may be treated as separate entities for the purpose of removal, permanent closure in place or permanent change in contents.

15.1.3 The AST Owner or Operator shall comply with the requirements of PART B, Section 14.0. 15.2 Additional Requirements for AST Removal

15.2.1 To remove an AST, an Owner or Operator shall at a minimum comply with the following requirements:

15.2.1.1 Remove all the regulated substance from the AST and ancillary piping; and

15.2.1.2 Thoroughly clean the interior of the AST and all ancillary piping of all sludge, solids, and residual regulated substance with documentation of the proper disposition of the removed sludge, solids and residual regulated substance; and

15.2.1.3 Completely displace the AST and ancillary piping from its installed location, and render the AST and ancillary piping permanently non-useable or discontinue use of the AST and ancillary piping as an AST and ancillary piping with the intent of not introducing a regulated substance into the AST and ancillary piping.



**TITLE 7 NATURAL RESOURCES & ENVIRONMENTAL CONTROL  
 DELAWARE ADMINISTRATIVE CODE**

1

**DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL  
 DIVISION OF WASTE AND HAZARDOUS SUBSTANCES  
 Tank Management Section**

**1352 Aboveground Storage Tanks**

**PART A GENERAL REQUIREMENTS FOR ASTS**

**1.0 General Provisions**

**1.1 Statement of Authority and Purpose**

1.1.1 These Regulations are enacted in accordance with Title 7 Del.C. Ch. 60, *Environmental Control*, and Title 7 Del.C. Ch. 74A, *The Jeffrey Davis Aboveground Storage Tank Act*.

1.1.2 The Delaware Department of Natural Resources and Environmental Control is responsible for protecting, preserving and enhancing the environmental quality of water, air and land of the State. In addition, the General Assembly of the State of Delaware has found "that it is therefore necessary to provide for more stringent control of the installation, operation, retrofitting, maintenance, repair, abandonment, and/or removal of aboveground storage tanks to prevent releases and where releases occur, to detect and remediate them at the earliest possible stage, thus minimizing further degradation of soil, air, surface water, and groundwater and promoting public safety."

The Regulations Governing Aboveground Storage Tanks are intended to address existing and potential sources of pollution that may result from ASTs. To ensure the prevention and early detection of a release of a regulated substance should one occur, new ASTs are required to meet acceptable design and installation criteria and existing ASTs are required to retrofit by a schedule set forth to comparable standards. AST design criteria promulgated under these Regulations will minimize the risk of regulated substances impacting the environment. Release confirmation and remediation standards are set forth to require the clean-up of any release that does occur.

**1.2 Applicability**

1.2.1 The requirements of these Regulations shall apply to all Owners and Operators of an AST as defined in these Regulations unless specifically exempted in these Regulations.

1.2.2 The following ASTs shall only be subject to the requirements of Part A, Section 1.0; Part A, Section 2.0; Part A Section 6.0; and Part A Section 8.0; and Part E of these Regulations:

1.2.2.1 ASTs of 1,100 gallons or less in capacity, located on a farm, and used solely to facilitate the production of crops, livestock, or livestock products on the farm;

1.2.2.2 ASTs used solely to store propane gas;

1.2.2.3 ASTs of 1,100 gallons or less in capacity used solely to store heating fuel for consumptive use on the premises where stored;

1.2.2.4 ASTs of 1,100 gallons or less in capacity used solely to store motor fuel or motor oil for Noncommercial purposes;

1.2.2.5 ASTs installed on a temporary basis, not to exceed six months;

1.2.2.6 ASTs regulated pursuant to Title 7 Del.C. Ch. 74B, *Boiler Safety Program*;

1.2.2.7 ASTs and associated equipment regulated as a part of a process regulated pursuant to Title 7 Del.C. Ch. 77, *Extremely Hazardous Substances Risk Management Act*.

1.2.3 The following ASTs shall only be subject to the requirements of Part A, subsection 1.3; PART A, subsection 1.4; PART A, subsection 1.5; PART A, subsection 1.6; Part A, subsection 2.0; Part A, subsection 4.1.1; PART A subsection 4.1.3, PART A, subsection 4.1.4; PART A, subsection 4.1.5; PART A, subsection 4.1.8; PART A, subsection 4.1.7; PART A, subsection 4.1.8, PART A subsection 4.1.9, Part A, subsection 4.2; Part A, subsection 4.3; Part A, subsection 4.4; Part A, Section 6.0; Part A, Section 8.0; Part A, Section 9.0; and Part E of these Regulations.

1.2.3.1 ASTs used to store regulated substance other than diesel, kerosene or heating fuel with a capacity greater than 250 gallons and less than 12,499 gallons.

1.2.3.2 ASTs used solely to store diesel, kerosene or heating fuel with a capacity greater than 250 gallons and less than 40,000 gallons.



**TITLE 7 NATURAL RESOURCES & ENVIRONMENTAL CONTROL  
DELAWARE ADMINISTRATIVE CODE**

35

**15.0 AST Removal Requirements****15.1 General Requirements for AST Removal**

- 15.1.1 The AST Owner or Operator shall notify the Department of the scheduled removal of an AST utilizing a form provided by the Department not later than ten (10) days prior to the removal of an AST.
- 15.1.2 An AST and ancillary piping may be treated as separate entities for the purpose of removal, permanent closure in place or permanent change in contents.
- 15.1.3 The AST Owner or Operator shall comply with the requirements of PART B, Section 14.0.

**15.2 Additional Requirements for AST Removal**

- 15.2.1 To remove an AST, an Owner or Operator shall at a minimum comply with the following requirements.
  - 15.2.1.1 Remove all the regulated substance from the AST and ancillary piping; and
  - 15.2.1.2 Thoroughly clean the interior of the AST and all ancillary piping of all sludge, solids, and residual regulated substance with documentation of the proper disposition of the removed sludge, solids and residual regulated substance; and
  - 15.2.1.3 Completely displace the AST and ancillary piping from its installed location, and render the AST and ancillary piping permanently non-useable or discontinue use of the AST and ancillary piping as an AST and ancillary piping with the intent of not introducing a regulated substance into the AST and ancillary piping.

8 DE Reg. 1167 (02/01/05)

20 DE Reg. 815 (04/01/17)

**16.0 Permanent Closure in Place****16.1 General Requirements for Permanent Closure in Place of ASTs**

- 16.1.1 The Owner or Operator shall notify the Department of the scheduled permanent closure in place of an AST utilizing a form provided by the Department not later than ten (10) days prior to the permanent closure in place of an AST.
- 16.1.2 An AST and ancillary piping may be treated as separate entities for the purpose of removal, permanent closure in place or permanent change in contents.
- 16.1.3 The AST Owner or Operator shall comply with the requirements of PART B, Section 14.0.

**16.2 Additional Requirements for Permanent Closure in Place of ASTs**

- 16.2.1 To Permanently close in Place an AST, the AST Owner or Operator shall at a minimum comply with the following requirements:
  - 16.2.1.1 Empty the AST and all ancillary piping of all regulated substances in accordance with API RP2015 and API RP2016 and retain documentation of the proper disposition of the removed sludge, liquids, solids and residual regulated substance for a minimum of three (3) years; and
  - 16.2.1.2 Secure the AST to prevent unauthorized entrance or tampering so that a regulated substance is not accidentally or intentionally introduced into the AST; and
  - 16.2.1.3 All permanently closed ASTs shall be labeled in accordance with PART A, subsection 9.5.

**16.3 Reactivating a Permanently Closed AST**

- 16.3.1 An AST Owner or Operator who reactivates an AST, which has been permanently closed per this Part, shall notify the Department utilizing a form provided by the Department in accordance with PART B, subsection 1.1, prior to putting the AST back into service.
- 16.3.2 Prior to placing an AST which has been permanently closed back into service, the Owner or Operator shall meet all new AST standards in these Regulations.
- 16.3.3 An AST which was permanently closed prior to June 1, 2004 and is intended to be placed into service must comply with all new AST standards in these Regulations including payment of required construction fees in PART B, subsection 1.2 and submission of installation documentation in accordance with PART B.

8 DE Reg. 1167 (02/01/05)

20 DE Reg. 815 (04/01/17)

**17.0 Permanent Change in Contents Requirements****17.1 General Requirements for Permanent Change in Contents**





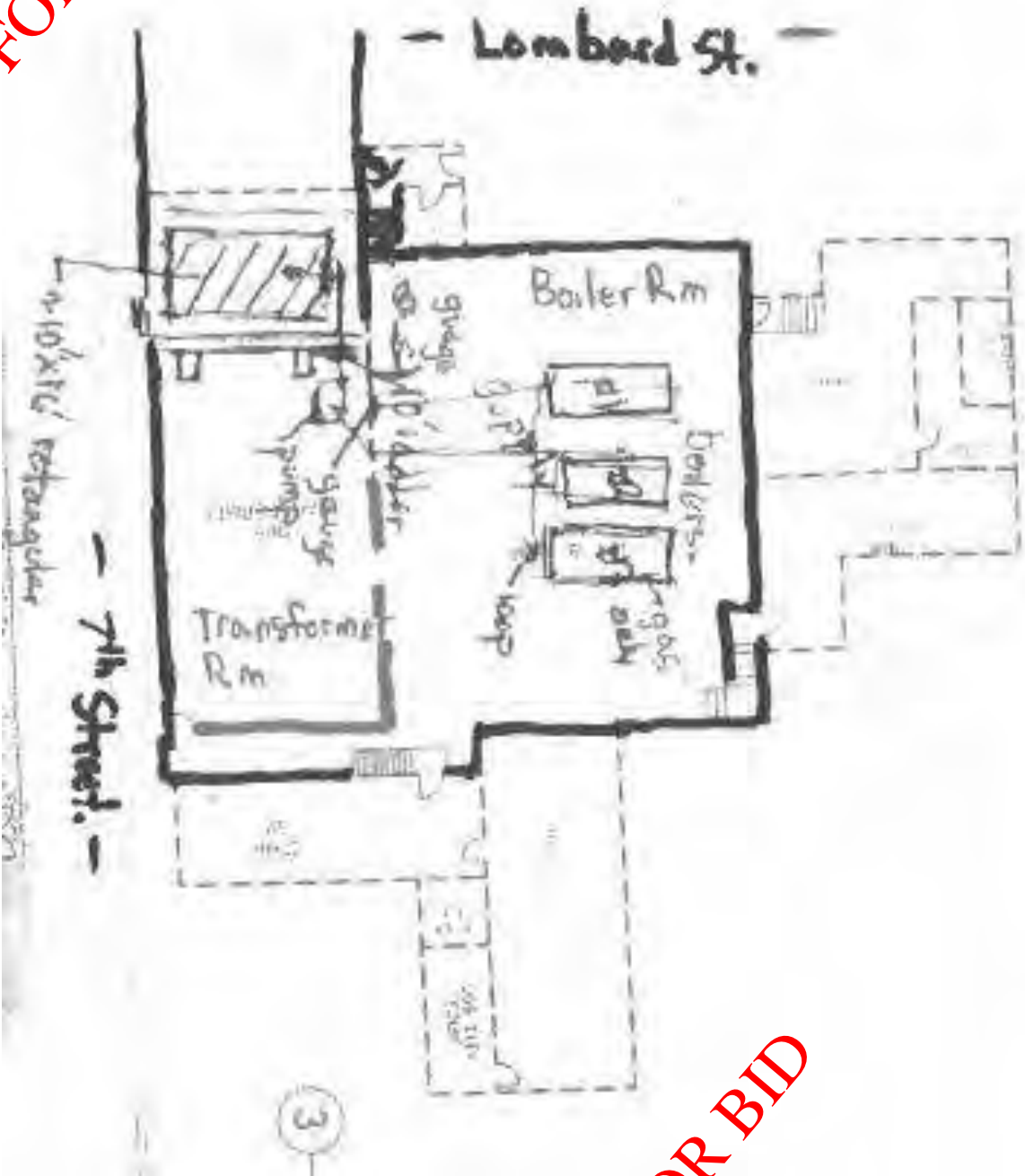
NOT FOR BID



NOT FOR BID



NOT FOR BID

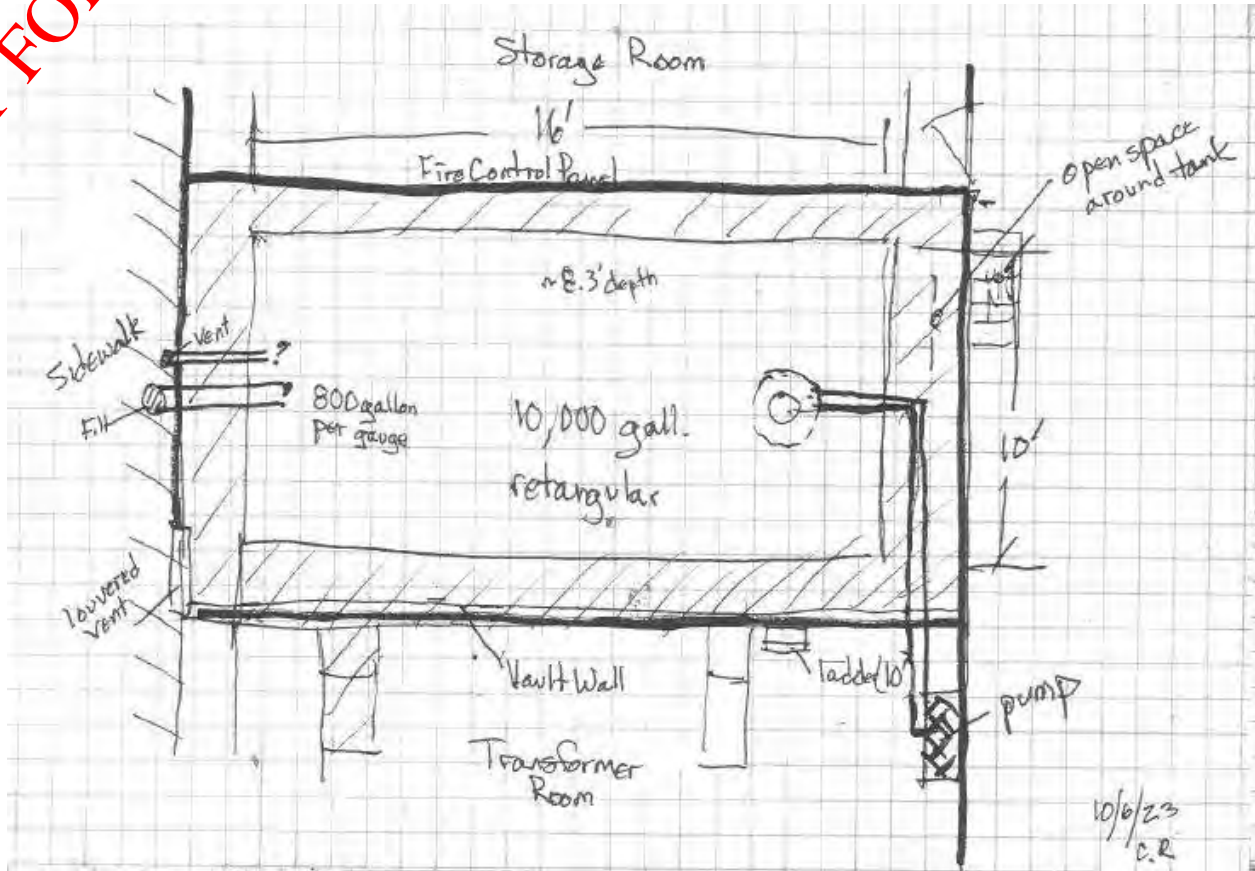


**Basement - Bancroft School**  
**7th and Lombard St., Wilmington, DE**

NOT FOR BID



NOT FOR BID



NOT FOR BID





**NOT FOR BID**

**PHOTOS**  
10-6-23



The tank fill and vent located along the 7<sup>th</sup> St sidewalk with Lombard St in the distance. The louvered vent indicated is located above the southeast corner of the tank vault, in the transformer room.



Looking from the southwest corner of the building towards the tank fill and vent approximately 65 feet to the east below Rm 114 windows.



NOT FOR BID



The Fill and the vent pipe located to the south of the tank below Room 114 windows.



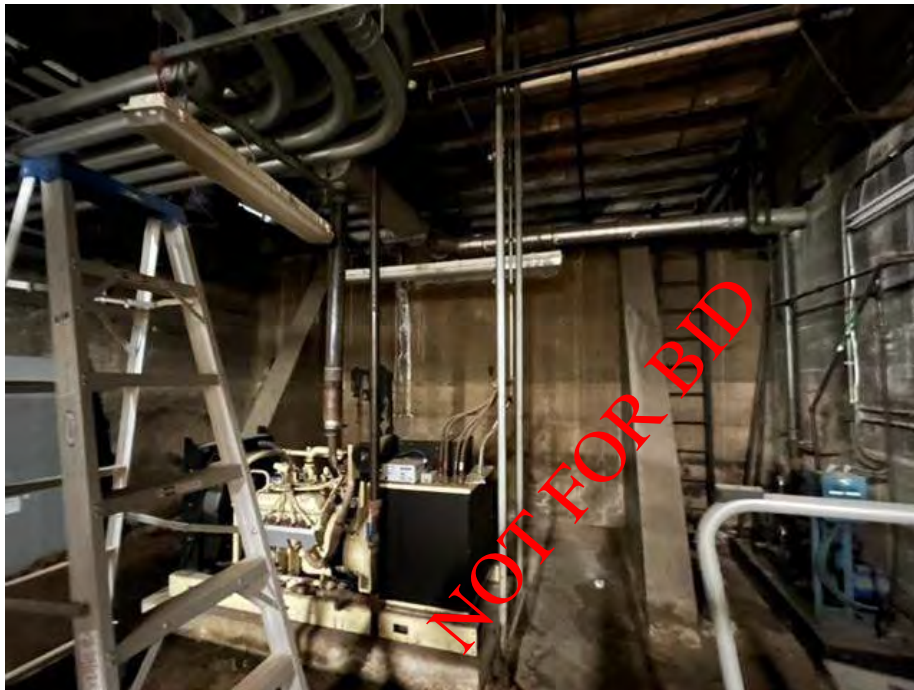
Southeast corner of the tank vault detail with the sidewalk vent to the left.



NOT FOR BID



Southeast vault detail with boiler room wall to right



The east vault wall is indicated with the boiler room wall to the right (north) and the southern foundation wall to the left.



NOT FOR BID



Gauge indicated. Tank is located behind the south boiler room wall (indicated) to the right of the gauge.



Access ladder and heating oil pump indicated. Green line is the supply line to the boilers.

NOT FOR BID

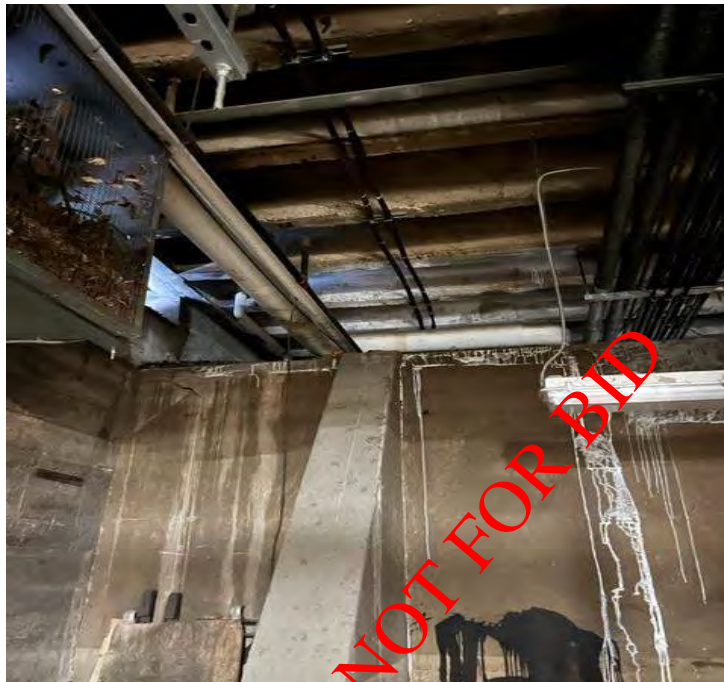




NOT FOR BID



Tank gauge indicating 800 gallons of heating oil.



South end of tank with vent indicated along sidewalk.





NOT FOR BID



South end of tank indicated. Tank is separated from surrounding walls by approximately 2 feet each way. Tank is believed to rest on the basement slab.



Manway at north end of tank. Supply and return lines are indicated.



NOT FOR BID



Top of tank looking southwest.



Storage Room south wall, adjacent to north side of tank vault, (shared wall). Floor indicated is approximately 4' above boiler room/ transformer room elevation.

NOT FOR BID

SECTION 00 40 00 – BID FORM

**For Bids Due:** \_\_\_\_\_ **To:** Christina School District  
925 Bear-Corbitt Road  
Bear, DE 19701

**Bid Package: 02C– Building Demolition**

**Name of Bidder:** \_\_\_\_\_

**Delaware Business License No.:** \_\_\_\_\_ **Taxpayer ID No.:** \_\_\_\_\_

**(Other License Nos.):** \_\_\_\_\_

**Phone No.:** \_\_\_\_\_

The undersigned, representing that they have read and understands the Bidding Documents and that this bid is made in accordance therewith, that they have visited the site and has familiarized themselves with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum itemized below:

**BASE BID: \$** \_\_\_\_\_ **Dollars**

( \$ \_\_\_\_\_ ) (in numbers)

**ALTERNATES – See Specific Scope of Work for complete descriptions of alternate pricing:**

Refer to the specifications and specific scope of work for alternates. Not all of the blank spaces may be required. Alternate prices are to conform to applicable project specification sections or drawing details. An “ADD” or “DEDUCT” amount is indicated by the crossed-out part that does not apply. If alternate does not apply to a specific bid package, insert: “Not Applicable”

**Alternate No. 1: Front Entrance Pediment Salvage by Others**

Add / Deduct: \_\_\_\_\_ Dollars  
( \$ \_\_\_\_\_ ) (in numbers)

**UNIT PRICES – See specific Scope of Work for unit pricing description:**

Unit prices conform to applicable project specification section. Refer to the specifications and/or specific scope of work for a complete description of required unit prices for this bid package.

	DESCRIPTION	ADD
UNIT PRICE No. 1	Import and placement/compaction of select fill, per ton	\$
UNIT PRICE No. 2	Abate and dispose of floor tile only, non-ACM mastic, per s.f.	\$
UNIT PRICE No. 3	Abate and dispose of single layer of floor tile and mastic, per s.f.	\$
UNIT PRICE No. 4	Abate and dispose of ACM Joint Compound on Drywall, per s.f.	\$
UNIT PRICE No. 5	Abate and dispose ACM mastic behind chalkboards, per s.f.	\$
UNIT PRICE No. 6	Install and breakdown two stage decontamination, per ea	\$
UNIT PRICE No. 7	Install and breakdown one stage decontamination, per ea	\$
UNIT PRICE No. 8	Construction and decontamination of containment area 100-499 s.f., per s.f.	\$
UNIT PRICE No. 9	Construction and decontamination of containment area greater than 500 s.f., per s.f.	\$

I/We acknowledge the receipt of addenda as listed below and the price(s) submitted include any cost/schedule impact they may have.

**Addendum Number**

**Date of Addendum**

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**NOT FOR BID**

**NOT FOR BID**

This bid shall remain valid and cannot be withdrawn for **Sixty (60)** days from the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (REQUIRED).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

Should I/We be awarded this contract, I/We pledge to complete all the work required in accordance with the project schedule include in specification section 013210.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to them or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

I am / We are an Individual / a Partnership / a Corporation

By \_\_\_\_\_ Trading as \_\_\_\_\_  
(Individual's / General Partner's / Corporate Name)

\_\_\_\_\_  
(State of Corporation)

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

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

By: \_\_\_\_\_  
(Authorized Signature)

\_\_\_\_\_  
(Printed Name and Title)

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

**ATTACHMENTS**

- Sub-Contractor List (See Section 00435 and any updates by addenda)
- Non-Collusion Statement
- Affidavit of Employee Drug Testing
- Affidavit of Contractor Qualifications
- Bid Security (Deposit or Bid Bond)



**BID FORM**

**Bid Package 02C Building Demolition:**

**SUBCONTRACTOR LIST**

In accordance with Title 29, Chapter 69, Section 6962(d)(10)b of the Delaware Code, the following subcontractor listing must accompany any bid submittal. The bidder must list **in each category** the full name and address (City & State) of the sub-contractor that the bidder will be using to perform the work and provide material for that subcontractor category. Should the bidder’s listed subcontractor intend to provide any of their subcontractor category of work through a third-tier contractor, the bidder shall list that third-tier contractor’s full name and address (City & State). **If the bidder intends to perform any category of work itself, it must list its full name and address.** For clarification, if the bidder intends to perform the work themselves, the bidder **may not** insert “not applicable”, “N/A”, “self” or anything other than its own full name and address (City & State). To do so shall cause the bid to be rejected. In addition, the failure to produce a completed subcontractor list with the bid submittal shall cause the bid to be rejected. If you have more than three (3) third-tier contractors to report in any subcontractor category, print out additional page(s) containing the appropriate category, complete the rest of your list of third-tier contractors for that category, notate the addition in parentheses as (CONTINUATION) next to the subcontractor category and an asterisk (\*) next to any additional third-tier contractors, and submit it with your bid.

**NOTE: Subcontractor categories specific to each bid package are listed in specification section 00435 and will be updated at the pre-bid meeting and via addendum. If no categories are requested for a bid package, then none are required to be submitted. Refer to specification section 00435 and any addenda that may modify the required listing.**

<u>Subcontractor Category</u>	<u>Subcontractor</u>	<u>Address (City &amp; State) &amp; License #</u>
<u>Demolition Contractor</u>	_____	City _____ State _____  Subcontractor’s tax-payer ID # or DE Business license # _____
<u>Abatement Contractor</u>	_____	City _____ State _____  Subcontractor’s tax-payer ID # or DE Business license # _____

**NOT FOR BID**

**NOT FOR BID**

**BID FORM**

**NON-COLLUSION STATEMENT**

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date to the Christina School District.

All the terms and conditions of Bid **CHR-23021E-BANDEMO** have been thoroughly examined and are understood.

**NAME OF BIDDER:** \_\_\_\_\_

**AUTHORIZED REPRESENTATIVE  
(TYPED):** \_\_\_\_\_

**AUTHORIZED REPRESENTATIVE  
(SIGNATURE):** \_\_\_\_\_

**TITLE:** \_\_\_\_\_

**ADDRESS OF BIDDER:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**PHONE NUMBER:** \_\_\_\_\_

Sworn to and subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_ 2023.

My Commission expires \_\_\_\_\_. NOTARY PUBLIC \_\_\_\_\_

**THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.**

**NOT FOR BID**

**NOT FOR BID**

**AFFIDAVIT  
OF  
EMPLOYEE DRUG TESTING PROGRAM**

**NOT FOR BID**

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors implement a program of mandatory drug testing for Employees who work on Large Public Works Contracts funded all or in part with public funds.

We hereby certify that we have in place or will implement during the entire term of the contract a Mandatory Drug Testing Program for our employees on the jobsite, including subcontractors that complies with this regulation:

**Contractor/Subcontractor Name:** \_\_\_\_\_

**Contractor/Subcontractor Address:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Authorized Representative (typed or printed):** \_\_\_\_\_

**Authorized Representative (signature):** \_\_\_\_\_

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

Sworn to and subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_ 2023.

My Commission expires \_\_\_\_\_. NOTARY PUBLIC \_\_\_\_\_.

**THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.**

**NOT FOR BID**

**CHRISTINA SCHOOL DISTRICT  
BANCROFT SCHOOL  
CHR-23021E-BANDEMO  
AFFIDAVIT  
OF  
CONTRACTOR QUALIFICATIONS**

**NOT FOR BID**

We hereby certify that we will abide by the contractor's qualifications outlined in the construction bid specifications for the duration of the contract term.

In accordance with Title 29, Chapter 69, Section 6962(d)(10)b.3 of the Delaware Code, after a contract has been awarded the successful bidder shall not substitute another subcontractor whose name was submitted on the Subcontractor Form except for the reasons in the statute and not without written consent from the awarding agency. Failure to utilize the subcontractors on the list will subject the successful bidder to penalties as outlined in the General Requirements Section 5.2 of the contract.

**Contractor Name:** \_\_\_\_\_

**Contractor Address:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Authorized Representative (typed or printed):** \_\_\_\_\_

**Authorized Representative (signature):** \_\_\_\_\_

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

Sworn to and Subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_.

My Commission expires \_\_\_\_\_. NOTARY PUBLIC \_\_\_\_\_.

**THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.**

**NOT FOR BID**

END OF SECTION 00 40 00

SECTION 00 43 00 – BID BOND

**BID BOND**

TO ACCOMPANY PROPOSAL  
(Not necessary if security is used)

NOT FOR BID

KNOW ALL MEN BY THESE PRESENTS That: \_\_\_\_\_  
\_\_\_\_\_ of \_\_\_\_\_ in the County of \_\_\_\_\_  
\_\_\_\_\_ and State of \_\_\_\_\_ as **Principal**, and \_\_\_\_\_  
\_\_\_\_\_ of \_\_\_\_\_ in the County of \_\_\_\_\_  
and State of \_\_\_\_\_ as **Surety**, legally authorized to do business in the State of Delaware  
("State"), are held and firmly unto the **State** in the sum of \_\_\_\_\_  
\_\_\_\_\_ Dollars (\$ \_\_\_\_\_), or \_\_\_\_\_ percent not to exceed \_\_\_\_\_  
\_\_\_\_\_ Dollars (\$ \_\_\_\_\_)

of amount of bid on Contract No. **CHR-23021E-BANDEMO**, to be paid to the **State** for the use and benefit  
of **Christina School District** (*insert State agency name*) for which payment well and truly to be made, we  
do bind ourselves, our and each of our heirs, executors, administrators, and successors, jointly and severally  
for and in the whole firmly by these presents.

NOW THE CONDITION OF THIS OBLIGATION IS SUCH That if the above bonded **Principal**  
who has submitted to the **Christina School District** (*insert State agency name*) a certain proposal to enter  
into this contract for the furnishing of certain material and/or services within the **State**, shall be awarded this  
Contract, and if said **Principal** shall well and truly enter into and execute this Contract as may be required by  
the terms of this Contract and approved by the **Christina School District** (*insert State agency name*) this  
Contract to be entered into within twenty days after the date of official notice of the award thereof in accordance  
with the terms of said proposal, then this obligation shall be void or else to be and remain in full force and  
virtue.

Sealed with \_\_\_\_\_ seal and dated this \_\_\_\_\_ day of \_\_\_\_\_ in the year of our Lord two  
thousand and \_\_\_\_\_ (20\_\_\_\_).

SEALED, AND DELIVERED IN THE  
Presence of

\_\_\_\_\_  
Name of Bidder (Organization)  
Corporate Seal By: \_\_\_\_\_  
Authorized Signature  
Attest \_\_\_\_\_  
Title  
Name of Surety  
Witness: \_\_\_\_\_ By: \_\_\_\_\_  
Title

SECTION 00 43 20 – REQUIREMENTS FOR APPROVAL FOR LISTING AS A SUBCONTRACTOR

1. Refer to the following section 004350 for any subcontractors or material suppliers to be listed on the bid form.
2. The Construction Manager / Owner will use the following criteria to determine qualifications for any Contractor for listing as a Subcontractor in any trade area:
  - a. The Contractor regularly employs and continuously maintains on his payroll skilled craftsmen in the trade. These skilled craftsmen shall be registered in the trade when such registration is required.
  - b. The Contractor owns the tools and equipment normally associated with the trade.
  - c. The Contractor has previously performed work in the trade which is similar in scope, size, complexity and cost to the proposed construction.
  - d. The Contractor must have or must have applied for a Delaware Business License prior to bidding the project.
3. The Construction Manager / Owner may challenge or disqualify any Contractor based on failure to meet any of the above criteria for qualification for listing as Subcontractor in a trade. Bidders may be required to present such evidence as deemed necessary to evaluate qualifications. The decision to disqualify a Contractor in a given trade shall be made by the Christina School District and all decisions shall be final.
4. The subcontractor listing is provided for information only to the construction manager and the owner if the subcontractor category was not requested at the pre-bid meeting or requested by the CM or owner.

END OF SECTION 00 43 20



SECTION 00 43 50 – LIST OF SUBCONTRACTORS OR MATERIAL SUPPLIERS

Where the Bidder intends to perform the work with his own forces, his name is listed as a subcontractor.

**This list will be updated via the pre-bid meeting.  
Check addenda and bid forms for final listing.**

Fill out the required information on the bid form:

<u>BID PACKAGE #</u>	<u>BID PACKAGE DESCRIPTION</u>	<u>SUBCONTRACTOR / SUPPLIER CATEGORY TO BE LISTED ON BID FORM</u>
02C	Bancroft Demolition	Demolition Contactor
02C	Bancroft Demolition	Abatement Contactor

END OF SECTION 00 43 50

SECTION 00 52 00 – STANDARD FORM OF AGREEMENT BETWEEN OWNER AND  
CONTRACTOR, CONSTRUCTION MANAGER AS ADVISER EDITION (AIA  
132 – 2019; 14 PAGES)

A copy of AIA Document A132 - 2019 Edition is bound into this Project Manual following  
this page.

A copy of AIA Document A132 - 2019 Edition Exhibit A is bound into this Project Manual following  
this page.

END OF SECTION 00 52 00

DRAFT

# AIA® Document A132™ - 2019

## Exhibit A

### Insurance and Bonds

NOT FOR BID

This Insurance and Bonds Exhibit is part of the Agreement, between the Owner and the Contractor, dated the « » day of « » in the year « 2024 »  
(In words, indicate day, month, and year.)

for the following PROJECT:  
(Name and location or address)

«-Bancroft School Demolition  
700 North Lombard Street  
Wilmington, DE 19801  
CHR-23021E-BANDEMO2

THE OWNER:  
(Name, legal status, and address)

«-Christina School District  
1899 South College Avenue  
Newark, DE 19702

THE CONTRACTOR:  
(Name, legal status, and address)

« »« »  
« »

#### TABLE OF ARTICLES

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#### ARTICLE A.1 GENERAL

The Owner and Contractor shall purchase and maintain insurance, and provide bonds, as set forth in this Exhibit. As used in this Exhibit, the term General Conditions refers to AIA Document A232™-2019, General Conditions of the Contract for Construction.

#### ARTICLE A.2 OWNER'S INSURANCE

##### § A.2.1 General

Prior to commencement of the Work, the Owner shall secure the insurance, and provide evidence of the coverage, required under this Article A.2 and, upon the Contractor's request, provide a copy of the property insurance policy or policies required by Section A.2.3. The copy of the policy or policies provided shall contain all applicable conditions, definitions, exclusions, and endorsements.

**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.

This document is intended to be used in conjunction with AIA Document A232™-2019, General Conditions of the Contract for Construction. Article 11 of A232™-2019 contains additional insurance provisions



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**§ A.2.2 Liability Insurance**

The Owner shall be responsible for purchasing and maintaining the Owner's usual general liability insurance.

**§ A.2.3 Required Property Insurance**

**§ A.2.3.1** Unless this obligation is placed on the Contractor pursuant to Section A.3.3.2.1, the Owner shall purchase and maintain, from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located, property insurance written on a builder's risk "all-risks" completed value or equivalent policy form and sufficient to cover the total value of the entire Project on a replacement cost basis. The Owner's property insurance coverage shall be no less than the amount of the initial Contract Sum, plus the value of subsequent Modifications and labor performed and materials or equipment supplied by others. The property insurance shall be maintained until Substantial Completion and thereafter as provided in Section A.2.3.1.3, unless otherwise provided in the Contract Documents or otherwise agreed in writing by the parties to this Agreement. This insurance shall include the interests of the Owner, Contractor, Subcontractors, and Sub-subcontractors in the Project as insureds. This insurance shall include the interests of mortgagees as loss payees.

**§ A.2.3.1.1 Causes of Loss.** The insurance required by this Section A.2.3.1 shall provide coverage for direct physical loss or damage, and shall not exclude the risks of fire, explosion, theft, vandalism, malicious mischief, collapse, earthquake, flood, or windstorm. The insurance shall also provide coverage for ensuing loss or resulting damage from error, omission, or deficiency in construction methods, design, specifications, workmanship, or materials. Sub-limits, if any, are as follows:

*(Indicate below the cause of loss and any applicable sub-limit.)*

Causes of Loss	Sub-Limit

**§ A.2.3.1.2 Specific Required Coverages.** The insurance required by this Section A.2.3.1 shall provide coverage for loss or damage to false work and other temporary structures, and to building systems from testing and startup. The insurance shall also cover debris removal, including demolition occasioned by enforcement of any applicable legal requirements, and reasonable compensation for the Architect's, Construction Manager's, and Contractor's services and expenses required as a result of such insured loss, including claim preparation expenses. Sub-limits, if any, are as follows:

*(Indicate below type of coverage and any applicable sub-limit for specific required coverages.)*

Coverage	Sub-Limit

**§ A.2.3.1.3** Unless the parties agree otherwise, upon Substantial Completion, the Owner shall continue the insurance required by Section A.2.3.1 or, if necessary, replace the insurance policy required under Section A.2.3.1 with property insurance written for the total value of the Project that shall remain in effect until expiration of the period for correction of the Work set forth in Section 12.2.2 of the General Conditions.

**§ A.2.3.1.4 Deductibles and Self-Insured Retentions.** If the insurance required by this Section A.2.3 is subject to deductibles or self-insured retentions, the Owner shall be responsible for all loss not covered because of such deductibles or retentions.

**§ A.2.3.2 Occupancy or Use Prior to Substantial Completion.** The Owner's occupancy or use of any completed or partially completed portion of the Work prior to Substantial Completion shall not commence until the insurance company or companies providing the insurance under Section A.2.3.1 have consented in writing to the continuance of coverage. The Owner and the Contractor shall take no action with respect to partial occupancy or use that would cause cancellation, lapse, or reduction of insurance, unless they agree otherwise in writing.

**§ A.2.3.3 Insurance for Existing Structures**

If the Work involves remodeling an existing structure or constructing an addition to an existing structure, the Owner shall purchase and maintain, until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, "all-risks" property insurance, on a replacement cost basis, protecting the existing structure against direct physical loss or damage from the causes of loss identified in Section A.2.3.1, notwithstanding the undertaking of the Work. The Owner shall be responsible for all co-insurance penalties.

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**§ A.2.4 Optional Extended Property Insurance.**

The Owner shall purchase and maintain the insurance selected and described below.

*(Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. For each type of insurance selected, indicate applicable limits of coverage or other conditions in the fill point below the selected item.)*

**§ A.2.4.1 Loss of Use, Business Interruption, and Delay in Completion Insurance**, to reimburse the Owner for loss of use of the Owner's property, or the inability to conduct normal operations due to a covered cause of loss.

**§ A.2.4.2 Ordinance or Law Insurance**, for the reasonable and necessary costs to satisfy the minimum requirements of the enforcement of any law or ordinance regulating the demolition, construction, repair, replacement or use of the Project.

**§ A.2.4.3 Expediting Cost Insurance**, for the reasonable and necessary costs for the temporary repair of damage to insured property, and to expedite the permanent repair or replacement of the damaged property.

**§ A.2.4.4 Extra Expense Insurance**, to provide reimbursement of the reasonable and necessary excess costs incurred during the period of restoration or repair of the damaged property that are over and above the total costs that would normally have been incurred during the same period of time had no loss or damage occurred.

**§ A.2.4.5 Civil Authority Insurance**, for losses or costs arising from an order of a civil authority prohibiting access to the Project, provided such order is the direct result of physical damage covered under the required property insurance.

**§ A.2.4.6 Ingress/Egress Insurance**, for loss due to the necessary interruption of the insured's business due to physical prevention of ingress to, or egress from, the Project as a direct result of physical damage.

**§ A.2.4.7 Soft Costs Insurance**, to reimburse the Owner for costs due to the delay of completion of the Work, arising out of physical loss or damage covered by the required property insurance: including construction loan fees; leasing and marketing expenses; additional fees, including those of architects, engineers, consultants, attorneys and accountants, needed for the completion of the construction, repairs, or reconstruction; and carrying costs such as property taxes, building permits, additional interest on loans, realty taxes, and insurance premiums over and above normal expenses.

**§ A.2.5 Other Optional Insurance.**

The Owner shall purchase and maintain the insurance selected below.

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(Select the types of insurance the Owner is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance.)

§ A.2.5.1 Cyber Security Insurance for loss to the Owner due to data security and privacy breach, including costs of investigating a potential or actual breach of confidential or private information. (Indicate applicable limits of coverage or other conditions in the fill point below.)

§ A.2.5.2 Other Insurance (List below any other insurance coverage to be provided by the Owner and any applicable limits.)

Coverage	Limits

ARTICLE A.3 CONTRACTOR'S INSURANCE AND BONDS

§ A.3.1 General

§ A.3.1.1 Certificates of Insurance. The Contractor shall provide certificates of insurance acceptable to the Owner evidencing compliance with the requirements in this Article A.3 at the following times: (1) prior to commencement of the Work; (2) upon renewal or replacement of each required policy of insurance; and (3) upon the Owner's written request. An additional certificate evidencing continuation of commercial liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment and thereafter upon renewal or replacement of such coverage until the expiration of the periods required by Section A.3.2.1 and Section A.3.3.1. The certificates will show the Owner as an additional insured on the Contractor's Commercial General Liability and excess or umbrella liability policy or policies.

§ A.3.1.2 Deductibles and Self-Insured Retentions. The Contractor shall disclose to the Owner any deductible or self-insured retentions applicable to any insurance required to be provided by the Contractor.

§ A.3.1.3 Additional Insured Obligations. To the fullest extent permitted by law, the Contractor shall cause the commercial general liability coverage to include (1) the Owner, the Architect and the Architect's consultants, and the Construction Manager and the Construction Manager's consultants, as additional insureds for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's operations; and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions for which loss occurs during completed operations. The additional insured coverage shall be primary and non-contributory to any of the Owner's general liability insurance policies and shall apply to both ongoing and completed operations. To the extent commercially available, the additional insured coverage shall be no less than that provided by Insurance Services Office, Inc. (ISO) forms CG 20 10 07 04, CG 20 37 07 04, and, with respect to the Architect and the Architect's consultants, and the Construction Manager and the Construction Manager's consultants, CG 20 32 07 04.

§ A.3.2 Contractor's Required Insurance Coverage

§ A.3.2.1 The Contractor shall purchase and maintain the following types and limits of insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below:

(If the Contractor is required to maintain insurance for a duration other than the expiration of the period for correction of Work, state the duration.)

§ A.3.2.2 Commercial General Liability

§ A.3.2.2.1 Commercial General Liability insurance for the Project written on an occurrence form with policy limits of not less than ~~One Million~~ Dollars » (\$ ~~1,000,000~~ ) each occurrence, ~~Three Million Dollars~~ » (\$ ~~3,000,000~~ ) general aggregate, and ~~Three Million Dollars~~ » (\$ ~~3,000,000~~ ) aggregate for products-completed operations hazard, providing coverage for claims including

- .1 damages because of bodily injury, sickness or disease, including occupational sickness or disease, and death of any person;

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- .2 personal injury and advertising injury;
- .3 damages because of physical damage to or destruction of tangible property, including the loss of use of such property;
- .4 bodily injury or property damage arising out of completed operations; and
- .5 the Contractor's indemnity obligations under Section 3.18 of the General Conditions.

§ A.3.2.2.2 The Contractor's Commercial General Liability policy under this Section A.3.2.2 shall not contain an exclusion or restriction of coverage for the following:

- .1 Claims by one insured against another insured, if the exclusion or restriction is based solely on the fact that the claimant is an insured, and there would otherwise be coverage for the claim.
- .2 Claims for property damage to the Contractor's Work arising out of the products-completed operations hazard where the damaged Work or the Work out of which the damage arises was performed by a Subcontractor.
- .3 Claims for bodily injury other than to employees of the insured.
- .4 Claims for indemnity under Section 3.18 of the General Conditions arising out of injury to employees of the insured.
- .5 Claims or loss excluded under a prior work endorsement or other similar exclusionary language.
- .6 Claims or loss due to physical damage under a prior injury endorsement or similar exclusionary language.
- .7 Claims related to residential, multi-family, or other habitational projects, if the Work is to be performed on such a project.
- .8 Claims related to roofing, if the Work involves roofing.
- .9 Claims related to exterior insulation finish systems (EIFS), synthetic stucco or similar exterior coatings or surfaces, if the Work involves such coatings or surfaces.
- .10 Claims related to earth subsidence or movement, where the Work involves such hazards.
- .11 Claims related to explosion, collapse and underground hazards, where the Work involves such hazards.

§ A.3.2.3 Automobile Liability covering vehicles owned, and non-owned vehicles used, by the Contractor, with policy limits of not less than ~~«One Million Dollars»~~ (\$ ~~«\$1,000,000»~~ ) per accident, for bodily injury, death of any person, and property damage arising out of the ownership, maintenance and use of those motor vehicles along with any other statutorily required automobile coverage.

§ A.3.2.4 The Contractor may achieve the required limits and coverage for Commercial General Liability and Automobile Liability through a combination of primary and excess or umbrella liability insurance, provided such primary and excess or umbrella insurance policies result in the same or greater coverage as the coverages required under Section A.3.2.2 and A.3.2.3, and in no event shall any excess or umbrella liability insurance provide narrower coverage than the primary policy. The excess policy shall not require the exhaustion of the underlying limits only through the actual payment by the underlying insurers.

§ A.3.2.5 Workers' Compensation at statutory limits.

§ A.3.2.6 Employers' Liability with policy limits not less than ~~«Five Hundred Thousand Dollars»~~ (\$ ~~«5,000,000»~~ ) each accident, ~~«Five Hundred Thousand Dollars»~~ (\$ ~~«5,000,000»~~ ) each employee, and ~~«Five Hundred Thousand Dollars»~~ (\$ ~~«5,000,000»~~ ) policy limit.

§ A.3.2.7 Jones Act, and the Longshore & Harbor Workers' Compensation Act, as required, if the Work involves hazards arising from work on or near navigable waterways, including vessels and docks

§ A.3.2.8 If the Contractor is required to furnish professional services as part of the Work, the Contractor shall procure Professional Liability insurance covering performance of the professional services, with policy limits of not less than ~~«One Million Dollars»~~ (\$ ~~«1,000,000»~~ ) per claim and ~~«Three Million Dollars»~~ (\$ ~~«3,000,000»~~ ) in the aggregate.

§ A.3.2.9 If the Work involves the transport, dissemination, use, or release of pollutants, the Contractor shall procure Pollution Liability insurance, with policy limits of not less than ~~«One Million Dollars»~~ (\$ ~~«1,000,000»~~ ) per claim and ~~«Three Million Dollars»~~ (\$ ~~«3,000,000»~~ ) in the aggregate.

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§ A.3.2.10 Coverage under Sections A.3.2.8 and A.3.2.9 may be procured through a Combined Professional Liability and Pollution Liability insurance policy, with combined policy limits of not less than ~~«Two Million Dollars»~~ (\$ ~~«2,000,000»~~) per claim and ~~«Four Million Dollars»~~ (\$ ~~«4,000,000»~~) in the aggregate.

§ A.3.2.11 Insurance for maritime liability risks associated with the operation of a vessel, if the Work requires such activities, with policy limits of not less than ~~«»~~ (\$ ~~«»~~) per claim and ~~«»~~ (\$ ~~«»~~) in the aggregate.

§ A.3.2.12 Insurance for the use or operation of manned or unmanned aircraft, if the Work requires such activities, with policy limits of not less than ~~«»~~ (\$ ~~«»~~) per claim and ~~«»~~ (\$ ~~«»~~) in the aggregate.

§ A.3.3 Contractor's Other Insurance Coverage

§ A.3.3.1 Insurance selected and described in this Section A.3.3 shall be purchased from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Contractor shall maintain the required insurance until the expiration of the period for correction of Work as set forth in Section 12.2.2 of the General Conditions, unless a different duration is stated below:

*(If the Contractor is required to maintain any of the types of insurance selected below for a duration other than the expiration of the period for correction of Work, state the duration.)*

« »

§ A.3.3.2 The Contractor shall purchase and maintain the following types and limits of insurance in accordance with Section A.3.3.1.

*(Select the types of insurance the Contractor is required to purchase and maintain by placing an X in the box(es) next to the description(s) of selected insurance. Where policy limits are provided, include the policy limit in the appropriate fill point.)*

- [  ] § A.3.3.2.1 If there is only one Contractor performing the Work on the Project, property insurance of the same type and scope satisfying the requirements identified in Section A.2.3, which, if selected in this section A.3.3.2.1, relieves the Owner of the responsibility to purchase and maintain such insurance except insurance required by Section A.2.3.1.3 and Section A.2.3.3. The Contractor shall comply with all obligations of the Owner under Section A.2.3 except to the extent provided below. The Contractor shall disclose to the Owner the amount of any deductible, and the Owner shall be responsible for losses within the deductible. Upon request, the Contractor shall provide the Owner with a copy of the property insurance policy or policies required. The Owner shall adjust and settle the loss with the insurer and be the trustee of the proceeds of the property insurance in accordance with Article 11 of the General Conditions unless otherwise set forth below:  
*(Where the Contractor's obligation to provide property insurance differs from the Owner's obligations as described under Section A.2.3, indicate such differences in the space below. Additionally, if a party other than the Owner will be responsible for adjusting and settling a loss with the insurer and acting as the trustee of the proceeds of property insurance in accordance with Article 11 of the General Conditions, indicate the responsible party below.)*

« Property Insurance of the same type and scope satisfying the requirements identified in Section A.2.3. The Contractor shall comply with all obligations of the Owner under A.2.3 except to the extent provided below. Upon request, the Contractor shall provide the Owner with a copy of the property insurance policy or policies required. »

- [  ] ~~§ A.3.3.2.2 Railroad Protective Liability Insurance~~, with policy limits of not less than ~~«»~~ (\$ ~~«»~~) per claim and ~~«»~~ (\$ ~~«»~~) in the aggregate, for Work within fifty (50) feet of railroad property.

- [  ] § A.3.3.2.3 ~~Asbestos Abatement Liability Insurance~~, with policy limits of not less than ~~«One Million Dollars»~~ (\$ ~~«1,000,000»~~) per claim and ~~«Three Million Dollars»~~ (\$ ~~«3,000,000»~~) in the aggregate, for liability arising from the encapsulation, removal, handling, storage, transportation, and disposal of asbestos-containing materials.

- [  ] § A.3.3.2.4 Insurance for physical damage to property while it is in storage and in transit to the construction site on an "all-risks" completed value form.

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« »] § A.3.3.2.5 Property insurance on an “all-risks” completed value form, covering property owned by the Contractor and used on the Project, including scaffolding and other equipment.

[ « »] § A.3.3.2.6 Other Insurance  
(List below any other insurance coverage to be provided by the Contractor and any applicable limits.)

Coverage	Limits

§ A.3.4 Performance Bond and Payment Bond

The Contractor shall provide surety bonds, from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located, as follows:  
(Specify type and penal sum of bonds.)

Type	Penal Sum (\$0.00)
Payment Bond	«See Section 00 61 00»
Performance Bond	See Section 00 60 00

Payment and Performance Bonds shall be AIA Document A312™, Payment Bond and Performance Bond, or contain provisions identical to AIA Document A312™, current as of the date of this Agreement.

ARTICLE A.4 SPECIAL TERMS AND CONDITIONS

Special terms and conditions that modify this Insurance and Bonds Exhibit, if any, are as follows:

« »

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**SECTION 00 54 14**

**SUPPLEMENT TO A132-2019 – EXHIBIT A - INSURANCE AND BONDS**

The following supplements modify the "Standard Form of Agreement Between Owner and Contractor, *Construction Manager as Adviser Edition*" AIA Document A132-2019 Exhibit A Insurance and Bonds. Where a portion of the Standard Form of Agreement, Exhibit A is modified or deleted by the following, the unaltered portions of the Standard Form of Agreement, Exhibit A shall remain in effect.

**ARTICLE A.2 OWNER'S INSURANCE**

A.2.1 General

Delete paragraph A.2.1 in its entirety.

A.2.2 Liability Insurance

Delete paragraph A.2.2 in its entirety, except in the case of school projects this paragraph shall remain.

A.2.3 Required Property Insurance

Delete paragraph A.2.3 in its entirety.

A.2.4 Optional Extended Property Insurance

Delete paragraph A.2.4 in its entirety.

A.2.5 Other Optional Insurance

Delete paragraph A.2.5 in its entirety.

**ARTICLE A.3 CONTRACTORS INSURANCE AND BONDS**

A.3.1.1 Strike the last sentence of the paragraph.

A.3.1.3 Additional Insured Obligations

In the first sentence after "coverage to include (1)" delete "(1) the Owner,".

Strike the remainder of the first sentence beginning at the semicolon "; and (2) the Owner" through the end of the sentence.

Delete the second sentence in its entirety.

A.3.2.2.1 Insert "\$1,000,000.00" in the blank for each occurrence.

Insert "\$3,000,000.00" in the blank for general aggregate.

Insert "\$3,000,000.00" in the blank for aggregate for products-completed operations hazard.

A.3.2.3 Insert "\$1,000,000.00" in the blank for per accident.



A.3.2.6 Insert "\$500,000.00" in the blank for each accident.  
Insert "\$500,000.00" in the blank for each employee.  
Insert "\$500,000.00" in the blank for policy limit.

A.3.2.8 Insert "\$1,000,000.00" in the blank for per claim.  
Insert "\$3,000,000.00" in the blank for in the aggregate.

A.3.2.9 Insert "\$1,000,000.00" in the blank for per claim.  
Insert "\$3,000,000.00" in the blank for in the aggregate.

A.3.2.10 Insert "\$2,000,000.00" in the blank for per claim.  
Insert "\$4,000,000.00" in the blank for in the aggregate.

A.3.2.11 Strike in its entirety.

A.3.2.12 Strike in its entirety.

A.3.3.2.1 Delete paragraph 3.3.2.1 in its entirety

A.3.3.2.2 Strike in its entirety.

A.3.3.2.3 Insert "\$1,000,000.00" in the blanks for per claim.  
Insert "\$3,000,000.00" in the blanks for in the aggregate.

A.3.4 Insert the actual contract price in both the Payment Bond and the Performance Bond Penal Sum blanks. It must be 100% of the contract price.

Strike the last sentence in this section and replace with "Payment and Performance Bonds shall be in the standard form issued by the Delaware Office of Management and Budget."

**END OF SECTION**

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**SECTION 00 54 13**

**SUPPLEMENT TO AGREEMENT BETWEEN OWNER AND CONTRACTOR A132-2019**

The following supplements modify the "Standard Form of Agreement Between Owner and Contractor, Construction Manager as Advisor Edition" AIA Document A132-2019. Where a portion of the Standard Form of Agreement is modified or deleted by the following, the unaltered portions of the Standard Form of Agreement shall remain in effect.

**ARTICLE 3: DATE OF COMMENCEMENT AND DATES OF SUBSTANTIAL COMPLETION**

3.1 Delete paragraph 3.1 in its entirety and replace with the following:

"The date of Commencement of the Work shall be a date set forth in a notice to proceed issued by the Owner."

3.3.1 In the space provided, insert "As defined in Article 9.8 of AIA Document A232-2019 and amended by the Owner's 'Supplementary General Conditions A232-2019'"

**ARTICLE 4: CONTRACT SUM**

4.1 Delete paragraph 4.1 in its entirety and replace with the following:

"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 a Stipulated Sum, in accordance with Section 4.2 below.

4.3 Delete paragraph 4.3 in its entirety.

4.4 Delete paragraph 4.4 in its entirety.

**ARTICLE 5: PAYMENTS**

5.1 PROGRESS PAYMENTS

5.1.3 Delete paragraph 5.1.3 in its entirety and replace with the following:

"Provided that a valid Application for Payment is received by the Architect that meets all requirements of the Contract, payment shall be made by the Owner not later than 30 days after the Owner receives the valid Application for Payment."

5.1.5 Delete paragraph 5.1.5 in its entirety.

5.1.6 Delete paragraph 5.1.6 in its entirety.

5.2.2 Delete paragraph 5.2.2 in its entirety.

5.3 Insert the interest rate of "1% per month not to exceed 12% per annum."

**ARTICLE 6: DISPUTE RESOLUTION**

6.2 BINDING DISPUTE RESOLUTION

Check the box "Other" – and add the following sentence:

"Any remedies available in law or in equity."

**ARTICLE 7: TERMINATION or SUSPENSION**

7.1.1.1 Delete paragraph 7.1.1.1 in its entirety.

7.2 Delete paragraph 7.2 in its entirety.

**ARTICLE 8: MISCELLANEOUS PROVISIONS**

8.4 Delete paragraph 8.4 in its entirety and replace with the following:

"The Contractor's representative shall not be changed without ten days written notice to the Owner."

8.7 Delete paragraph 8.7 in its entirety.

**ARTICLE 9: ENUMERATION OF CONTRACT DOCUMENTS**

9.1.9 Insert "Supplement to Agreement Between Owner and Contractor A132-2019"

9.1.9 Insert "Supplementary General Conditions A232-2019"

END OF SECTION

**SECTION 00 54 14**

**SUPPLEMENT TO A132-2019 – EXHIBIT A - INSURANCE AND BONDS**

The following supplements modify the "Standard Form of Agreement Between Owner and Contractor, *Construction Manager as Adviser Edition*" AIA Document A132-2019 Exhibit A Insurance and Bonds. Where a portion of the Standard Form of Agreement, Exhibit A is modified or deleted by the following, the unaltered portions of the Standard Form of Agreement, Exhibit A shall remain in effect.

**ARTICLE A.2 OWNER'S INSURANCE**

A.2.1 General

Delete paragraph A.2.1 in its entirety.

A.2.2 Liability Insurance

Delete paragraph A.2.2 in its entirety, except in the case of school projects this paragraph shall remain.

A.2.3 Required Property Insurance

Delete paragraph A.2.3 in its entirety.

A.2.4 Optional Extended Property Insurance

Delete paragraph A.2.4 in its entirety.

A.2.5 Other Optional Insurance

Delete paragraph A.2.5 in its entirety.

**ARTICLE A.3 CONTRACTORS INSURANCE AND BONDS**

A.3.1.1 Strike the last sentence of the paragraph.

A.3.1.3 Additional Insured Obligations

In the first sentence after "coverage to include (1)" delete "(1) the Owner,".

Strike the remainder of the first sentence beginning at the semicolon "; and (2) the Owner" through the end of the sentence.

Delete the second sentence in its entirety.

- A.3.2.2.1 Insert "\$1,000,000.00" in the blank for each occurrence.  
Insert "\$3,000,000.00" in the blank for general aggregate.  
Insert "\$3,000,000.00" in the blank for aggregate for products-completed operations hazard.

A.3.2.3 Insert "\$1,000,000.00" in the blank for per accident.

A.3.2.6 Insert "\$500,000.00" in the blank for each accident.  
Insert "\$500,000.00" in the blank for each employee.  
Insert "\$500,000.00" in the blank for policy limit.

A.3.2.8 Insert "\$1,000,000.00" in the blank for per claim.  
Insert "\$3,000,000.00" in the blank for in the aggregate.

A.3.2.9 Insert "\$1,000,000.00" in the blank for per claim.  
Insert "\$3,000,000.00" in the blank for in the aggregate.

A.3.2.10 Insert "\$2,000,000.00" in the blank for per claim.  
Insert "\$4,000,000.00" in the blank for in the aggregate.

A.3.2.11 Strike in its entirety.

A.3.2.12 Strike in its entirety.

A.3.3.2.1 Delete paragraph 3.3.2.1 in its entirety

A.3.3.2.2 Strike in its entirety.

A.3.3.2.3 Insert "\$1,000,000.00" in the blanks for per claim.  
Insert "\$3,000,000.00" in the blanks for in the aggregate.

A.3.4 Insert the actual contract price in both the Payment Bond and the Performance Bond Penal Sum blanks. It must be 100% of the contract price.

Strike the last sentence in this section and replace with "Payment and Performance Bonds shall be in the standard form issued by the Delaware Office of Management and Budget."

**END OF SECTION**

**NOT FOR BID**



**SECTION 00 54 14**

**SUPPLEMENT TO A132-2019 – EXHIBIT A - INSURANCE AND BONDS**

The following supplements modify the "Standard Form of Agreement Between Owner and Contractor, *Construction Manager as Adviser Edition*" AIA Document A132-2019 Exhibit A Insurance and Bonds. Where a portion of the Standard Form of Agreement, Exhibit A is modified or deleted by the following, the unaltered portions of the Standard Form of Agreement, Exhibit A shall remain in effect.

**ARTICLE A.2 OWNER'S INSURANCE**

A.2.1 General

Delete paragraph A.2.1 in its entirety.

A.2.2 Liability Insurance

Delete paragraph A.2.2 in its entirety, except in the case of school projects this paragraph shall remain.

A.2.3 Required Property Insurance

Delete paragraph A.2.3 in its entirety.

A.2.4 Optional Extended Property Insurance

Delete paragraph A.2.4 in its entirety.

A.2.5 Other Optional Insurance

Delete paragraph A.2.5 in its entirety.

**ARTICLE A.3 CONTRACTORS INSURANCE AND BONDS**

A.3.1.1 Strike the last sentence of the paragraph.

A.3.1.3 Additional Insured Obligations

In the first sentence after "coverage to include (1)" delete "(1) the Owner,".

Strike the remainder of the first sentence beginning at the semicolon "; and (2) the Owner" through the end of the sentence.

Delete the second sentence in its entirety.

A.3.2.2.1 Insert "\$1,000,000.00" in the blank for each occurrence.

Insert "\$3,000,000.00" in the blank for general aggregate.

Insert "\$3,000,000.00" in the blank for aggregate for products-completed operations hazard.

A.3.2.3 Insert "\$1,000,000.00" in the blank for per accident.

A.3.2.6 Insert "\$500,000.00" in the blank for each accident.  
Insert "\$500,000.00" in the blank for each employee.  
Insert "\$500,000.00" in the blank for policy limit.

A.3.2.8 Insert "\$1,000,000.00" in the blank for per claim.  
Insert "\$3,000,000.00" in the blank for in the aggregate.

A.3.2.9 Insert "\$1,000,000.00" in the blank for per claim.  
Insert "\$3,000,000.00" in the blank for in the aggregate.

A.3.2.10 Insert "\$2,000,000.00" in the blank for per claim.  
Insert "\$4,000,000.00" in the blank for in the aggregate.

A.3.2.11 Strike in its entirety.

A.3.2.12 Strike in its entirety.

A.3.3.2.1 Delete paragraph 3.3.2.1 in its entirety

A.3.3.2.2 Strike in its entirety.

A.3.3.2.3 Insert "\$1,000,000.00" in the blanks for per claim.  
Insert "\$3,000,000.00" in the blanks for in the aggregate.

A.3.4 Insert the actual contract price in both the Payment Bond and the Performance Bond Penal Sum blanks. It must be 100% of the contract price.

Strike the last sentence in this section and replace with "Payment and Performance Bonds shall be in the standard form issued by the Delaware Office of Management and Budget."

**END OF SECTION**

**NOT FOR BID**

SECTION 00 60 00 – PERFORMANCE BOND

PERFORMANCE BOND

Bond Number: \_\_\_\_\_

KNOW ALL PERSONS BY THESE PRESENTS, that we, \_\_\_\_\_, as principal (“Principal”), and \_\_\_\_\_, a \_\_\_\_\_ corporation, legally authorized to do business in the State of Delaware, as surety (“Surety”), are held and firmly bound unto the Christina School District (“Owner”) (*insert State agency name*), in the amount of \_\_\_\_\_ (\$ \_\_\_\_\_), to be paid to **Owner**, for which payment well and truly to be made, we do bind ourselves, our and each and every of our heirs, executors, administrations, successors and assigns, jointly and severally, for and in the whole, firmly by these presents.

Sealed with our seals and dated this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

NOW THE CONDITION OF THIS OBLIGATION IS SUCH, that if **Principal**, who has been awarded by **Owner** that certain contract known as Contract No. **CHR-23021E-BANDEMO** dated the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_ (the “Contract”), which Contract is incorporated herein by reference, shall well and truly provide and furnish all materials, appliances and tools and perform all the work required under and pursuant to the terms and conditions of the Contract and the Contract Documents (as defined in the Contract) or any changes or modifications thereto made as therein provided, shall make good and reimburse **Owner** sufficient funds to pay the costs of completing the Contract that **Owner** may sustain by reason of any failure or default on the part of **Principal**, and shall also indemnify and save harmless **Owner** from all costs, damages and expenses arising out of or by reason of the performance of the Contract and for as long as provided by the Contract; then this obligation shall be void, otherwise to be and remain in full force and effect.

**Surety**, for value received, hereby stipulates and agrees, if requested to do so by **Owner**, to fully perform and complete the work to be performed under the Contract pursuant to the terms, conditions and covenants thereof, if for any cause **Principal** fails or neglects to so fully perform and complete such work.

**Surety**, for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of **Surety** and its bond shall be in no way impaired or affected by any extension of time, modification, omission, addition or change in or to the Contract or the work to be performed thereunder, or by any payment thereunder before the time required therein, or by any waiver of any provisions thereof, or by any assignment, subletting or other transfer thereof or of any work to be performed or any monies due or to become due thereunder; and **Surety** hereby waives notice of any and all such extensions, modifications, omissions, additions, changes, payments, waivers, assignments, subcontracts and transfers and hereby expressly stipulates and agrees that any and all things done and omitted to be done by and in relation to assignees, subcontractors, and other transferees shall have the same effect as to **Surety** as though done or omitted to be done by or in relation to **Principal**.

**Surety** hereby stipulates and agrees that no modifications, omissions or additions in or to the terms of the Contract shall in any way whatsoever affect the obligation of **Surety** and its bond.

NOT FOR BID

NOT FOR BID

Any proceeding, legal or equitable, under this Bond may be brought in any court of competent jurisdiction in the State of Delaware. Notices to **Surety** or Contractor may be mailed or delivered to them at their respective addresses shown below.

IN WITNESS WHEREOF, **Principal** and **Surety** have hereunto set their hand and seals, and such of them as are corporations have caused their corporate seal to be hereto affixed and these presents to be signed by their duly authorized officers, the day and year first above written.

PRINCIPAL

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

Witness or Attest: Address: \_\_\_\_\_

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

(Corporate Seal)

By: \_\_\_\_\_(SEAL)  
Name:  
Title:

SURETY

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

Witness or Attest: Address: \_\_\_\_\_

\_\_\_\_\_  
(SEAL)  
Name:

(Corporate Seal)

By: \_\_\_\_\_  
Name:  
Title:

END OF SECTION 00 60 00

NOT FOR BID

SECTION 00 61 00 – PAYMENT BOND

PAYMENT BOND

Bond Number: \_\_\_\_\_

KNOW ALL PERSONS BY THESE PRESENTS, that we, \_\_\_\_\_, as principal (“**Principal**”), and \_\_\_\_\_, a \_\_\_\_\_ corporation, legally authorized to do business in the State of Delaware, as surety (“**Surety**”), are held and firmly bound unto the Christina School District (“**Owner**”) (*insert State agency name*), in the amount of \_\_\_\_\_ (\$ \_\_\_\_\_), to be paid to **Owner**, for which payment well and truly to be made, we do bind ourselves, our and each and every of our heirs, executors, administrations, successors and assigns, jointly and severally, for and in the whole firmly by these presents.

Sealed with our seals and dated this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

NOW THE CONDITION OF THIS OBLIGATION IS SUCH, that if **Principal**, who has been awarded by **Owner** that certain contract known as Contract No. **CHR-23021E-BANDEMO** dated the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_ (the “Contract”), which Contract is incorporated herein by reference, shall well and truly pay all and every person furnishing materials or performing labor or service in and about the performance of the work under the Contract, all and every sums of money due him, her, them or any of them, for all such materials, labor and service for which **Principal** is liable, shall make good and reimburse **Owner** sufficient funds to pay such costs in the completion of the Contract as **Owner** may sustain by reason of any failure or default on the part of **Principal**, and shall also indemnify and save harmless **Owner** from all costs, damages and expenses arising out of or by reason of the performance of the Contract and for as long as provided by the Contract; then this obligation shall be void, otherwise to be and remain in full force and effect.

**Surety**, for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of **Surety** and its bond shall be in no way impaired or affected by any extension of time, modification, omission, addition or change in or to the Contract or the work to be performed thereunder, or by any payment thereunder before the time required therein, or by any waiver of any provisions thereof, or by any assignment, subletting or other transfer thereof or of any work to be performed or any monies due or to become due thereunder; and **Surety** hereby waives notice of any and all such extensions, modifications, omissions, additions, changes, payments, waivers, assignments, subcontracts and transfers and hereby expressly stipulates and agrees that any and all things done and omitted to be done by and in relation to assignees, subcontractors, and other transferees shall have the same effect as to **Surety** as though done or omitted to be done by or in relation to **Principal**.

**Surety** hereby stipulates and agrees that no modifications, omission or additions in or to the terms of the Contract shall in any way whatsoever affect the obligation of **Surety** and its bond.

Any proceeding, legal or equitable, under this Bond may be brought in any court of competent jurisdiction in the State of Delaware. Notices to **Surety** or Contractor may be mailed or delivered to them at their respective addresses shown below.



IN WITNESS WHEREOF, **Principal** and **Surety** have hereunto set their hand and seals, and such of them as are corporations have caused their corporate seal to be hereto affixed and these presents to be signed by their duly authorized officers, the day and year first above written.

PRINCIPAL

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

Witness or Attest: Address: \_\_\_\_\_

\_\_\_\_\_  
Name: (Corporate Seal) By: \_\_\_\_\_ (SEAL)  
Name: Title:

SURETY

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

Witness or Attest: Address: \_\_\_\_\_

\_\_\_\_\_  
Name: (Corporate Seal) By: \_\_\_\_\_ (SEAL)  
Name: Title:

END OF SECTION 00 61 00

SECTION 00 62 00 – APPLICATION & CERTIFICATE FOR PAYMENT (AIA G732 – 2009; 1 PAGE)

A copy of AIA Document G732 - 2009 Edition is bound into this Project Manual following this page.

END OF SECTION 00 62 00

# AIA® Document G732" 2009

## Application and Certificate for Payment, Construction Manager as Adviser Edition

**TO OWNER:** Christina School District  
1899 South College Avenue  
Newark DE 19702

**PROJECT:** Bancroft Demolition

**APPLICATION NO:** 001

**DISTRIBUTION TO:**  
OWNER   
CONSTRUCTION MANAGER   
ARCHITECT   
CONTRACTOR   
FIELD

**FROM CONTRACTOR:**

**VIA CONSTRUCTION MANAGER:** The Whiting-Turner Contracting Co.

**CONTRACT DATE:**

**PROJECT NOS:** / /

**VIA ARCHITECT:** BSA+A/ABHA

**CONTRACT FOR:** 102C Building Demolition

### CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract. AIA Document G703" , Continuation Sheet, is attached.

<b>1. ORIGINAL CONTRACT SUM</b>	\$0.00
<b>2. NET CHANGES IN THE WORK</b>	\$0.00
<b>3. CONTRACT SUM TO DATE</b> (Line 1 ± 2)	\$0.00
<b>4. TOTAL COMPLETED AND STORED TO DATE</b> (Column G on G703) & 8	\$0.00
<b>5. RETAINAGE:</b>	
<b>a.</b> 0 % of Completed Work (Column D + E on G703: \$0.00 ≠ \$0.00	
<b>b.</b> 0 % of Stored Material (Column F on G703: \$0.00 ≠ \$0.00	
Total Retainage (Lines 5a + 5b, or Total in Column I on G703)	\$0.00
<b>6. TOTAL EARNED LESS RETAINAGE:</b> (Line 4 minus Line 5 Total)	\$0.00
<b>7. LESS PREVIOUS CERTIFICATES FOR PAYMENT:</b> (Line 6 from prior Certificate)	\$0.00
<b>8. CURRENT PAYMENT DUE:</b>	\$0.00
<b>9. BALANCE TO FINISH, INCLUDING RETAINAGE</b> (Line 3 minus Line 6)	\$0.00

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

**CONTRACTOR:**  
By: \_\_\_\_\_ Date: \_\_\_\_\_  
State of: \_\_\_\_\_  
County of: \_\_\_\_\_  
Subscribed and sworn to before  
me this \_\_\_\_\_ day of \_\_\_\_\_  
Notary Public: \_\_\_\_\_  
My Commission expires: \_\_\_\_\_

### CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on evaluations of the Work and the data comprising this application, the Construction Manager and Architect certify to the Owner that to the best of their knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED.

**AMOUNT CERTIFIED** \$0.00  
(Attach explanation if amount certified differs from the amount applied. Initial all figures on this Application and on the Continuation Sheet that are changed to conform with the amount

**CONSTRUCTION MANAGER:**  
By: \_\_\_\_\_ Date: \_\_\_\_\_

**ARCHITECT:** (NOTE: If Multiple Prime Contractors are responsible for performing portions of the Project, the Architect's Certification is not required.)  
By: \_\_\_\_\_ Date: \_\_\_\_\_

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of the Owner or Contractor under this Contract.

SUMMARY OF CHANGES IN THE WORK	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner	\$0.00	\$0.00
Total approved this month including Construction Change Directives	\$0.00	\$0.00
<b>TOTALS</b>	<b>\$0.00</b>	<b>\$0.00</b>
<b>NET CHANGES IN THE WORK</b>		<b>\$0.00</b>

SECTION 006250 – CONTINUATION SHEET FOR G702 (AIA G732 – 2009; 1 PAGE)

A draft copy of AIA Document G703 is bound into this Project Manual following this page.

END OF SECTION 006250

**NOT FOR BID**

**NOT FOR BID**





SECTION 00 70 00 – GENERAL CONDITIONS TO THE CONTRACT FOR CONSTRUCTION  
(AIA 232 – 2019)

END OF SECTION 00 70 00

**NOT FOR BID**

**NOT FOR BID**

DRAFT

# AIA® Document A232™ - 2019

## General Conditions of the Contract for Construction, Construction Manager as Adviser Edition

**NOT FOR BID**

**for the following PROJECT:**  
(Name, and location or address)

«Christina School District  
Bancroft Demolition  
700 E. 7th St, Wilmington, DE 19801  
Wilmington, DE 19801  
CHR-23021E-BANDEMO»  
«»

**THE CONSTRUCTION MANAGER:**  
(Name, legal status, and address)

«The Whiting-Turner Contracting Company  
131 Continental Drive – Suite 404  
Newark, DE 19713»«»  
«»

**THE OWNER:**  
(Name, legal status, and address)

«Christina School District  
1899 South College Avenue  
Newark, DE 19702»«»  
«»

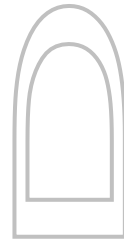
**THE ARCHITECT:**  
(Name, legal status, and address)

«Buck Simperts Architect and Associates, Inc.  
954 Justison St.  
Wilmington, DE 19801»«»  
«»

**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.

This document is intended to be used in conjunction with AIA Documents A132™-2019, Standard Form of Agreement Between Owner and Contractor, Construction Manager as Adviser Edition; B132™-2019, Standard Form of Agreement Between Owner and Architect, Construction Manager as Adviser Edition; and C132™-2019, Standard Form of Agreement Between Owner and Construction Manager as Adviser.



**NOT FOR BID**

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**NOT FOR BID**

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**NOT FOR BID**

## ARTICLE 1 GENERAL PROVISIONS

### § 1.1 Basic Definitions

**§ 1.1.1 The Contract Documents.** The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of addenda relating to bidding or proposal requirements.

**§ 1.1.2 The Contract.** The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and the Construction Manager or the Construction Manager's consultants, (3) between the Owner and the Architect or the Architect's consultants, (4) between the Contractor and the Construction Manager or the Construction Manager's consultants, (5) between the Owner and a Subcontractor or Sub-subcontractor (6) between the Construction Manager and the Architect, or (7) between any persons or entities other than the Owner and Contractor. The Construction Manager and Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of their duties.

**§ 1.1.3 The Work.** The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

**§ 1.1.4 The Project.** The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by other Contractors, and by the Owner's own forces and Separate Contractors.

**§ 1.1.5 Contractors.** Contractors are persons or entities, other than the Contractor or Separate Contractors, who perform Work under contracts with the Owner that are administered by the Architect and Construction Manager.

**§ 1.1.6 Separate Contractors.** Separate Contractors are persons or entities who perform construction under separate contracts with the Owner not administered by the Architect and Construction Manager.

**§ 1.1.7 The Drawings.** The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

**§ 1.1.8 The Specifications.** The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

**§ 1.1.9 Instruments of Service.** Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

**§ 1.1.10 Initial Decision Maker.** The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

## § 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

## § 1.3 Capitalization

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles, or (3) the titles of other documents published by the American Institute of Architects.

## § 1.4 Interpretation

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

## § 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service

§ 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

## § 1.6 Notice

§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

§ 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

## § 1.7 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™-2013, Building

Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

#### **§ 1.8 Building Information Models Use and Reliance**

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document G202™–2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

### **ARTICLE 2 OWNER**

#### **§ 2.1 General**

**§ 2.1.1** The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Construction Manager and the Architect do not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

**§ 2.1.2** The Owner shall furnish to the Contractor, within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of, or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

#### **§ 2.2 Evidence of the Owner's Financial Arrangements**

**§ 2.2.1** Prior to commencement of the Work, and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 2.2.1, the Contract Time shall be extended appropriately.

**§ 2.2.2** Following commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due; or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fourteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because a change in the Work materially changes the Contract Sum under (3) above, the Contractor may immediately stop only that portion of the Work affected by the change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided in the Contract Documents.

**§ 2.2.3** After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

**§ 2.2.4** Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.



**§ 2.3 Information and Services Required of the Owner**

**§ 2.3.1** Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities. Unless otherwise provided under the Contract Documents, the Owner, assisted by the Construction Manager, shall secure and pay for the building permit.

**§ 2.3.2** The Owner shall retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture, in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

**§ 2.3.3** The Owner shall retain a construction manager adviser lawfully practicing construction management in the jurisdiction where the Project is located. That person or entity is identified as the Construction Manager in the Agreement and is referred to throughout the Contract Documents as if singular in number.

**§ 2.3.4** If the employment of the Construction Manager or Architect terminates, the Owner shall employ a successor construction manager or architect to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Construction Manager or Architect, respectively.

**§ 2.3.5** The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

**§ 2.3.6** The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

**§ 2.3.7** Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

**§ 2.3.8** The Owner shall forward all communications to the Contractor through the Construction Manager. Other communication shall be made as set forth in Section 4.2.6.

**§ 2.4 Owner's Right to Stop the Work**

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

**§ 2.5 Owner's Right to Carry Out the Work**

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to review by the Construction Manager and prior approval of the Architect, and the Construction Manager or Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Construction Manager's and Architect's and their respective consultants' additional services made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.

## ARTICLE 3 CONTRACTOR

### § 3.1 General

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Construction Manager or Architect in their administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

### § 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.5, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Construction Manager and Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information submitted to the Construction Manager in such form as the Construction Manager and Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Construction Manager and Architect any nonconformity discovered by or made known to the Contractor as a request for information submitted to Construction Manager in such form as the Construction Manager and Architect may require.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner, subject to section 15.1.7, as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

### § 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely notice to the Owner, the Construction Manager, and the Architect, and shall propose alternative means, methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent

for the completed construction. The Construction Manager shall review the proposed alternative for sequencing, constructability, and coordination impacts on the other Contractors. Unless the Architect or the Construction Manager objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative means, methods, techniques, sequences, or procedures.

**§ 3.3.2** The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

**§ 3.3.3** The Contractor shall be responsible for inspection of portions of the Project already performed to determine that such portions are in proper condition to receive subsequent Work.

### **§ 3.4 Labor and Materials**

**§ 3.4.1** Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

**§ 3.4.2** Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect, in consultation with the Construction Manager, and in accordance with a Change Order or Construction Change Directive.

**§ 3.4.3** The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

### **§ 3.5 Warranty**

**§ 3.5.1** The Contractor warrants to the Owner, Construction Manager, and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Construction Manager or Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

**§ 3.5.2** All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

### **§ 3.6 Taxes**

The Contractor shall pay sales, consumer, use and similar taxes for the Work or portions thereof provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

### **§ 3.7 Permits, Fees, Notices, and Compliance with Laws**

**§ 3.7.1** Unless otherwise provided in the Contract Documents, the Owner, assisted by the Construction Manager, shall secure and pay for the building permit. The Contractor shall secure and pay for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

**§ 3.7.2** The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 **Concealed or Unknown Conditions.** If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner, Construction Manager, and the Architect before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The Architect and Construction Manager will promptly investigate such conditions and, if the Architect, in consultation with the Construction Manager, determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect, in consultation with the Construction Manager, determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner, Construction Manager, and Contractor, stating the reasons. If the Owner or Contractor disputes the Architect's determination or recommendation, either party may submit a Claim as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner, Construction Manager, and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

### § 3.8 Allowances

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents:

- .1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- .3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

### § 3.9 Superintendent

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect, through the Construction Manager, of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Construction Manager may notify the Contractor, stating whether the Owner, the Construction Manager, or the Architect (1) has reasonable objection to the proposed superintendent or (2) require

additional time for review. Failure of the Construction Manager to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner, Construction Manager, or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

### § 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information, and the Construction Manager's use in developing the Project schedule, a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project. The Contractor shall cooperate with the Construction Manager in scheduling and performing the Contractor's Work to avoid conflict with, and as to cause no delay in, the work or activities of other Contractors, or the construction or operations of the Owner's own forces or Separate Contractors.

§ 3.10.2 The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the Construction Manager's and Architect's approval. The Architect and Construction Manager's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Construction Manager and Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, or fails to provide submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall participate with other Contractors, the Construction Manager, and the Owner in reviewing and coordinating all schedules for incorporation into the Project schedule that is prepared by the Construction Manager. The Contractor shall make revisions to the construction schedule and submittal schedule as deemed necessary by the Construction Manager to conform to the Project schedule.

§ 3.10.4 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner, Construction Manager, and Architect, and incorporated into the approved Project schedule.

### § 3.11 Documents and Samples at the Site

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the Construction Manager, Architect, and Owner, and delivered to the Construction Manager for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

### § 3.12 Shop Drawings, Product Data, and Samples

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment, or workmanship, and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed



in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect and Construction Manager is subject to the limitations of Sections 4.2.10 through 4.2.12. Informational submittals upon which the Construction Manager and Architect are not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Construction Manager or Architect without action.

**§ 3.12.5** The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Construction Manager, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the Project submittal schedule approved by the Construction Manager and Architect or, in the absence of an approved Project submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of other Contractors, Separate Contractors, or the Owner's own forces. The Contractor shall cooperate with the Construction Manager in the coordination of the Contractor's Shop Drawings, Product Data, Samples, and similar submittals with related documents submitted by other Contractors.

**§ 3.12.6** By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner, Construction Manager, and Architect, that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

**§ 3.12.7** The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been reviewed and approved by the Architect.

**§ 3.12.8** The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Construction Manager and Architect of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the Architect's approval thereof.

**§ 3.12.9** The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the Construction Manager and Architect on previous submittals. In the absence of such notice, the Architect's approval of a resubmission shall not apply to such revisions.

**§ 3.12.10** The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

**§ 3.12.10.1** If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner, the Architect, and the Construction Manager shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with



information given and the design concept expressed in the Contract Documents. The Construction Manager shall review submittals for sequencing, constructability, and coordination impacts on other Contractors.

**§ 12.10.2** If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Construction Manager and Architect at the time and in the form specified by the Architect.

### **§ 3.13 Use of Site**

**§ 3.13.1** The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

**§ 3.13.2** The Contractor shall coordinate the Contractor's operations with, and secure the approval of, the Construction Manager before using any portion of the site.

### **§ 3.14 Cutting and Patching**

**§ 3.14.1** The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents.

**§ 3.14.2** The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner, Separate Contractors, or of other Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner, Separate Contractors, or by other Contractors except with written consent of the Construction Manager, Owner, and such other Contractors or Separate Contractors. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Separate Contractors, other Contractors, or the Owner, its consent to cutting or otherwise altering the Work.

### **§ 3.15 Cleaning Up**

**§ 3.15.1** The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials from and about the Project.

**§ 3.15.2** If the Contractor fails to clean up as provided in the Contract Documents, the Owner, or Construction Manager with the Owner's approval, may do so and the Owner shall be entitled to reimbursement from the Contractor.

### **§ 3.16 Access to Work**

The Contractor shall provide the Owner, Construction Manager, and Architect with access to the Work in preparation and progress wherever located.

### **§ 3.17 Royalties, Patents and Copyrights**

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner, Construction Manager, and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications, or other documents prepared by the Owner, Architect, or Construction Manager. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect through the Construction Manager.

### **§ 3.18 Indemnification**

**§ 3.18.1** To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Construction Manager, Architect, Construction Manager's and Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is

attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

**§ 3.18.2** In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

## **ARTICLE 4 ARCHITECT AND CONSTRUCTION MANAGER**

### **§ 4.1 General**

**§ 4.1.1** The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

**§ 4.1.2** The Construction Manager is the person or entity retained by the Owner pursuant to Section 2.3.3 and identified as such in the Agreement.

**§ 4.1.3** Duties, responsibilities, and limitations of authority of the Construction Manager and Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Construction Manager, Architect, and Contractor. Consent shall not be unreasonably withheld.

### **§ 4.2 Administration of the Contract**

**§ 4.2.1** The Construction Manager and Architect will provide administration of the Contract as described in the Contract Documents and will be the Owner's representatives during construction until the date the Architect issues the final Certificate for Payment. The Construction Manager and Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

**§ 4.2.2** The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. On the basis of the site visits, the Architect will keep the Owner and the Construction Manager reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner and Construction Manager known deviations from the Contract Documents and defects and deficiencies observed in the Work.

**§ 4.2.3** The Construction Manager shall provide one or more representatives who shall be in attendance at the Project site whenever the Work is being performed. The Construction Manager will determine in general if the Work observed is being performed in accordance with the Contract Documents, will keep the Owner and Architect reasonably informed of the progress of the Work, and will promptly report to the Owner and Architect known deviations from the Contract Documents and the most recent Project schedule, and defects and deficiencies observed in the Work.

**§ 4.2.4** The Construction Manager will schedule and coordinate the activities of the Contractor and other Contractors in accordance with the latest approved Project schedule.

**§ 4.2.5** The Construction Manager, except to the extent required by Section 4.2.4, and Architect will not have control over, charge of, or responsibility for, the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents, and neither will be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. Neither the Construction Manager nor the Architect will have control over or charge of, or be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or of any other persons or entities performing portions of the Work.

**§ 4.2.6 Communications.** The Owner shall communicate with the Contractor and the Construction Manager's consultants through the Construction Manager about matters arising out of or relating to the Contract Documents. The Owner and Construction Manager shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Construction Manager otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with other Contractors shall be through the Construction Manager. Communications by and with the Owner's own forces and Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

**§ 4.2.7** The Construction Manager and Architect will review and certify all Applications for Payment by the Contractor, in accordance with the provisions of Article 9.

**§ 4.2.8** The Architect and Construction Manager have authority to reject Work that does not conform to the Contract Documents, and will notify each other about the rejection. Whenever the Construction Manager considers it necessary or advisable, the Construction Manager will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, upon written authorization of the Owner, whether or not the Work is fabricated, installed or completed. The foregoing authority of the Construction Manager will be subject to the provisions of Sections 4.2.18 through 4.2.20 inclusive, with respect to interpretations and decisions of the Architect. However, neither the Architect's nor the Construction Manager's authority to act under this Section 4.2.8 nor a decision made by either of them in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect or the Construction Manager to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons performing any of the Work.

**§ 4.2.9** Utilizing the submittal schedule provided by the Contractor, the Construction Manager shall prepare, and revise as necessary, a Project submittal schedule incorporating information from other Contractors, the Owner, Owner's consultants, Owner's Separate Contractors and vendors, governmental agencies, and participants in the Project under the management of the Construction Manager. The Project submittal schedule and any revisions shall be submitted to the Architect for approval.

**§ 4.2.10** The Construction Manager will receive and promptly review for conformance with the submittal requirements of the Contract Documents, all submittals from the Contractor such as Shop Drawings, Product Data, and Samples. Where there are other Contractors, the Construction Manager will also check and coordinate the information contained within each submittal received from the Contractor and other Contractors, and transmit to the Architect those recommended for approval. By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Construction Manager represents to the Owner and Architect that the Construction Manager has reviewed and recommended them for approval. The Construction Manager's actions will be taken in accordance with the Project submittal schedule approved by the Architect or, in the absence of an approved Project submittal schedule, with reasonable promptness while allowing sufficient time to permit adequate review by the Architect.

**§ 4.2.11** The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Upon the Architect's completed review, the Architect shall transmit its submittal review to the Construction Manager.

**§ 4.2.12** Review of the Contractor's submittals by the Construction Manager and Architect is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Construction Manager and Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The Construction Manager and Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.13 The Construction Manager will prepare Change Orders and Construction Change Directives.

§ 4.2.14 The Construction Manager and the Architect will take appropriate action on Change Orders or Construction Change Directives in accordance with Article 7, and the Architect will have authority to order minor changes in the Work as provided in Section 7.4. The Architect, in consultation with the Construction Manager, will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.15 Utilizing the documents provided by the Contractor, the Construction Manager will maintain at the site for the Owner one copy of all Contract Documents, approved Shop Drawings, Product Data, Samples, and similar required submittals, in good order and marked currently to record all changes and selections made during construction. These will be available to the Architect and the Contractor, and will be delivered to the Owner upon completion of the Project.

§ 4.2.16 The Construction Manager will assist the Architect in conducting inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion in conjunction with the Architect pursuant to Section 9.8; and receive and forward to the Owner written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10. The Construction Manager will forward to the Architect a final Application and Certificate for Payment or final Project Application and Project Certificate for Payment upon the Contractor's compliance with the requirements of the Contract Documents.

§ 4.2.17 If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. The Owner shall notify the Construction Manager of any change in the duties, responsibilities and limitations of authority of the Project representatives.

§ 4.2.18 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of the Construction Manager, Owner, or Contractor through the Construction Manager. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.19 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either, and will not be liable for results of interpretations or decisions so rendered in good faith.

§ 4.2.20 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.21 The Construction Manager will receive and review requests for information from the Contractor, and forward each request for information to the Architect, with the Construction Manager's recommendation. The Architect will review and respond in writing, through the Construction Manager, to requests for information about the Contract Documents. The Construction Manager's recommendation and the Architect's response to each request will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

## ARTICLE 5 SUBCONTRACTORS

### § 5.1 Definitions

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include other Contractors or Separate Contractors or the subcontractors of other Contractors or Separate Contractors.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract

Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

## **§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work**

**§ 5.2.1** Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Construction Manager, for review by the Owner, Construction Manager and Architect, of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Construction Manager may notify the Contractor whether the Owner, the Construction Manager or the Architect (1) has reasonable objection to any such proposed person or entity or, (2) requires additional time for review. Failure of the Construction Manager to provide notice within the 14-day period shall constitute notice of no reasonable objection.

**§ 5.2.2** The Contractor shall not contract with a proposed person or entity to whom the Owner, Construction Manager or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

**§ 5.2.3** If the Owner, Construction Manager or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner, Construction Manager or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

**§ 5.2.4** The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner, Construction Manager or Architect makes reasonable objection to such substitution.

## **§ 5.3 Subcontractual Relations**

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work, that the Contractor, by these Contract Documents, assumes toward the Owner, Construction Manager and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner, Construction Manager and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

## **§ 5.4 Contingent Assignment of Subcontracts**

**§ 5.4.1** Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.



§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor Contractor or other entity. If the Owner assigns the subcontract to a successor Contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor Contractor's obligations under the subcontract.

## ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

### § 6.1 Owner's Right to Perform Construction with Own Forces and to Award Other Contracts

§ 6.1.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

§ 6.1.2 When the Owner performs construction or operations with the Owner's own forces or Separate Contractors, the Owner shall provide for coordination of such forces and Separate Contractors with the Work of the Contractor, who shall cooperate with them.

§ 6.1.3 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10, 11, and 12.

### § 6.2 Mutual Responsibility

§ 6.2.1 The Contractor shall afford the Owner's own forces, Separate Contractors, Construction Manager and other Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner's own forces, Separate Contractors or other Contractors, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the Construction Manager and Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor or other Contractors that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Construction Manager and the Architect of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's or other Contractors' completed or partially completed construction is fit and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractors or other Contractors that are not apparent.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs, including costs that are payable to a Separate Contractors or to other Contractors, because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of delays, improperly timed activities, damage to the Work or defective construction by the Owner's own forces, Separate Contractors, or other Contractors.

§ 6.2.4 The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction, or to property of the Owner, Separate Contractors, or other Contractors as provided in Section 10.2.5.

§ 6.2.5 The Owner, Separate Contractors, and other Contractors shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

### § 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, Separate Contractors, other Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste



materials and rubbish, the Owner may clean up and the Construction Manager, with notice to the Architect, will allocate the cost among those responsible.

## **ARTICLE 7 CHANGES IN THE WORK**

### **§ 7.1 General**

**§ 7.1.1** Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

**§ 7.1.2** A Change Order shall be based upon agreement among the Owner, Construction Manager, Architect and Contractor. A Construction Change Directive requires agreement by the Owner, Construction Manager and Architect and may or may not be agreed to by the Contractor. An order for a minor change in the Work may be issued by the Architect alone.

**§ 7.1.3** Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.

### **§ 7.2 Change Orders**

A Change Order is a written instrument prepared by the Construction Manager and signed by the Owner, Construction Manager, Architect, and Contractor, stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

### **§ 7.3 Construction Change Directives**

**§ 7.3.1** A Construction Change Directive is a written order prepared by the Construction Manager and signed by the Owner, Construction Manager and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

**§ 7.3.2** A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

**§ 7.3.3** If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.4.

**§ 7.3.4** If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Construction Manager shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Construction Manager may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:

- .1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Construction Manager and Architect;
- .2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;

**NOT FOR BID**

- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and
- .5 Costs of supervision and field office personnel directly attributable to the change.

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

§ 7.3.6 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Construction Manager of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.7 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Construction Manager and Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Construction Manager and Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Construction Manager and Architect determine to be reasonably justified. The interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Construction Manager and Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Construction Manager shall prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

**§ 7.4 Minor Changes in the Work**

The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Construction Manager and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Construction Manager that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

**ARTICLE 8 TIME**

**§ 8.1 Definitions**

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

**§ 8.2 Progress and Completion**

**§ 8.2.1** Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

**§ 8.2.2** The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner.

**§ 8.2.3** The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

**§ 8.3 Delays and Extensions of Time**

**§ 8.3.1** If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner, Architect, Construction Manager, or an employee of any of them, or of the Owner's own forces, Separate Contractors, or other Contractors; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts and the Architect, based on the recommendation of the Construction Manager, determines justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.

**§ 8.3.2** Claims relating to time shall be made in accordance with applicable provisions of Article 15.

**§ 8.3.3** This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

**ARTICLE 9 PAYMENTS AND COMPLETION**

**§ 9.1 Contract Sum**

**§ 9.1.1** The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

**§ 9.1.2** If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

**§ 9.2 Schedule of Values**

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the Construction Manager, before the first Application for Payment, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Construction Manager and the Architect. This schedule, unless objected to by the Construction Manager or Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. The Construction Manager shall forward to the Architect the Contractor's schedule of values. Any changes to the schedule of values shall be submitted to the Construction Manager and supported by such data to substantiate its accuracy as the Construction Manager and the Architect may require, and unless objected to by the Construction Manager or the Architect, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.

**§ 9.3 Applications for Payment**

**§ 9.3.1** At least fifteen days before the date established for each progress payment, the Contractor shall submit to the Construction Manager an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner, Construction Manager or Architect require, such as copies of requisitions, and releases of waivers of lien from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents.

**§ 9.3.1.1** As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Construction Manager and Architect, but not yet included in Change Orders.

**§ 9.3.1.2** Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

**§ 9.3.2** Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage, and transportation to the site, for such materials and equipment stored off the site.

**§ 9.3.3** The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials and equipment relating to the Work.

#### **§ 9.4 Certificates for Payment**

**§ 9.4.1** Where there is only one Contractor, the Construction Manager will, within seven days after the Construction Manager's receipt of the Contractor's Application for Payment, review the Application, certify the amount the Construction Manager determines is due the Contractor, and forward the Contractor's Application and Certificate for Payment to the Architect. Within seven days after the Architect receives the Contractor's Application for Payment from the Construction Manager, the Architect will either (1) issue to the Owner a Certificate for Payment, in the full amount of the Application for Payment, with a copy to the Construction Manager; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Construction Manager and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Construction Manager and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1. The Construction Manager will promptly forward to the Contractor the Architect's notice of withholding certification.

**§ 9.4.2** Where there is more than one Contractor performing portions of the Project, the Construction Manager will, within seven days after the Construction Manager receives all of the Contractors' Applications for Payment: (1) review the Applications and certify the amount the Construction Manager determines is due each of the Contractors; (2) prepare a Summary of Contractors' Applications for Payment by combining information from each Contractor's application with information from similar applications for progress payments from the other Contractors; (3) prepare a Project Application and Certificate for Payment; (4) certify the amount the Construction Manager determines is due all Contractors; and (5) forward the Summary of Contractors' Applications for Payment and Project Application and Certificate for Payment to the Architect.

**§ 9.4.2.1** Within seven days after the Architect receives the Project Application and Project Certificate for Payment and the Summary of Contractors' Applications for Payment from the Construction Manager, the Architect will either (1) issue to the Owner a Project Certificate for Payment, with a copy to the Construction Manager; or (2) issue to the Owner a Project Certificate for Payment for such amount as the Architect determines is properly due, and notify the Construction Manager and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Project Application for Payment, and notify the Construction Manager and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1. The Construction Manager will promptly forward the Architect's notice of withholding certification to the Contractors.

**§ 9.4.3** The Construction Manager's certification of an Application for Payment or, in the case of more than one Contractor, a Project Application and Certificate for Payment, shall be based upon the Construction Manager's evaluation of the Work and the data in the Application or Applications for Payment. The Construction Manager's certification will constitute a representation that, to the best of the Construction Manager's knowledge, information,

and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is, or Contractors are, entitled to payment in the amount certified.

§ 9.4.4 The Architect's issuance of a Certificate for Payment or, in the case of more than one Contractor, Project Application and Certificate for Payment, shall be based upon the Architect's evaluation of the Work, the recommendation of the Construction Manager, and data in the Application for Payment or Project Application for Payment. The Architect's certification will constitute a representation that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is, or Contractors are, entitled to payment in the amount certified.

§ 9.4.5 The representations made pursuant to Sections 9.4.3 and 9.4.4 are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Construction Manager or Architect.

§ 9.4.6 The issuance of a Certificate for Payment or a Project Certificate for Payment will not be a representation that the Construction Manager or Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

#### § 9.5 Decisions to Withhold Certification

§ 9.5.1 The Construction Manager or Architect may withhold a Certificate for Payment or Project Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Construction Manager's or Architect's opinion the representations to the Owner required by Section 9.4.3 and 9.4.4 cannot be made. If the Construction Manager or Architect is unable to certify payment in the amount of the Application, the Construction Manager will notify the Contractor and Owner as provided in Section 9.4.1 and 9.4.2. If the Contractor, Construction Manager and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment or a Project Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Construction Manager or Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment or Project Certificate for Payment previously issued, to such extent as may be necessary in the Construction Manager's or Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from the acts and omissions described in Section 3.3.2 because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;
- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a Separate Contractor or other Contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.

§ 9.5.3 When the reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.4 If the Architect or Construction Manager withholds certification for payment under Section 9.5.1, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the



Owner makes payments by joint check, the Owner shall notify the Architect and the Construction Manager, and both will reflect such payment on the next Certificate for Payment.

### § 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a Certificate for Payment or Project Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Construction Manager and Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Construction Manager will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Owner, Construction Manager and Architect on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers to ascertain whether they have been properly paid. Neither the Owner, Construction Manager nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

§ 9.6.5 The Contractor's payments to suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors or provided by suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, create any fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.6.8 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

### § 9.7 Failure of Payment

If the Construction Manager and Architect do not issue a Certificate for Payment or a Project Certificate for Payment, through no fault of the Contractor, within fourteen days after the Construction Manager's receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents, the amount certified by the Construction Manager and Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' notice to the Owner, Construction Manager and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents.



## § 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so the Owner can occupy or utilize the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall notify the Construction Manager, and the Contractor and Construction Manager shall jointly prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the list, the Architect, assisted by the Construction Manager, will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect, assisted by the Construction Manager, to determine Substantial Completion.

§ 9.8.4 When the Architect, assisted by the Construction Manager, determines that the Work of all of the Contractors, or designated portion thereof, is substantially complete, the Construction Manager will prepare, and the Construction Manager and Architect shall execute, a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

## § 9.9 Partial Occupancy or Use

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor and Construction Manager shall jointly prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect after consultation with the Construction Manager.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Construction Manager, Contractor, and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

## § 9.10 Final Completion and Final Payment

§ 9.10.1 Upon completion of the Work, the Contractor shall forward to the Construction Manager a notice that the Work is ready for final inspection and acceptance, and shall also forward to the Construction Manager a final

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Contractor's Application for Payment. Upon receipt, the Construction Manager shall perform an inspection to confirm the completion of Work of the Contractor. The Construction Manager shall make recommendations to the Architect when the Work of all of the Contractors is ready for final inspection, and shall then forward the Contractors' notices and Application for Payment or Project Application for Payment, to the Architect, who will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Construction Manager and Architect will promptly issue a final Certificate for Payment or Project Certificate for Payment stating that to the best of their knowledge, information and belief, and on the basis of their on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Construction Manager's and Architect's final Certificate for Payment or Project Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

**§ 9.10.2** Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect through the Construction Manager (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

**§ 9.10.3** If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Construction Manager and Architect so confirm, the Owner shall, upon application by the Contractor and certification by the Construction Manager and Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect through the Construction Manager prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

**§ 9.10.4** The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- .1 liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents;
- .3 terms of special warranties required by the Contract Documents; or
- .4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

**§ 9.10.5** Acceptance of final payment by the Contractor, a Subcontractor, or a supplier, shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

## **ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY**

### **§ 10.1 Safety Precautions and Programs**

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract. The Contractor shall submit the Contractor's safety program to the Construction Manager for review and coordination with the safety programs of other Contractors. The Construction Manager's responsibilities for review and coordination of safety programs shall not extend to direct control over or charge of the acts or omissions of the Contractors, Subcontractors, agents or employees of the

Contractors or Subcontractors, or any other persons performing portions of the Work and not directly employed by the Construction Manager.

## § 10.2 Safety of Persons and Property

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor;
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction; and
- .4 construction or operations by the Owner, Separate Contractors, or other Contractors.

§ 10.2.2 The Contractor shall comply with, and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, bearing on safety of persons or property or their protection from damage, injury, or loss.

§ 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2, 10.2.1.3 and 10.2.1.4 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2, 10.2.1.3 and 10.2.1.4. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner, Construction Manager or Architect or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner, Construction Manager and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

## § 10.2.8 Injury or Damage to Person or Property

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

## § 10.3 Hazardous Materials

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing

the condition, immediately stop Work in the affected area and notify the Owner, Construction Manager and Architect of the condition.

§ 10.3.2 Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor, Construction Manager and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor, the Construction Manager and the Architect will promptly reply to the Owner in writing stating whether or not any of them has reasonable objection to the persons or entities proposed by the Owner. If the Contractor, Construction Manager or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor, the Construction Manager and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Construction Manager, Architect, their consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall reimburse the Contractor for all cost and expense thereby incurred.

#### § 10.4 Emergencies

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

### ARTICLE 11 INSURANCE AND BONDS

#### § 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Owner, Construction Manager and Construction Manager's consultants, and the Architect and Architect's consultants, shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents.

§ 11.1.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds



from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 11.1.3 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

§ 11.1.4 **Notice of Cancellation or Expiration of Contractor's Required Insurance.** Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice directly to the Owner, and separately to the Construction Manager, of such impending or actual cancellation or expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

## § 11.2 Owner's Insurance

§ 11.2.1 The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

§ 11.2.2 **Failure to Purchase Required Property Insurance.** If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform both the Contractor and the Construction Manager, separately and in writing, prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

§ 11.2.3 **Notice of Cancellation or Expiration of Owner's Required Property Insurance.** Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice directly to the Contractor, and separately to the Construction Manager, of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

## § 11.3 Waivers of Subrogation

§ 11.3.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Construction Manager and Construction Manager's consultants; (3) the Architect and Architect's consultants; (4) other Contractors and any of their subcontractors, sub-subcontractors, agents, and employees; and (5) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Construction Manager,

Construction Manager's consultants, Architect, Architect's consultants, other Contractors, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this Section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

**§ 11.3.2** If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

### **§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance**

The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor, Architect, and Construction Manager for loss of use of the Owner's property, due to fire or other hazards however caused.

### **§ 11.5 Adjustment and Settlement of Insured Loss**

**§ 11.5.1** A loss insured under the property insurance required by the Agreement shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.5.2. The Owner shall pay the Construction Manager, Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the Construction Manager, Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

**§ 11.5.2** Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner shall settle the loss and the Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.

## **ARTICLE 12 UNCOVERING AND CORRECTION OF WORK**

### **§ 12.1 Uncovering of Work**

**§ 12.1.1** If a portion of the Work is covered contrary to the Construction Manager's or Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by either, be uncovered for their examination and be replaced at the Contractor's expense without change in the Contract Time.

**§ 12.1.2** If a portion of the Work has been covered that the Construction Manager or Architect has not specifically requested to examine prior to its being covered, the Construction Manager or Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.



**§ 12.2 Correction of Work**

**§ 12.2.1 Before Substantial Completion**

The Contractor shall promptly correct Work rejected by the Construction Manager or Architect or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion, and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Construction Manager's and Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

**§ 12.2.2 After Substantial Completion**

**§ 12.2.2.1** In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof, or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during that period after receipt of notice from the Owner, Construction Manager or Architect, the Owner may correct it in accordance with Section 2.5.

**§ 12.2.2.2** The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

**§ 12.2.2.3** The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

**§ 12.2.3** The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

**§ 12.2.4** The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner, Separate Contractors, or other Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

**§ 12.2.5** Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

**§ 12.3 Acceptance of Nonconforming Work**

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

**ARTICLE 13 MISCELLANEOUS PROVISIONS**

**§ 13.1 Governing Law**

The Contract shall be governed by the law of the place where the Project is located excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

**§ 13.2 Successors and Assigns**

**§ 13.2.1** The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the

other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.

### § 13.3 Rights and Remedies

§ 13.3.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

§ 13.3.2 No action or failure to act by the Owner, Construction Manager, Architect, or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing.

### § 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Construction Manager and Architect timely notice of when and where tests and inspections are to be made so that the Construction Manager and Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 13.4.2 If the Construction Manager, Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Construction Manager and Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Construction Manager and Architect of when and where tests and inspections are to be made so that the Construction Manager and Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Construction Manager's and Architect's services and expenses, shall be at the Contractor's expense.

§ 13.4.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Construction Manager for transmittal to the Architect.

§ 13.4.5 If the Construction Manager or Architect is to observe tests, inspections, or approvals required by the Contract Documents, the Construction Manager or Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.4.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

### § 13.5 Interest

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

## ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

### § 14.1 Termination by the Contractor

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency, that requires all Work to be stopped;
- .3 Because the Construction Manager has not certified or the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- .4 The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner, Construction Manager and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, or their agents or employees, or any other persons performing portions of the Work because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' notice to the Owner, Construction Manager and Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

### § 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the reasons described in Section 14.2.1 exist, after consultation with the Construction Manager, and upon certification by the Architect that sufficient cause exists to justify such action, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

**§ 14.2.4** If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Construction Manager's and Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall, upon application, be certified by the Initial Decision Maker after consultation with the Construction Manager, and this obligation for payment shall survive termination of the Contract.

**§ 14.3 Suspension by the Owner for Convenience**

**§ 14.3.1** The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine.

**§ 14.3.2** The Contract Sum and the Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent:

- .1 that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of this Contract.

**§ 14.4 Termination by the Owner for Convenience**

**§ 14.4.1** The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

**§ 14.4.2** Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;
- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

**§ 14.4.3** In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.

**ARTICLE 15 CLAIMS AND DISPUTES**

**§ 15.1 Claims**

**§ 15.1.1 Definition.** A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

**§ 15.1.2 Time Limits on Claims**

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

**§ 15.1.3 Notice of Claims**

**§ 15.1.3.1** Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Construction Manager and Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be

initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

#### § 15.1.4 Continuing Contract Performance

§ 15.1.4.1 Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

§ 15.1.5 Claims for Additional Cost. If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

#### § 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay only one Claim is necessary.

§ 15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the scheduled construction.

§ 15.1.7 Waiver of Claims for Consequential Damages. The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

#### § 15.2 Initial Decision

§ 15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise,



or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties, the Construction Manager, and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days of receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

### § 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to



file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

§ 15.3.4 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

#### § 15.4 Arbitration

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. The Arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

#### § 15.4.4 Consolidation or Joinder

§ 15.4.4.1 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 15.4.4.2 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as those of the Owner and Contractor under this Agreement.

**SECTION 00 73 13**

**SUPPLEMENTARY GENERAL CONDITIONS A232-2019**

The following supplements modify the "General Conditions of the Contract for Construction, Construction Manager as Advisor Edition." AIA Document A232-2019. Where a portion of the General Conditions is modified or deleted by the Supplementary Conditions, the unaltered portions of the General Conditions shall remain in effect.

TABLE OF ARTICLES

1. GENERAL PROVISIONS
2. OWNER
3. CONTRACTOR
4. ARCHITECT AND CONSTRUCTION MANAGER
5. SUBCONTRACTORS
6. CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS
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12. UNCOVERING AND CORRECTION OF WORK
13. MISCELLANEOUS PROVISIONS
14. TERMINATION OR SUSPENSION OF THE CONTRACT
15. CLAIMS AND DISPUTES

**NOT FOR BID**

**ARTICLE 1: GENERAL PROVISIONS**

1.1 BASIC DEFINITIONS

1.1.1 THE CONTRACT DOCUMENTS

Delete the last sentence in its entirety and replace with the following:

“The Contract Documents also include Advertisement for Bid, Instructions to Bidder, sample forms, the Bid Form, the Contractor’s completed Bid and the Award Letter.”

1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS

Add the following Paragraphs:

1.2.4 In the case of an inconsistency between the Drawings and the Specifications, or within either document not clarified by addendum, the better quality or greater quantity of work shall be provided in accordance with the Architect’s interpretation.

1.2.5 The word “PROVIDE” as used in the Contract Documents shall mean “FURNISH AND INSTALL” and shall include, without limitation, all labor, materials, equipment, transportation, services and other items required to complete the Work.

1.2.6 The word “PRODUCT” as used in the Contract Documents means all materials, systems and equipment.

1.5 OWNERSHIP AND USE OF DRAWINGS, SPECIFICATIONS AND OTHER INSTRUMENTS OF SERVICE

Delete Paragraph 1.5.1 in its entirety and replace with the following:

“All pre-design studies, drawings, specifications and other documents, including those in electronic form, prepared by the Architect under this Agreement are, and shall remain, the property of the Owner whether the Project for which they are made is executed or not. As for the Project for which the Architect is hired, the Architect still remain liable for any claim relating to the design that arises from the Project.

However, such documents may be used by the Owner to construct one or more like projects without the approval of, or additional compensation to, the Architect. The Contractor, Subcontractors, Sub-subcontractors and Material or Equipment Suppliers are authorized to use and reproduce applicable portions of the Drawings, Specifications and other documents prepared by the Architect and the Architect’s consultants appropriate to and for use in the execution of their Work under the Contract Documents. They are not to be used by the Contractor or any Subcontractor, Sub-subcontractor or Material and Equipment Supplier on other Projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner, Architect and Architect’s consultants.

The Architect shall not be liable for injury or damage resulting from the re-use of drawings and specifications if the Architect is not involved in the re-use Project.”

1.6

**NOTICE**

1.6.1 Insert the following sentence at the end of the paragraph:

“Electronic mail, also known as email, is an acceptable form of electronic transmission of notices under this Agreement.”

**ARTICLE 2: OWNER**

2.1 General

2.1.2 Delete Paragraph 2.1.2 in its entirety.

2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER

2.2.1 Delete the second sentence in this paragraph and replace with the following: “The Contractor shall have no obligation to commence the Work until the Owner issues a Purchase Order for the Project.”

2.2.2 Delete the last three sentences in this paragraph.

**ARTICLE 3: CONTRACTOR**

3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR

3.2.4 Delete the third sentence in Paragraph 3.2.4.

3.3 SUPERVISION AND CONSTRUCTION PROCEDURES

Add the following Paragraphs:

3.3.2.1 The Contractor shall immediately remove from the Work, whenever requested to do so by the Owner, any person who is considered by the Owner or Architect to be incompetent or disposed to be disorderly, or who for any reason is not satisfactory to the Owner, and that person shall not again be employed on the Work without the consent of the Owner or the Architect.

3.3.4 The Contractor must provide suitable storage facilities at the Site, or an alternative site as approved by the Owner, for the proper protection and safe storage of their materials. Consult the Owner and the Architect before storing any materials.

3.3.5 When any room is used as a shop, storeroom, office, etc., by the Contractor or Subcontractor(s) during the construction of the Work, the Contractor making use of these areas will be held responsible for any repairs, patching or cleaning arising from such use.

3.4 LABOR AND MATERIALS

3.4.1.1 Add a new section 3.4.1.1:

“The Contractor, at their expense shall bear the costs to accurately identify the location of all underground utilities in the area of their excavation and shall bear all cost for any repairs required, out of failure to accurately identify said utilities.”

Add the Following Paragraphs:

3.4.4 Before starting the Work, each Contractor shall carefully examine all preparatory Work that has been executed to receive their Work. Check carefully, by whatever means are required, to insure that its Work and adjacent, related Work, will finish to proper contours, planes and levels. Promptly notify the General Contractor/Construction Manager of any defects or imperfections in preparatory Work which will in any way affect satisfactory completion of its Work. Absence of such notification will be construed as an acceptance of preparatory Work and later claims of defects will not be recognized.

3.4.5 Under no circumstances shall the Contractor’s Work proceed prior to preparatory Work having been completely cured, dried and/or otherwise made satisfactory to receive this Work. Responsibility for timely installation of all materials rests solely with the Contractor responsible for that Work, who shall maintain coordination at all times.

3.5 WARRANTY

Add the following Paragraphs:

3.5.3 The Contractor will warrant all materials and workmanship against original defects, except injury from proper and usual wear when used for the purpose intended, for two years after Substantial Completion of the project in accordance with Section 9.8.4 of this Agreement, and will maintain all items in condition that conforms with the Contract Documents during the period of warranty.

3.5.4 Non-conforming work during the period of warranty will be corrected by the Contractor at its expense upon demand of the Owner, it being required that the Work conforms to the Contract Documents at the expiration of the warranty period.

3.5.5 In addition to the General Warranty there are other warranties required for certain items for different periods of time than the two years as above and are particularly so stated in that part of the specifications referring to same. The said warranties will commence at the same time as the General Warranty.

3.5.6 If the Contractor fails to remedy any failure, defect or damage within a reasonable time after receipt of notice, the Owner will have the right to replace, repair, or otherwise remedy the failure, defect or damage at the Contractor’s expense.

3.11 DOCUMENTS AND SAMPLES AT THE SITE

Add the following Paragraphs:

- 3.11.1 During the course of the Work, the Contractor shall maintain a record set of drawings on which the Contractor shall mark the actual physical location of all piping, valves, equipment, conduit, outlets, access panels, controls, actuators, including all appurtenances that will be concealed once construction is complete, etc., including all invert elevations.
- 3.11.2 At the completion of the project, the Contractor shall obtain a set of reproducible drawings from the Architect, and neatly transfer all information outlined in 3.11.1 to provide a complete record of the as-built conditions.
- 3.11.3 The Contractor shall provide two (2) prints of the as-built conditions, along with the reproducible drawings themselves, to the Owner and one (1) set to the Architect. In addition, attach one complete set to each of the Operating and Maintenance Instructions/Manuals.

3.15 CLEANING UP

3.15.2 Strike sentence in its entirety and replace with the following:

“If the Contractor fails to clean up as provided in the Contract Documents, the Owner, or Construction Manager with the Owner’s approval, may do so and the Owner shall withhold the amount that reflects the cost of the cleanup from any moneys owed the Contractor. If the cost of cleanup exceeds the moneys owed to the Contractor, the Owner shall be entitled to reimbursement from the Contractor for the amount exceeding what is withheld.

3.17 In the second sentence of 3.17, insert “indemnify and” between “shall” and “hold”.

**ARTICLE 4: ARCHITECT AND CONSTRUCTION MANAGER**

4.2 Administration of the Contract

Delete the first sentence of Paragraph 4.2.11 and replace with the following:

The Architect will review and approve or take other appropriate action upon the Contractor’s submittals such as Shop Drawings, Product Data and Samples for the purpose of checking for conformance with the Contract Documents.

Delete the second sentence of Paragraph 4.2.11 and replace with the following:

The Architect’s action will be taken with such reasonable promptness as to cause no delay in the Work in the activities of the Owner, Contractor or separate Contractors, while allowing sufficient time in the Owner’s professional judgment to permit adequate review.

Add the following to Paragraph 4.2.17:

There will be no full-time Project representative provided by the Owner or Architect on site for this Project.

Add to Paragraph 4.2.20 “and in compliance with all applicable codes, regulations and ordinances.” to the end of the sentence.



**ARTICLE 5: SUBCONTRACTORS**

5.2 AWARD OF SUBCONTRACTS AND OTHER CONTRACTS FOR PORTIONS OF THE WORK

Delete Paragraph 5.2.3 in its entirety and replace with the following:

5.2.3 If the Owner, Architect or Construction Manager has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner, Architect or Construction Manager has no reasonable objection, subject to the statutory requirements of 29 Delaware Code § 6962(d)(10)b.3 and 4.

**ARTICLE 6: CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS**

6.1 OWNER'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

6.1.1 Delete "and waiver of subrogation" from the last sentence.

6.1.3 Delete Paragraph 6.1.3 in its entirety and replace with the following:

"When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Constructor who executes each separate Owner-Contractor Agreement."

6.2 MUTUAL RESPONSIBILITY

6.2.3 In the second sentence, strike the word "shall" and insert the word "may".

**ARTICLE 7: CHANGES IN THE WORK**

(SEE ARTICLE 7: CHANGES IN WORK IN THE GENERAL REQUIREMENTS)

**ARTICLE 8: TIME**

8.2 PROGRESS AND COMPLETION

Add the following Paragraphs:

8.2.1.1 Refer to Specification Section SUMMARY OF WORK for Contract time requirements.

8.2.4 If the Work falls behind the Progress Schedule as submitted by the Contractor, the Contractor shall employ additional labor and/or equipment necessary to bring the Work into compliance with the Progress Schedule at no additional cost to the Owner.

8.3 DELAYS AND EXTENSION OF TIME

8.3.1 Strike "binding dispute resolution" and insert "remedies at law or in equity".

Add the following Paragraph:

- 8.3.2.1 The Contractor shall update the status of the suspension, delay, or interruption of the Work with each Application for Payment. (The Contractor shall report the termination of such cause immediately upon the termination thereof.) Failure to comply with this procedure shall constitute a waiver for any claim for adjustment of time or price based upon said cause.

Delete Paragraph 8.3.3 in its entirety and replace with the following:

- 8.3.3 Except in the case of a suspension of the Work directed by the Owner, an extension of time under the provisions of Paragraph 8.3.1 shall be the Contractor's sole remedy in the progress of the Work and there shall be no payment or compensation to the Contractor for any expense or damage resulting from the delay.

Add the following Paragraph:

- 8.3.4 By permitting the Contractor to work after the expired time for completion of the project, the Owner does not waive its rights under the Contract.

- 8.3.5 The parties agree that Paragraph 8.3.3 of the Supplementary General Conditions does not apply to the Construction Manager in the event of a delay caused by a party other than the Construction Manager.

**ARTICLE 9: PAYMENTS AND COMPLETION**

9.1 CONTRACT SUM

- 9.1.2 Strike Section 9.1.2 in its entirety.

9.2 SCHEDULE OF VALUES

Add the following Paragraphs:

- 9.2.1 The Schedule of Values shall be submitted using AIA Document G732, Continuation Sheet to G703.

9.3 APPLICATIONS FOR PAYMENT

Add the following Paragraph:

- 9.3.1.3 Application for Payment shall be submitted on AIA Document G732 "Application and Certificate for Payment", supported by AIA Document G703 "Continuation Sheet". Said Applications shall be fully executed and notarized.

Add the following Paragraphs:

- 9.3.4 Until Closeout Documents have been received and outstanding items completed the Owner will pay 95% (ninety-five percent) of the amount due the Contractor on account of progress payments.

- 9.3.5 The Contractor shall provide a current and updated Progress Schedule to the Architect with each Application for Payment. Failure to provide Schedule will be just cause for rejection of Application for Payment.

9.5 DECISIONS TO WITHHOLD CERTIFICATION

Add the following to 9.5.1:

- .8 failure to provide a current Progress Schedule;
- .9 a lien or attachment is filed;
- .10 failure to comply with mandatory requirements for maintaining Record Documents.

9.6 PROGRESS PAYMENTS

Delete Paragraph 9.6.1 in its entirety and replace with the following:

- 9.6.1 After the Architect and the Construction Manager have approved and issued a Certificate for Payment, payment shall be made by the Owner within 30 days after Owner's receipt of the Certificate for Payment.
- 9.6.8 Strike "Provided the Owner has fulfilled its payment obligations under the Contract Documents, the" and replace with "The".

9.7 FAILURE OF PAYMENT

In first sentence, strike the first reference to "seven" and insert "thirty (30)". Also strike "binding dispute resolution" and insert "remedies at law or in equity".

9.8 SUBSTANTIAL COMPLETION

9.8.5 In the second sentence, strike "shall" and insert "may".

**ARTICLE 10: PROTECTION OF PERSONS AND PROPERTY**

10.1 SAFETY PRECAUTIONS AND PROGRAMS

Add the following Paragraphs:

10.1.1 Each Contractor shall develop a safety program in accordance with the Occupational Safety and Health Act of 1970. A copy of said plan shall be furnished to the Owner and Architect prior to the commencement of that Contractor's Work.

10.1.2 Each Contractor shall appoint a Safety Representative. Safety Representatives shall be someone who is on site on a full-time basis. If deemed necessary by the Owner or Architect, Contractor Safety meetings will be scheduled. The attendance of all Safety Representatives will be required. Minutes will be recorded of said meetings by the Contractor and will be distributed to all parties as well as posted in all job offices/trailers etc.

10.2 SAFETY OF PERSONS AND PROPERTY

Add the following Paragraph:

10.2.4.1 As required in the Hazardous Chemical Act of June 1984, all vendors supplying any material that may be defined as hazardous must provide Material Safety Data Sheets for those products. Any chemical product should be considered hazardous if it has a caution warning on the label relating to a potential physical or health hazard, if it is known to be present in the workplace, and if employees

may be exposed under normal conditions or in foreseeable emergency situations. Material Safety Data Sheets shall be provided directly to the Owner or its designee, along with the shipping slips that include those products.

10.3 HAZARDOUS MATERIALS

Delete Paragraph 10.3.3 in its entirety.

Delete Paragraphs 10.3.6 in its entirety.

**ARTICLE 11: INSURANCE AND BONDS**

11.1 CONTRACTOR'S INSURANCE AND BONDS

11.1.1 Strike "Owner," at the beginning of the third sentence.

11.1.2 Add the following sentence at the end of the paragraph: "The bonds will conform to those forms approved by the Office of Management and Budget."

11.2 OWNER'S INSURANCE

Delete Paragraph 11.2 in its entirety and replace with the following:

11.2 The Owner will not provide Builder's All Risk Insurance for the Project. The Construction Manager will provide Builder's All Risk Insurance for the Project. The Contractor and all Subcontractors shall provide coverage for materials, fixtures and/or equipment being used in the construction or renovation of a building or structure should those items sustain physical loss or damage from a covered cause.

11.3 WAIVERS OF SUBROGATION

Delete Paragraph 11.3 and its subparagraphs in their entirety. Substitute the following:

The Construction Manager and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, consultants and employees, each of the other; (2) the Architect and Architect's consultants; (3) other Contractors and any of their subcontractors, sub-subcontractors, agents, and employees; and (4) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this Article shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property. For clarity, the Owner does not waive any of its subrogation rights.

11.4 LOSS OF USE, BUSINESS INTERRUPTION, AND DELAY IN COMPLETION INSURANCE

Delete Paragraph 11.4 in its entirety.

11.5 ADJUSTMENT AND SETTLEMENT OF INSURED LOSS

Delete Paragraph 11.5 in its entirety. Substitute the following:

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A loss insured under the property insurance required by the Agreement shall be adjusted by the Construction Manager and made payable to the Construction Manager. The Construction Manager shall pay the Architect and Contractor their just shares of insurance proceeds received by the Construction Manager, and by appropriate agreements the Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner. Prior to settlement of an insured loss, the Construction Manager shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Construction Manager shall settle the loss and the Contractor shall be bound by the settlement and allocation. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Construction Manager may proceed to settle the insured loss, and any dispute between the Construction Manager and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant remedies at law and in equity. For clarity, the Owner shall be listed as an Additional Insured to protect the Owner's property interest on the Project under the Builder's Risk Insurance.

**ARTICLE 12: UNCOVERING AND CORRECTION OF WORK**

**12.2.2 AFTER SUBSTANTIAL COMPLETION**

12.2.2.1 In the first sentence, strike "within one year after the date of Substantial Completion of the Work or designated portion thereof" and replace with "within two years after the date of Substantial Completion of the Project in accordance with Section 9.8.4 of this Agreement or designated portion thereof".

12.2.2.1 In the third sentence of the paragraph, strike "one year period" and replace it with "two year period".

Add the following Paragraph:

12.2.2.1.1 At any time during the progress of the Work, or in any case where the nature of the defects will be such that it is not expedient to have corrected, the Owner, at its option, will have the right to deduct such sum, or sums, of money from the amount of the Contract as it considers justified to adjust the difference in value between the defective work and that required under contract including any damage to the structure.

12.2.2.2 Strike "one" and insert "two".

12.2.2.3 Strike "one" and insert "two".

12.2.5 In second sentence, strike "one" and insert "two".

**ARTICLE 13: MISCELLANEOUS PROVISIONS**

**13.1 GOVERNING LAW**

13.1 Strike the second sentence in its entirety.

**13.5 INTEREST**

13.5 Strike 13.5 in its entirety and replace with the following:  
"Payments are due 30 days after receipt of a valid Application for Payment. After that 30

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day period, interest may be charged at the rate of 1% per month not to exceed 12% per annum."

Add the following Paragraph:

**13.6 CONFLICTS WITH FEDERAL STATUTES OR REGULATIONS**

13.6.1 If any provision, specifications or requirement of the Contract Documents conflict or is inconsistent with any statute, law or regulation of the government of the United State of America, the Contractor shall notify the Architect and Owner immediately upon discovery.

**ARTICLE 14: TERMINATION OR SUSPENSION OF THE CONTRACT**

**14.4 TERMINATION BY THE OWNER FOR CONVENIENCE**

Delete Paragraph 14.4.3 in its entirety and replace with the following:

14.4.3 In case of such termination for the Owner's convenience, the Contractor shall be entitled to receive payment for Work executed, and cost incurred by reason of such termination along with reasonable overhead.

**ARTICLE 15: CLAIMS AND DISPUTES**

**15.1.2 TIME LIMITS ON CLAIMS.**

15.1.2 Strike "in accordance with the requirements of the binding dispute resolution method selected in the Agreement and" from the first sentence.

Strike the second sentence in its entirety.

**15.1.4 CONTINUING CONTRACT PERFORMANCE**

15.1.4.2 Strike in its entirety.

**15.1.7 CLAIMS FOR CONSEQUENTIAL DAMAGES**

Delete Paragraph 15.1.7 and its subparagraphs in their entirety.

**15.2 INITIAL DECISION**

15.2.1 Delete "and binding dispute resolution"

15.2.5 Delete in its entirety and replace with the following:

15.2.5 The Architect will approve or reject Claims by written decision, which shall state the reasons therefore and shall notify the parties of any change in the Contract Sum or Contract Time or both. The approval or rejection of a Claim by the Architect shall be subject to mediation and other remedies at law or in equity.

Delete Paragraph 15.2.6 and its subparagraphs in their entirety.

**15.3 MEDIATION**



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15.3.1 Strike “binding dispute resolution” and insert “any or all remedies at law or in equity”.

15.3.2 In the first sentence, delete “administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedure in effect on the date of the Agreement,”. Also strike “binding dispute resolution” and insert “remedies at law and in equity”.

15.3.3 Strike in its entirety.

15.4

ARBITRATION

Delete Paragraph 15.4 and its subparagraphs in their entirety.

END OF SECTION

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SECTION 00 73 50 – GENERAL REQUIREMENTS

**TABLE OF ARTICLES**

1. GENERAL PROVISIONS
2. OWNER
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9. PAYMENTS AND COMPLETION
10. PROTECTION OF PERSONS AND PROPERTY
11. INSURANCE AND BONDS
12. UNCOVERING AND CORRECTION OF WORK
13. MISCELLANEOUS PROVISIONS
14. TERMINATION OR SUSPENSION OF THE CONTRACT

**ARTICLE 1: GENERAL**

**1.1 CONTRACT DOCUMENTS**

1.1.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary and what is required by one shall be as binding as if required by all. Performance by the Contractor shall be required to an extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the intended results.

1.1.2 Work including material purchases shall not begin until the Contractor is in receipt of a bonafide State of Delaware Purchase Order. Any work performed or material purchases prior to the issuance of the Purchase Order is done at the Contractor's own risk and cost.

**1.2 EQUALITY OF EMPLOYMENT OPPORTUNITY ON PUBLIC WORKS**

1.2.1 For Public Works Projects financed in whole or in part by state appropriation the Contractor agrees that during the performance of this contract:

1. The Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex or national origin. The Contractor will take positive steps to ensure that applicants are employed and that employees are treated during employment without regard to their race, creed, color, sex 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 by the contracting agency setting forth 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, creed, color, sex or national origin."

**ARTICLE 2: OWNER**

(NO ADDITIONAL GENERAL REQUIREMENTS – SEE SUPPLEMENTARY GENERAL CONDITIONS)

**ARTICLE 3: CONTRACTOR**

3.1 Schedule of Values: The successful Bidder shall within twenty (20) days after receiving notice to proceed with the work, furnish to the Owner a complete schedule of values on the various items comprising the work.

3.2 Subcontracts: Upon approval of Subcontractors, the Contractor shall award their Subcontracts as soon as possible after the signing of their own contract and see that all

material, their own and those of their Subcontractors, are promptly ordered so that the work will not be delayed by failure of materials to arrive on time.

3.3 Before commencing any work or construction, the General Contractor is to consult with the Owner as to matters in connection with access to the site and the allocation of Ground Areas for the various features of hauling, storage, etc.

3.4 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions.

3.5 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Contract. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.

3.6 The Contractor warrants to the Owner that materials and equipment furnished will be new and of good quality, unless otherwise permitted, and that the work will be free from defects and in conformance with the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved, may be considered defective. If required by the Owner, the Contractor shall furnish evidence as to the kind and quality of materials and equipment provided.

3.7 Unless otherwise provided, the Contractor shall pay all sales, consumer, use and other similar taxes, and shall secure and pay for required permits, fees, licenses, and inspections necessary for proper execution of the Work.

3.8 The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on performance of the Work. The Contractor shall promptly notify the Owner if the Drawings and Specifications are observed to be at variance therewith.

3.9 The Contractor shall be responsible to the Owner for the acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons performing portions of the Work under contract with the Contractor.

3.10 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Contract. At completion of the Work the Contractor shall remove from and about the Project all waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials. The Contractor shall be responsible for returning all damaged areas to their original conditions.

### 3.11 STATE LICENSE AND TAX REQUIREMENTS

3.11.1 Each Contractor and Subcontractor shall be licensed to do business in the State of Delaware and shall pay all fees and taxes due under State laws. In conformance with Section 2503, Chapter 25, Title 30, Delaware Code, "the Contractor shall furnish the Delaware Department of Finance within ten (10) days after entering into any contract with a contractor or subcontractor not a resident of this State, a statement of total value of such contract or contracts together with the names and addresses of the contracting parties."

3.2 The Contractor shall comply with all requirements set forth in Section 6962, Chapter 69, Title 29 of the Delaware Code.

**ARTICLE 4: ADMINISTRATION OF THE CONTRACT**

4.1 CONTRACT SURETY

4.1.1 PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND

4.1.2 All bonds will be required as follows unless specifically waived elsewhere in the Bidding Documents.

4.1.3 Contents of Performance Bonds – The bond shall be in the form approved by the Office of Management and Budget. The bond shall be conditioned upon the faithful compliance and performance by the successful bidder of each and every term and condition of the contract and the proposal, plans, specifications, and bid documents thereof. Each term and condition shall be met at the time and in the manner prescribed by the Contract, Bid documents and the specifications, including the payment in full to every person furnishing material or performing labor in the performance of the Contract, of all sums of money due the person for such labor and material. (The bond shall also contain the successful bidder's guarantee to indemnify and save harmless the State and the agency from all costs, damages and expenses growing out of or by reason of the Contract in accordance with the Contract.)

4.1.4 Invoking a Performance Bond – The agency may, when it considers that the interest of the State so require, cause judgment to be confessed upon the bond.

4.1.5 Within twenty (20) days after the date of notice of award of contract, the Bidder to whom the award is made shall furnish a Performance Bond and Labor and Material Payment Bond, each equal to the full amount of the Contract price to guarantee the faithful performance of all terms, covenants and conditions of the same. The bonds are to be issued by an acceptable Bonding Company licensed to do business in the State of Delaware and shall be issued in duplicate.

4.1.6 Performance and Payment Bonds shall be maintained in full force (warranty bond) for a period of two (2) years after the date of the Certificate for Final Payment. The Performance Bond shall guarantee the satisfactory completion of the Project and that the Contractor will make good any faults or defects in his work which may develop during the period of said guarantees as a result of improper or defective workmanship, material or apparatus, whether furnished by themselves or their Sub-Contractors. The Payment Bond shall guarantee that the Contractor shall pay in full all persons, firms or corporations who furnish labor or material or both labor and material for, or on account of, the work included herein. The bonds shall be paid for by this Contractor. The Owner shall have the right to demand that the proof parties signing the bonds are duly authorized to do so.

4.2 FAILURE TO COMPLY WITH CONTRACT

4.2.1 If any firm entering into a contract with the State, or Agency that neglects or refuses to perform or fails to comply with the terms thereof, the Agency which signed the Contract may terminate the Contract and proceed to award a new contract in accordance with this

Chapter 69, Title 29 of the Delaware Code or may require the Surety on the Performance Bond to complete the Contract in accordance with the terms of the Performance Bond. Nothing herein shall preclude the Agency from pursuing additional remedies as otherwise provided by law.

4.3 CONTRACT INSURANCE AND CONTRACT LIABILITY

4.3.1 In addition to the bond requirements stated in the Bid Documents, each successful Bidder shall purchase adequate insurance for the performance of the Contract and, by submission of a Bid, agrees to indemnify and save harmless and to defend all legal or equitable actions brought against the State, any Agency, officer and/or employee of the State, for and from all claims of liability which is or may be the result of the successful Bidder's actions during the performance of the Contract.

4.3.2 The purchase or nonpurchase of such insurance or the involvement of the successful Bidder in any legal or equitable defense of any action brought against the successful Bidder based upon work performed pursuant to the Contract will not waive any defense which the State, its agencies and their respective officers, employees and agents might otherwise have against such claims, specifically including the defense of sovereign immunity, where applicable, and by the terms of this section, the State and all agencies, officers and employees thereof shall not be financially responsible for the consequences of work performed, pursuant to said contract.

4.4 RIGHT TO AUDIT RECORDS

4.4.1 The Owner shall have the right to audit the books and records of a Contractor or any Subcontractor under any Contract or Subcontract to the extent that the books and records relate to the performance of the Contract or Subcontract.

4.4.2 Said books and records shall be maintained by the Contractor for a period of seven (7) years from the date of final payment under the Prime Contract and by the Subcontractor for a period of seven (7) years from the date of final payment under the Subcontract.

**ARTICLE 5: SUBCONTRACTORS**

5.1 SUBCONTRACTING REQUIREMENTS

5.1.1 All contracts for the construction, reconstruction, alteration or repair of any public building (not a road, street or highway) shall be subject to the following provisions:

1. A contract shall be awarded only to a Bidder whose Bid is accompanied by a statement containing, for each Subcontractor category, the name and address (city or town and State only – street number and P.O. Box addresses not required) of the subcontractor whose services the Bidder intends to use in performing the Work and providing the material for such Subcontractor category.
2. A Bid will not be accepted nor will an award of any Contract be made to any Bidder which, as the Prime Contractor, has listed itself as the Subcontractor for any Subcontractor unless:



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- A. It has been established to the satisfaction of the awarding Agency that the Bidder has customarily performed the specialty work of such Subcontractor category by artisans regularly employed by the Bidder's firm;
- B. That the Bidder is duly licensed by the State to engage in such specialty work, if the State requires licenses; and
- C. That the Bidder is recognized in the industry as a bona fide Subcontractor or Contractor in such specialty work and Subcontractor category.

5.1.2 The decision of the awarding Agency as to whether a Bidder who list itself as the Subcontractor for a Subcontractor category shall be final and binding upon all Bidders, and no action of any nature shall lie against any awarding agency or its employees or officers because of its decision in this regard.

5.1.3 After such a Contract has been awarded, the successful Bidder shall not substitute another Subcontractor for any Subcontractor whose name was set forth in the statement which accompanied the Bid without the written consent of the awarding Agency.

5.1.4 No Agency shall consent to any substitution of Subcontractors unless the Agency is satisfied that the Subcontractor whose name is on the Bidders accompanying statement:

- A. Is unqualified to perform the work required;
- B. Has failed to execute a timely reasonable Subcontract;
- C. Has defaulted in the performance on the portion of the work covered by the Subcontract; or
- D. Is no longer engaged in such business.

## 5.2 PENALTY FOR SUBSTITUTION OF SUBCONTRACTORS

5.2.1 Should the Contractor fail to utilize any or all of the Subcontractors in the Contractor's Bid statement in the performance of the Work on the public bidding, the Contractor shall be penalized in the amount of (project specific amount\*). The Agency may determine to deduct payments of the penalty from the Contractor or have the amount paid directly to the Agency. Any penalty amount assessed against the Contractor may be remitted or refunded, in whole or in part, by the Agency awarding the Contract, only if it is established to the satisfaction of the Agency that the Subcontractor in question has defaulted or is no longer engaged in such business. No claim for the remission or refund of any penalty shall be granted unless an application is filed within one year after the liability of the successful Bidder accrues. All penalty amounts assessed and not refunded or remitted to the contractor shall be reverted to the State.

\*one (1) percent of contract amount not to exceed \$10,000

## 5.3 ASBESTOS ABATEMENT

5.3.1 The selection of any Contractor to perform asbestos abatement for State-funded projects shall be approved by the Office of Management and Budget, Division of Facilities Management pursuant to Chapter 78 of Title 16.

5.4 **STANDARDS OF CONSTRUCTION FOR THE PROTECTION OF THE PHYSICALLY HANDICAPPED**

5.4.1 All Contracts shall conform with the standard established by the Delaware Architectural Accessibility Board unless otherwise exempted by the Board.

5.5 **CONTRACT PERFORMANCE**

5.5.1 Any firm entering into a Public Works Contract that neglects or refuses to perform or fails to comply with its terms, the Agency may terminate the Contract and proceed to award a new Contract or may require the Surety on the Performance Bond to complete the Contract in accordance with the terms of the Performance Bond.

**ARTICLE 6: CONSTRUCTION BY OWNER OR SEPARATE CONTRACTORS**

6.1 The Owner reserves the right to simultaneously perform other construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project or other Projects at the same site.

6.2 The Contractor shall afford the Owner and other Contractors reasonable opportunity for access and storage of materials and equipment, and for the performance of their activities, and shall connect and coordinate their activities with other forces as required by the Contract Documents.

**ARTICLE 7: CHANGES IN THE WORK**

7.1 The Owner, without invalidating the Contract, may order changes in the Work consisting of Additions, Deletions, Modifications or Substitutions, with the Contract Sum and Contract completion date being adjusted accordingly. Such changes in the Work shall be authorized by written Change Order signed by the Professional, as the duly authorized agent, the Contractor and the Owner.

7.2 The Contract Sum and Contract Completion Date shall be adjusted only by a fully executed Change Order.

7.3 The additional cost, or credit to the Owner resulting from a change in the Work shall be by mutual agreement of the Owner, Contractor and the Architect. In all cases, this cost or credit shall be based on the 'DPE' wages required and the "invoice price" of the materials/equipment needed.

7.3.1 "DPE" shall be defined to mean "direct personnel expense". Direct payroll expense includes direct salary plus customary fringe benefits (prevailing wage rates) and documented statutory costs such as workman's compensation insurance, Social Security/Medicare, and unemployment insurance (a maximum multiplier of 1.35 times DPE).

7.3.2 "Invoice price" of materials/equipment shall be defined to mean the actual cost of materials and/or equipment that is paid by the Contractor, (or subcontractor), to a material distributor,

direct factory vendor, store, material provider, or equipment leasing entity. Rates for equipment that is leased and/or owned by the Contractor or subcontractor(s) shall not exceed those listed in the latest version of the "Means Building Construction Cost Data" publication.

7.3.3

In addition to the above, the Contractor is allowed a fifteen percent (15%) markup for overhead and profit for additional work performed by the Contractor's own forces. For additional subcontractor work, the Subcontractor is allowed a fifteen (15) percent overhead and profit on change order work above and beyond the direct costs stated previously. To this amount, the Contractor will be allowed a mark-up not exceeding seven and one half percent (7.5%) on the subcontractors work. These mark-ups shall include all costs including, but not limited to: overhead, profit, bonds, insurance, supervision, etc. No markup is permitted on the work of the subcontractors subcontractor. No additional costs shall be allowed for changes related to the Contractor's onsite superintendent/staff, or project manager, unless a change in the work changes the project duration and is identified by the CPM schedule. There will be no other costs associated with the change order.

#### ARTICLE 8: TIME

8.1

Time limits, if any, are as stated in the Project Manual. By executing the Agreement, the Contractor confirms that the stipulated limits are reasonable, and that the Work will be completed within the anticipated time frame. Should I/We be awarded this contract, I/We pledge to complete all the work required in accordance with the project schedule include in specification section 013210. Should I/We be awarded this contract, and should I/We neglect, fail or refuse to complete my/our Work within the time specified in the project schedule, then I/We do hereby agree to pay the owner as liquidated damages the sum of \$0 per day. Liquidated damages will be assessed if final completion date, as adjusted by the Construction Manager is not met. Liquidated damages shall apply to all trade contracts. Liquidated damages will be assessed for each day beyond the scheduled date of completion for each trade contractor's item of work. Assessment will occur upon completion of all contracts and may be incurred by one or multiple contractors determined by the Construction Manager.

8.2

If progress of the Work is delayed at any time by changes ordered by the Owner, by labor disputes, fire, unusual delay in deliveries, abnormal adverse weather conditions, unavoidable casualties or other causes beyond the Contractor's control, the Contract Time shall be extended for such reasonable time as the Owner may determine.

8.3

Any extension of time beyond the date fixed for completion of the construction and acceptance of any part of the Work called for by the Contract, or the occupancy of the building by the Owner, in whole or in part, previous to the completion shall not be deemed a waiver by the Owner of his right to annul or terminate the Contract for abandonment or delay in the matter provided for, nor relieve the Contractor of full responsibility.

8.4

#### SUSPENSION AND DEBARMENT

8.4.1

Per Section 6962(d)(14), Title 29, Delaware Code, "Any Contractor who fails to perform a public works contract or complete a public works project within the time schedule established by the Agency in the Invitation To Bid, may be subject to Suspension or Debarment for one or more of the following reasons: a) failure to supply the adequate labor

supply ratio for the project; b) inadequate financial resources; or, c) poor performance on the Project.”

8.4.2

“Upon such failure for any of the above stated reasons, the Agency that contracted for the public works project may petition the Director of the Office of Management and Budget for Suspension or Debarment of the Contractor. The Agency shall send a copy of the petition to the Contractor within three (3) working days of filing with the Director. If the Director concludes that the petition has merit, the Director shall schedule and hold a hearing to determine whether to suspend the Contractor, debar the Contractor or deny the petition. The Agency shall have the burden of proving, by a preponderance of the evidence, that the Contractor failed to perform or complete the public works project within the time schedule established by the Agency and failed to do so for one or more of the following reasons: a) failure to supply the adequate labor supply ratio for the project; b) inadequate financial resources; or, c) poor performance on the project. Upon a finding in favor of the Agency, the Director may suspend a Contractor from Bidding on any project funded, in whole or in part, with public funds for up to 1 year for a first offense, up to 3 years for a second offense and permanently debar the Contractor for a third offense. The Director shall issue a written decision and shall send a copy to the Contractor and the Agency. Such decision may be appealed to the Superior Court within thirty (30) days for a review on the record.”

8.5

#### RETAINAGE

8.5.1

Per Section 6962(d)(5) a.3, Title 29, Delaware Code: The Agency may at the beginning of each public works project establish a time schedule for the completion of the project. If the project is delayed beyond the completion date due to the Contractor’s failure to meet their responsibilities, the Agency may forfeit, at its discretion, all or part of the Contractor’s retainage.

8.5.2

This forfeiture of retainage also applies to the timely completion of the punchlist. A punchlist will only be prepared upon the mutual agreement of the Owner, Architect and Contractor. Once the punchlist is prepared, all three parties will by mutual agreement, establish a schedule for its completion. Should completion of the punchlist be delayed beyond the established date due to the Contractor’s failure to meet their responsibilities, the Agency may hold permanently, at its discretion, all or part of the Contractor’s retainage.

### ARTICLE 9: PAYMENTS AND COMPLETION

9.1

#### APPLICATION FOR PAYMENT

9.1.1

Applications for payment shall be made upon AIA Document G702. There will be a five percent (5%) retainage on all Contractor's monthly invoices until completion of the project. This retainage may become payable upon receipt of all required closeout documentation, provided all other requirements of the Contract Documents have been met.

9.1.2

A date will be fixed for the taking of the monthly account of work done. Upon receipt of Contractor's itemized application for payment, such application will be audited, modified, if found necessary, and approved for the amount. Statement shall be submitted to the Owner.

9.2 PARTIAL PAYMENTS

9.2.1 Any public works Contract executed by any Agency may provide for partial payments at the option of the Owner with respect to materials placed along or upon the sites or stored at secured locations, which are suitable for use in the performance of the contract.

9.2.2 When approved by the agency, partial payment may include the values of tested and acceptable materials of a nonperishable or noncontaminative nature which have been produced or furnished for incorporation as a permanent part of the work yet to be completed, provided acceptable provisions have been made for storage.

9.2.2.1 Any allowance made for materials on hand will not exceed the delivered cost of the materials as verified by invoices furnished by the Contractor, nor will it exceed the contract bid price for the material complete in place.

9.2.3 If requested by the Agency, receipted bills from all Contractors, Subcontractors, and material, men, etc., for the previous payment must accompany each application for payment. Following such a request, no payment will be made until these receipted bills have been received by the Owner.

9.3 SUBSTANTIAL COMPLETION

9.3.1 When the building has been made suitable for occupancy, but still requires small items of miscellaneous work, the Owner will determine the date when the project has been substantially completed.

9.3.2 If, after the Work has been substantially completed, full completion thereof is materially delayed through no fault of the Contractor, and without terminating the Contract, the Owner may make payment of the balance due for the portion of the Work fully completed and accepted. Such payment shall be made under the terms and conditions governing final payment that it shall not constitute a waiver of claims.

9.3.3 On projects where commissioning is included, the commissioning work as defined in the specifications must be complete prior to the issuance of substantial completion.

9.4 FINAL PAYMENT

9.4.1 Final payment, including the five percent (5%) retainage, if determined appropriate, shall be made within thirty (30) days after the Work is fully completed and the Contract fully performed and provided that the Contractor has submitted the following closeout documentation (in addition to any other documentation required elsewhere in the Contract Documents):

9.4.1.1 Evidence satisfactory to the Owner that all payrolls, material bills, and other indebtedness connected with the work have been paid.

9.4.1.2 An acceptable RELEASE OF LIENS,

9.4.1.3 Copies of all applicable warranties,

9.4.1.4 As-built drawings,

GENERAL REQUIREMENTS

- 9.4.1.5 Operations and Maintenance Manuals,
- 9.4.1.6 Instruction Manuals,
- 9.4.1.7 Consent of Surety to final payment.
- 9.4.1.8 The Owner reserves the right to retain payments, or parts thereof, for its protection until the foregoing conditions have been complied with, defective work corrected and all unsatisfactory conditions remedied.

**ARTICLE 10: PROTECTION OF PERSONS AND PROPERTY**

- 10.1 The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract. The Contractor shall take all reasonable precautions to prevent damage, injury or loss to: workers, persons nearby who may be affected, the Work, materials and equipment to be incorporated, and existing property at the site or adjacent thereto. The Contractor shall give notices and comply with applicable laws ordinances, rules regulations, and lawful orders of public authorities bearing on the safety of persons and property and their protection from injury, damage, or loss. The Contractor shall promptly remedy damage and loss to property at the site caused in whole or in part by the Contractor, a Subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable.
- 10.2 The Contractor shall notify the Owner in the event any existing hazardous material such as lead, PCBs, asbestos, etc. is encountered on the project. The Owner will arrange with a qualified specialist for the identification, testing, removal, handling and protection against exposure or environmental pollution, to comply with applicable regulation laws and ordinances. The Contractor and Architect will not be required to participate in or to perform this operation. Upon completion of this work, the Owner will notify the Contractor and Architect in writing the area has been cleared and approved by the authorities in order for the work to proceed. The Contractor shall attach documentation from the authorities of said approval.
- 10.3 As required in the Hazardous Chemical Information Act of June 1984, all vendors supplying any materials that may be defined as hazardous, must provide Material Safety Data Sheets for those products. Any chemical product should be considered hazardous if it has a warning caution on the label relating to a potential physical or health hazard, if it is known to be present in the work place, and if employees may be exposed under normal conditions or in any foreseeable emergency situation. Material Safety Data Sheets must be provided directly to the Owner along with the shipping slips that include those products.
- 10.4 The Contractor shall certify to the Owner that materials incorporated into the Work are free of all asbestos. This certification may be in the form of Material Safety Data Sheet (MSDS) provided by the product manufacturer for the materials used in construction, as specified or as provided by the Contractor.

**ARTICLE 11: INSURANCE AND BONDS**

- 11.1 The Contractor shall carry all insurance required by law, such as Unemployment Insurance, etc. The Contractor shall carry such insurance coverage as they desire on their own property



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such as a field office, storage sheds or other structures erected upon the project site that belong to them and for their own use. The Subcontractors involved with this project shall carry whatever insurance protection they consider necessary to cover the loss of any of their personal property, etc.

11.2 Upon being awarded the Contract, the Contractor shall obtain a minimum of two (2) copies of all required insurance certificates called for herein, and submit one (1) copy of each certificate, to the Owner, within 20 days of contract award.

11.3 Bodily Injury Liability and Property Damage Liability Insurance shall, in addition to the coverage included herein, include coverage for injury to or destruction of any property arising out of the collapse of or structural injury to any building or structure due to demolition work and evidence of these coverages shall be filed with and approved by the Owner.

11.4 The Contractor's Property Damage Liability Insurance shall, in addition to the coverage noted herein, include coverage on all real and personal property in their care, custody and control damaged in any way by the Contractor or their Subcontractors during the entire construction period on this project.

11.5 Builders Risk (including Standard Extended Coverage Insurance) on the existing building during the entire construction period, shall not be provided by the Contractor under this contract. The Owner shall insure the existing building and all of its contents and all this new alteration work under this contract during entire construction period for the full insurable value of the entire work at the site. Note, however, that the Contractor and their Subcontractors shall be responsible for insuring building materials (installed and stored) and their tools and equipment whenever in use on the project, against fire damage, theft, vandalism, etc.

11.6 Certificates of the insurance company or companies stating the amount and type of coverage, terms of policies, etc., shall be furnished to the Owner, within 20 days of contract award.

11.7 The Contractor shall, at their own expense, (in addition to the above) carry the following forms of insurance:

11.7.1 Contractor's Contractual Liability Insurance

Minimum coverage to be:  
Bodily Injury

	\$1,000,000	for each occurrence
	\$3,000,000	aggregate
Property Damage	\$1,000,000	for each occurrence
	\$3,000,000	aggregate

11.7.2 Contractor's Protective Liability Insurance

Minimum coverage to be:  
Bodily Injury

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	\$1,000,000	for each occurrence
	\$3,000,000	aggregate
Property Damage	\$1,000,000	for each occurrence
	\$3,000,000	aggregate

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11.7.3

Automobile Liability Insurance

Minimum coverage to be:

Bodily Injury	\$1,000,000	for each person
	\$1,000,000	for each occurrence
Property Damage	\$500,000	per accident

11.7.4 Prime Contractor's and Subcontractors' policies shall include contingent and contractual liability coverage in the same minimum amounts as 11.7.1 above.

11.7.5 Workmen's Compensation (including Employer's Liability):

11.7.5.1 Minimum Limit on employer's liability to be as required by law.

11.7.5.2 Minimum Limit for all employees working at one site.

11.7.6 Certificates of Insurance must be filed with the Owner guaranteeing fifteen (15) days prior notice of cancellation, non-renewal, or any change in coverages and limits of liability shown as included on certificates.

11.7.7 Social Security Liability

11.7.7.1 With respect to all persons at any time employed by or on the payroll of the Contractor or performing any work for or on their behalf, or in connection with or arising out of the Contractor's business, the Contractor shall accept full and exclusive liability for the payment of any and all contributions or taxes or unemployment insurance, or old age retirement benefits, pensions or annuities now or hereafter imposed by the Government of the United States and the State or political subdivision thereof, whether the same be measured by wages, salaries or other remuneration paid to such persons or otherwise.

11.7.7.2 Upon request, the Contractor shall furnish Owner such information on payrolls or employment records as may be necessary to enable it to fully comply with the law imposing the aforesaid contributions or taxes.

11.7.7.3 If the Owner is required by law to and does pay any and/or all of the aforesaid contributions or taxes, the Contractor shall forthwith reimburse the Owner for the entire amount so paid by the Owner.

**ARTICLE 12: UNCOVERING AND CORRECTION OF WORK**

12.1 The Contractor shall promptly correct Work rejected by the Owner or failing to conform to the requirements of the Contract Documents, whether observed before or after Substantial Completion and whether or not fabricated, installed or completed, and shall correct any Work found to be not in accordance with the requirements of the Contract Documents within a period of two years from the date of Substantial Completion, or by terms of an applicable special warranty required by the Contract Documents. The provisions of this Article apply to work done by Subcontractors as well as to Work done by direct employees of the Contractor.

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- 12.2 At any time during the progress of the work, or in any case where the nature of the defects shall be such that it is not expedient to have them corrected, the Owner, at their option, shall have the right to deduct such sum, or sums, of money from the amount of the contract as they consider justified to adjust the difference in value between the defective work and that required under contract including any damage to the structure.

**ARTICLE 13: MISCELLANEOUS PROVISIONS**

13.1 CUTTING AND PATCHING

- 13.1.1 The Contractor shall be responsible for all cutting and patching. The Contractor shall coordinate the work of the various trades involved.

13.2 DIMENSIONS

- 13.2.1 All dimensions shown shall be verified by the Contractor by actual measurements at the project site. Any discrepancies between the drawings and specifications and the existing conditions shall be referred to the Owner for adjustment before any work affected thereby has been performed.

13.3 LABORATORY TESTS

- 13.3.1 Any specified laboratory tests of material and finished articles to be incorporated in the work shall be made by bureaus, laboratories or agencies approved by the Owner and reports of such tests shall be submitted to the Owner. The cost of the testing shall be paid for by the Contractor.
- 13.3.2 The Contractor shall furnish all sample materials required for these tests and shall deliver same without charge to the testing laboratory or other designated agency when and where directed by the Owner.

13.4 ARCHAEOLOGICAL EVIDENCE

- 13.4.1 Whenever, in the course of construction, any archaeological evidence is encountered on the surface or below the surface of the ground, the Contractor shall notify the authorities of the Delaware Archaeological Board and suspend work in the immediate area for a reasonable time to permit those authorities, or persons designated by them, to examine the area and ensure the proper removal of the archaeological evidence for suitable preservation in the State Museum.

13.5 GLASS REPLACEMENT AND CLEANING

- 13.5.1 The General Contractor shall replace without expense to the Owner all glass broken during the construction of the project. If job conditions warrant, at completion of the job the General Contractor shall have all glass cleaned and polished.

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13.6

WARRANTY

13.6.1

For a period of two (2) years from the date of substantial completion, as evidenced by the date of final acceptance of the work, the contractor warrants that work performed under this contract conforms to the contract requirements and is free of any defect of equipment, material or workmanship performed by the contractor or any of his subcontractors or suppliers. However, manufacturer's warranties and guarantees, if for a period longer than two (2) years, shall take precedence over the above warranties. The contractor shall remedy, at his own expense, any such failure to conform or any such defect. The protection of this warranty shall be included in the Contractor's Performance Bond.

**ARTICLE 14: TERMINATION OF CONTRACT**

14.1

If the Contractor defaults or persistently fails or neglects to carry out the Work in accordance with the Contract Documents or fails to perform a provision of the Contract, the Owner, after seven days written notice to the Contractor, may make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor. Alternatively, at the Owner's option, and the Owner may terminate the Contract and take possession of the site and of all materials, equipment, tools, and machinery thereon owned by the Contractor and may finish the Work by whatever method the Owner may deem expedient. If the costs of finishing the Work exceed any unpaid compensation due the Contractor, the Contractor shall pay the difference to the Owner.

14.2

“If the continuation of this Agreement is contingent upon the appropriation of adequate state, or federal funds, this Agreement may be terminated on the date beginning on the first fiscal year for which funds are not appropriated or at the exhaustion of the appropriation. The Owner may terminate this Agreement by providing written notice to the parties of such non-appropriation. All payment obligations of the Owner will cease upon the date of termination. Notwithstanding the foregoing, the Owner agrees that it will use its best efforts to obtain approval of necessary funds to continue the Agreement by taking appropriate action to request adequate funds to continue the Agreement.”

END OF SECTION 00 73 50

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SECTION 007400 – DELAWARE PREVAILING WAGE RATES & REPORTING FORM

ATTACHMENTS:

1. Delaware Department of Labor Payroll Report Form
2. Delaware Department of Labor Prevailing Wage Rates for Building Construction
  - Included by Reference: The State of Delaware Prevailing Wage Rate Regulations. A copy is available from the Department of Labor by calling 302-761-8200 or online on the State of Delaware’s website. Contractors are required to abide by all requirements issued by the State relating to prevailing wage regulations.
  - Contractors are required to submit payroll reports to the Department of Labor. Refer to the State Prevailing Wage regulations and the instructions to bidders section 00200 Article 4.5.

END OF SECTION 007400



**NOT FOR BID**

STATE OF DELAWARE  
DEPARTMENT OF LABOR  
DIVISION OF INDUSTRIAL AFFAIRS  
OFFICE OF LABOR LAW ENFORCEMENT  
PHONE: (302) 318-2769

Mailing Address:  
252 Chapman Road  
Newark, DE 19702

Located at:  
252 Chapman Road  
Newark, DE 19702

PREVAILING WAGES FOR HEAVY CONSTRUCTION EFFECTIVE MARCH 15, 2023

CLASSIFICATION	NEW CASTLE	KENT	SUSSEX
ASBESTOS WORKERS	26.95	23.70	51.54
BOILERMAKERS	86.57	39.16	71.83
BRICKLAYERS	84.08	72.20	30.37
CARPENTERS	59.56	59.56	47.80
CEMENT FINISHERS	53.16	29.69	22.12
DIVER	95.30	Contact DDOL -	Contact DDOL -
DIVER TENDER	108.79	Contact DDOL -	Contact DDOL -
ELECTRICAL LINE WORKERS	88.36	88.36	88.36
ELECTRICIANS	79.17	79.17	79.17
GLAZIERS	24.89	21.62	14.65
INSULATORS	65.34	65.34	65.34
IRON WORKERS	73.31	74.33	73.31
LABORERS	53.65	53.65	53.65
MILLWRIGHTS	82.08	82.08	65.93
PAINTERS	91.91	91.91	91.91
PILEDRIVERS	85.37	47.99	37.34
PLASTERERS	23.44	20.38	13.76
PLUMBERS/PIPEFITTERS/STEAMFITTERS	96.38	94.91	23.76
POWER EQUIPMENT OPERATORS	79.29	83.90	79.29
SHEET METAL WORKERS	37.47	23.25	21.84
SPRINKLER FITTERS	40.39	15.29	12.67
TRUCK DRIVERS	41.73	25.08	27.15

CERTIFIED: 8/11/2023

BY: Sabrina Chesdand / for Francis Chudrik  
ADMINISTRATOR, OFFICE OF LABOR LAW ENFORCEMENT

**NOTE:** THESE RATES ARE PROMULGATED AND ENFORCED PURSUANT TO THE PREVAILING WAGE REGULATIONS ADOPTED BY THE DEPARTMENT OF LABOR ON APRIL 3, 1992.

CLASSIFICATIONS OF WORKERS ARE DETERMINED BY THE DEPARTMENT OF LABOR. FOR ASSISTANCE IN CLASSIFYING WORKERS, OR FOR A COPY OF THE REGULATIONS OR CLASSIFICATIONS, PHONE (302) 318-2769.

NON-REGISTERED APPRENTICES MUST BE PAID THE MECHANIC'S RATE.

PROJECT: CHR23009ENBANDEMO Bancroft School Demolition, New Castle County

**NOT FOR BID**

**NOT FOR BID**

**PREVAILING WAGE DEBARMENT LIST**

The following contractors have been debarred for violations of the prevailing wage law 29Del.C. §6960 or other applicable State statutes.

Therefore, no public construction contract in this State shall be bid on, awarded to, or received by contractors and individuals on this list for a period of (3) three years from the date of the judgment or as deemed by a court of competent jurisdiction.

<b>Contractor</b>	<b>Address</b>	<b>Date of Debarment</b>
Mullen Brothers, Inc. and Daniel Mullen, individually	3375 Garnett Road, Boothwyn, PA 19060	Indefinite/ Civil Contempt
State Contractors Corporation, and Jose Oscar Rivera, individually	13004 Hathaway Drive Silver Spring, MD 20906	Indefinite/ 19 <u>Del.C.</u> 2374(f)
Green Granite and Jason Green, individually	604 Heatherbrooke Court Avondale, PA 19311	Indefinite/ Civil Contempt
Pro Image Landscaping, Inc. and Owner(s) individually	23 Commerce Street Wilmington, DE 19801 and/or 2 Cameo Road Claymont, DE 19703	Indefinite/19 <u>Del.C.</u> §108 & 10 <u>Del.C.</u> 542(c)
Liberty Mechanical, LLC and Owner(s), individually	2032 Duncan Road Wilmington, DE 19801	Indefinite/ 19 <u>Del.C.</u> 2374(f)
Integrated Mechanical and Fire Systems Inc. and Allison Sheldon, individually	4601 Governor Printz Boulevard Wilmington, DE 19809	Indefinite/19 <u>Del.C.</u> §108 & 10 <u>Del.C.</u> 542(c)
ACH I, INC.	873 Salem Church Road Newark, DE 19702	Indefinite/19 <u>Del.C.</u> 6960

Updated: July 6, 2022

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**EMPLOYEE DRUG TESTING REPORT FORM**

**Period Ending:** \_\_\_\_\_

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors who work on Large Public Works Contracts funded all or in part with public funds maintain testing data that includes but is not limited to the data elements below.

Project Number: CHR-23021E-BANDEMO

Project Name: BANCROFT DEMOLITION

Contractor/Subcontractor Name: \_\_\_\_\_

Contractor/Subcontractor Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Number of employees who worked on the jobsite during the report period: \_\_\_\_\_

Number of employees subject to random testing during the report period: \_\_\_\_\_

Number of Negative Results \_\_\_\_\_ Number of Positive Results \_\_\_\_\_

Action taken on employee(s) in response to a failed or positive random test:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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

This form is not required to be submitted to the Owner. Included as a reference to show information required to be maintained by the Contractor. The Owner shall have the right to periodically audit all Contractor and Subcontractor test results at the Contractor's or Subcontractor's offices (or by other means to make the data available for inspection by the Owner).

**EMPLOYEE DRUG TESTING**  
**REPORT OF POSITIVE RESULTS**

4104 Regulations for the Drug Testing of Contractor and Subcontractor Employees Working on Large Public Works Projects requires that Contractors and Subcontractors who work on Large Public Works Contracts funded all or in part with public funds to notify the Owner in writing of a positive random drug test.

Project Number: \_\_\_\_\_

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

Contractor/Subcontractor Name: \_\_\_\_\_

Contractor/Subcontractor Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Name of employee with positive test result: \_\_\_\_\_

Last 4 digits of employee SSN: \_\_\_\_\_

Date test results received: \_\_\_\_\_

Action taken on employee in response to a positive test result:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Authorized Representative of Contractor/Subcontractor: \_\_\_\_\_  
(typed or printed)

Authorized Representative of Contractor/Subcontractor: \_\_\_\_\_  
(signature)

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

**This form shall be sent by mail to the Owner within 24 hours of receipt of test results.**

**Enclose this test results form in a sealed envelope with the notation "Drug Testing Form – DO NOT OPEN" on the face thereof and place in a separate mailing envelope.**

**Bancroft Demolition**  
700 E. 7<sup>th</sup> St, Wilmington, DE  
CHR-23021E-BANDEMO

**AFFIDAVIT OF  
CRAFT TRAINING COMPLIANCE**

We, the contractor, hereby certify that we and all applicable subcontractors will abide by the contractor and subcontractor craft training requirements outlined below for the duration of the contract. Craft training must be provided by a contractor and/or subcontractor for each craft on a project for which there are Delaware Department of Labor approved and registered training programs or, if the contractor and/or subcontractor meets the requirements under Title 29, Chapter 69, Section 6960A.(b)(1)c.1.-3., payment may be made in accordance with Title 29, Chapter 69, Section 6960A.(b)(1)d. A list of crafts for which there are approved and registered training programs is maintained by the Delaware Department of Labor and can be found at: <https://laborfiles.delaware.gov/main/det/apprenticeship/DE%20Craft%20Training%20Occupation%20List%20Effective%20March%201%202022.pdf>. If you have questions regarding craft training programs, please submit all questions in writing to the Delaware Department of Labor at: [apprenticeship@delaware.gov](mailto:apprenticeship@delaware.gov). *This Affidavit of Craft Training Compliance must be submitted prior to contract execution.*

In accordance with Title 29, Chapter 69, Section 6960A.(a)(1), a contract relating to a public works project under § 6962 of Title 29 must include a craft training program for each craft in the project if at the time the contractor executes a public works contract, all of the following apply:

- a. A project meets the prevailing wage requirement under Section 6960 of Title 29.
- b. The contractor employs 10 or more total employees.
- c. The project is not a federal highway project, except for the project under Section 6962(c)(11) of Title 29.
- d. There is an apprenticeship program for a craft in the project on the list of crafts under Section 204(b)(2) of Title 19.

Pursuant to Title 29, Chapter 69, Section 6960A.(a)(2), *a contractor must commit that all subcontractors provide craft training* if paragraph (a)(1) of this section applies to the subcontractor. Failure to provide required craft training or payment on the project may subject the successful contractor and/or subcontractor(s) to penalties as outlined in Title 29, Chapter 69, Section 6960A.(d)(1)-(3).

**Craft(s):** \_\_\_\_\_  
**Contractor Name:** \_\_\_\_\_  
**Contractor Address:** \_\_\_\_\_  
\_\_\_\_\_

**Contractor Program  
Registration Number(s)** \_\_\_\_\_  
On this line also indicate whether DE, Other State (identify) or US Registration Number

Or  
 A payment has been made in the amount established under Section 204(b)(2)b.2. of Title 19, for the craft into the Delaware Department of Labor's Apprenticeship and Training Fund.

Or  
 Craft Training requirements are not applicable because:  
\_\_\_\_\_

**Authorized Representative (typed or printed):** \_\_\_\_\_  
**Authorized Representative (signature):** \_\_\_\_\_





**SECTION 01 12 00-01A – GENERAL SCOPE OF WORK**

All work is to be done in accordance with the Contract Documents, including the drawings and the specifications, this scope of work, and all addenda if any. Each trade must comply fully with all sections of the Division 1 general requirements.

This scope is intended as a reference to assist in the bidding process. The Contractor is responsible for all labor, material, tools, equipment, hoisting, storage, layout, incidental work, and associated services necessary to fully complete all of the work described and shown in the Contract Documents. This contractor is responsible to review and include all items in their attached specific scope of work and to also review the work of other trades.

This work includes but is not limited to:

1. All bidders are required to provide 10% bid bond for each bid package submitted.
2. All contractors are required to provide 100% payment and performance bonds for their contract.
3. All contractor employees will be required to sign-in each day on the jobsite.
4. Work hours are 8:00 am to 4:30 pm. See note general scope #41 below, Wilmington Noise Ordinance. All contractors are required to work minimum 5 days per week, 8 hours per day. If day(s) are lost during the work week, all contractors are required to work Saturdays and/or extended hours (coordinate with WT first) to make up for all lost days at no added cost. See specific scope requirement for overtime.
5. Each contractor, upon award, is to forward budget costs for each individual item of work, in s.f. or l.f. costs for accounting only. A list will be forwarded to each sub from Whiting-Turner.
6. Each foreman is required to complete daily field reports and turn them into WT daily. This report states where and what work was performed. Failure to submit reports on a daily basis may delay contractor payment.
7. All deliveries must be scheduled in advance with Whiting-Turner. Major deliveries, those that may impact or disrupt the work of other trades, require seven (7) days notice to WT. Minor deliveries require two (2) days notice to WT. WT shall coordinate storage locations for all deliveries.
8. All contractors shall attend schedule pull planning sessions with WT.
9. This contractor will execute an AIA contract with no changes. See Specification sections 00 52 00, 00 54 13, 00 70 00, and 00 73 00
10. All contractor employees will meet with the WT Superintendent for a short safety orientation upon starting their work on site. All contractor employees are required to attend this orientation.
11. The foreman and project manager will need to meet with the superintendent for a “pre-start” job meeting.
12. This contractor is responsible for all existing site conditions in existence as of the bid due date. These conditions may not be identified on the drawings or in this scope of work. Examine prior to the bid.
13. All contractors are required to perform all layout required for their work.
14. No gasoline-powered equipment can be used at any time within an enclosed building. All equipment you plan to use must be reviewed with the Superintendent for safety concerns.
15. SDS must be forwarded prior to starting work. No chemicals can be used at any time without properly reviewing them with WT first.
16. All contractors are required to perform any necessary dewatering in order to complete their work.

17. All subcontractors are responsible for daily cleanup of their debris to the jobsite dumpster. This means that no trash or excess construction materials can be left on site or in buildings at the end of the day. Failure to do so may result in backcharges.
18. Storage space will be limited. Materials and gang boxes cannot be in the way of other trades, traffic, fire lanes, access, etc. Review location and requirements with WT. Onsite storage trailer will not be allowed, provide off site storage and trucking as required.
19. Jobsite security and security of materials, equipment, tools, etc. is the responsibility of each contractor.
20. Contractors are required to coordinate with other trades and with Whiting-Turner.
21. Contractors are required to comply with all safety regulations as required by OSHA, State of Delaware, Christina School District, Whiting-Turner, and as noted in the specifications. Provide all safety devices necessary for your work.
22. All worker must have their company name and employee name on their hard hats.
23. All change order pricing must be accompanied by a labor and material breakdown and with subcontractor & vendor quotes.
24. Care must be taken to not mark or damage finished surfaces. Contractors will be backcharged or will need to pay for repairs to the work of others. Protect the owner's property.
25. All safety, barricades, floor opening protection, etc., installed by this contractor or by others is the responsibility of this contractor if moved or damaged by this contractor.
26. Provide all testing, guarantees, warranties, as-built drawings, O&M manuals, commissioning tests, close-out documentation, and start-up services necessary to put all work into first class operating condition per the contract documents including any final cleanup required.
27. As-built drawings must be maintained on the job-site and updated on a daily basis for review by Whiting-Turner. At contract completion, contractor must submit as-built drawings and O&M Manuals as required by specifications.
28. Where furnishing and installation of work is indicated by separate parties include:
- Furnishing Party – delivery to jobsite including freight and taxes
  - Installing Party – receiving, unloading, inventory, storage, handling, and installation.
29. Permit fees and licenses required for work, other than the building permit, shall be furnished by the contractor whose work requires such permits.
30. General temporary lighting, 120V power & water will not be provided. Any contractor requiring temporary services shall provide the necessary temporary service required for their work. Refer to specific scopes of work for contractors that will be required to provide all temporary power and lighting for the duration of their work.
31. Each contractor shall provide scaffolding, hoists, lifts, cranes, and other means of access for own work.
32. Premium cost for shutdowns or any other off-hour work. All shutdowns must be scheduled at least two (2) weeks in advance.
33. Phasing and remobilization per the project schedule and as required to properly coordinate and complete the work.
34. Contractors are to perform their work according to the project schedule. Overtime and weekends are to be included as required. Field measurements and verification of existing conditions.
35. Temporary weather and dust protection for own work.
36. Perform any snow removal for access to your work, beyond road areas normally maintained by State/City.

- NOT FOR BID**
37. Compliance with local noise restrictions. . See City of Wilmington City Code, Chapter 11, Article III, Noise Control and abatement - Operating or causing to be operated any equipment or construction tools used in commercial or noncommercial construction, repair, alteration, or demolition work on buildings, structures, streets, creating a noise disturbance in a residence districts at any time before 8:00 a.m. and after 7:00 p.m., Monday through Friday; before 9:00 a.m. and after 7:00 p.m. on Saturday; and before 10:00 a.m. and after 5:00 p.m., on Sunday or the day of a legal, national or state holiday is prohibited.
  38. Temporary sheeting, shoring & bracing as required to perform this work. Engineering calculations/PE certifications if specified.
  39. Warrantees as specified commencing on date of substantial completion.
  40. Insurance as required by specifications. Maintain throughout project. Professional liability insurance for any design/engineering work.
  41. Include all applicable City wage, sales, use & excise taxes.
  42. Additional reinforcement/supports for this work which is not detailed on the architectural and structural drawings.
  43. Comply with all Whiting-Turner and Owner Quality Control Program requirements for this work.
  44. The contractor must have on site at all times during own work a supervisor or foreman responsible to coordinate the work with all other trades to meet the project schedule, to perform the work to meet the contract documents and to effectively communicate with the construction manager and other trades. The decision of that individual shall be binding upon the contractor. The onsite foreman or supervisor must have a tablet with internet capability and email that they check at minimum (2) times per day.
  45. Attendance at foreman meetings by the supervisor or foreman is mandatory.
  46. Attendance at progress meetings by your project manager is mandatory. Meetings may be tape recorded.
  47. The successful contractor must list the names of all onsite workers and certify they are not on the Delaware Sex Offender Central Registry.
  48. After bids are received, contractors will need to attend a scope review meeting with Whiting-Turner, the Owner, and the Architect.
  49. The successful contractor must forward Whiting-Turner a copy of their safety program.
  50. During this project, hot work permits will need to be obtained from Whiting-Turner prior to proceeding with any such work on a daily basis.
  51. All contractors are responsible for their work as shown on any and all drawings.
  52. Building or site commissioning is to be performed separately from owner training.
  53. All subcontractor foremen and project manager are required to remain as such throughout the duration of the project unless otherwise approved by WT and Christina School District.
  54. This project will be using Procore project management software, all trade contractor's project managers and superintendents/Foremen are required to use Procore for submittals, RFI's, document management, issue management, quality control and punchlist. A login will be provided at no cost. All foreman are required to have an Ipad or tablet for daily use of Procore.
  55. The following documents will be required at project start-up and need to be submitted with-in two weeks of the notice to proceed:
    - A. Fully executed Contract.
    - B. Copy of State of DE Business License
    - C. Copy of City of Wilmington License

- NOT FOR BID**
- D. Insurance Certificate indicating coverage and limits, as specified in Contract Documents.
  - E. Permits or permit filing receipts as required by the contract documents, City of Wilmington, New Castle County, State of Delaware or any other regulatory agencies having jurisdiction. (Building permit is by CM)
  - F. Payment Bond and Performance Bond
  - G. Emergency Telephone Numbers for project manager and foremen
  - H. Attendance of Onsite Safety Orientation
  - I. List of all applicable labor rates
  - J. Detailed Schedule for the work
  - K. Schedule of Values for invoicing
  - L. Subcontractor List
  - M. Supplier List
  - N. Certification that all onsite workers are not on the Delaware Sex Offender Central Registry.
56. The following field safety documents will be required at project start-up and need to be submitted with-in 1 month of starting work onsite:
- A. Site Specific Safety Plan
  - B. JHA/AHAs for Major Phases of Work
  - C. OSHA 30 Card (for on-site representative)
  - D. Competent Person Identified (for on-site representative)
  - E. CPR/First Aid Certification(s) (for on-site representative)
  - F. Site Specific SDS and Chemical Inventories
  - G. Certification/Training Card(s) (for any piece of equipment that you will be operating on site including forklifts, aerial lifts, scaffolds, etc.)
  - H. Fall Protection Plan
  - I. Silica Exposure Control Plan
57. The following documents (other than submittals) will be required prior to billing for the close-out documents.
- A. Signed-off copy of the punchlist.
  - B. Attic stock delivery confirmation (if required by the specifications)
  - C. As-built Drawings
  - D. Testing Reports and/or Equipment Start-up reports
  - E. Operation and Maintenance Manuals
  - F. Standard Guarantee/Warranty for this Trade Contractor and subcontractors (attached)
  - G. Specific Warranties from individual suppliers or manufacturers
  - H. Affidavit that all taxes have been paid
  - I. AIA Document G706 – Affidavit of Payment of Debts and Claims (Original available from AIA)
  - J. AIA Document G706A – Affidavit of Release of Liens (Original available from AIA)
    - Complete and attach the ‘Trade Contractor’s Final Release and Affidavit’
    - Complete and attach the ‘Final Waiver and Release for Second Tier subcontractors and suppliers’ (1 needed from each subcontractor / supplier utilized.)

K. AIA Document G707, Consent of Surety of Final Payment (Original available from AIA)

END OF SECTION 01 12 00-01A

**NOT FOR BID**

**NOT FOR BID**

**SECTION 01 12 00-02C – SPECIFIC SCOPE OF WORK – BUILDING DEMOLITION**

**SPECIFIC SCOPE – Building Demolition and Abatement:**

- A. The provisions outlined in the General Scope of Work shall apply to all items of this section. All work shall be in accordance with the schedule.
- B. This work shall include all labor, supervision, material, tools, equipment, shop drawings, submittals, layout, unloading, scaffolding, ladders, hoisting, transportation, taxes, permits, engineering, support functions, insurance, bonds, and any other items or services necessary for and reasonably incidental to the proper execution and completion of the work, whether temporary or permanent, in accordance with all drawings, specifications, addenda, general conditions, requirements, and other related documents as indicated herein. All work shall be furnished and installed unless noted otherwise herein. The scope of work shall include but not be limited to the following specific scope of work:

**SPECIFICATION SECTIONS**

Prepared by ABHA / BSA+A, dated November 29, 2023:  
 Volume 1: Divisions 00 – 31

The contractor is fully responsible for the technical specification sections as listed below for this Unit of Work. The exception to this is when the note “As Applicable” follows a technical specification section. In that case, other units of work, as defined by the Scope, may also have some responsibility for that particular section. General Conditions, Supplementary Conditions, General Requirements and General Scope Items apply to each and all of the Individual Units of Work.

Section	Description	Responsibility
Division 00	Bidding and Contract Requirements	In Its Entirety
Division 01	General Requirements	In Its Entirety
024116	Structural Demolition	In Its Entirety
02 82 00	Asbestos Abatement.	In Its Entirety
Division 31	Earthwork	In Its Entirety

1. See “Use of Archival Drawing Notes” on Contract Drawings, the 1924 and 1965 and 1997 construction drawings are provided to assist in bidding. Existing Conditions may differ substantially. Contractor must review/walk the site. This Contractor must fully inform themselves as to all existing condition and limitation that are above ground, visible and readily accessible and as well as indicated in the contractor documents under which the work as set forth. No allowance will be made to any contractor because of lack of such examination or knowledge. The submission of a bid is construed as conclusive evidence that the contractor has made such examinations.
2. Unless explicitly stated otherwise, “demolition” shall constitute the demolition, removal from site and proper disposal of all materials indicated in this scope of work.
3. Include the cost of performance and payment bonds in the base bid.
4. Site must be maintained and cleaned daily.
5. All trucks are required to clean their tires prior to leaving the project site.
6. A temporary power source will not be provided, it will be the responsibility of this contractor to provide power via generator or battery-operated equipment for the duration of their work.
7. Provide temporary lighting while working in the building per OSHA requirements.



6. Provide, maintain and remove all safety barricades, traffic controls, shoring, flagmen, etc. to comply with all safety practices required by OSHA, State of Delaware, City of Wilmington, New Castle County, Christina School District, The Whiting-Turner Contracting Company or any agency having jurisdiction and as noted in the specifications in order to complete the work under this Contract.
9. This contractor is responsible for all fall protection and safety requirements associated with roof work. When working from lifts & harnesses, or tie-offs provided by this contractor, OSHA & WT standards must always be met and followed.
10. This Demolition Contractor is to provide and pay for any required permits and/or approvals required for this work including but not limited to the City of Wilmington, State of Delaware and all appropriate state, city and county agencies. Only the City of Wilmington building/demo permit will be provided by Whiting-Turner.
11. This Building Demolition Contractor is required to coordinate with other trades as required.
12. All work/disposal is to be done per all federal, state, local, OSHA rules and regulations.
13. This contractor shall take protective measures necessary for the safety of all workers, the public and adjacent properties. All safety measures shall comply with the regulation of all Federal, State, Local authorities having jurisdiction including all applicable OSHA, Whiting-Turner (W-T) safety rules and at W-T's direction. Contractor shall abide by all current regulation and procedures regarding any confined space safety practices and fall protection.
14. Contractor is responsible for silica and dust control measures during their demolition. Water must be provided by this contractor. This contractor is responsible for all dust that leaves this site, as well as the exposure to workers and the surrounding community.
15. All cutting, drilling, grinding, chipping and dust producing activities must comply with Whiting-Turner's safety policies and OSHA's crystalline silica dust regulations.
16. Provide erosion and sediment control at all ground that is disturbed by this contract. This demolition contract must construct, maintain and remove (2) stabilized entrances, minimum of 15' x 50' for their own work. Locations determined in consultation with WT. Include any additional SCE if your work will require more that 2 entrance locations.
17. Sitework contractor will protect all storm inlets prior to your work. Maintenance of this inlet protection is by the demolition contractor while they are onsite. Sitework contractor will install all other E&S controls AFTER your work is complete, you will not have the benefit of their use. While the building demolition contractor is onsite, they must assure that sediment does not leave the site.
18. This contractor shall provide all unloading, hoisting and maintenance of traffic, scaffolding, lifts, cranes and other means of access for your own work as needed.
19. This contractor acknowledges that the current Bancroft school will be occupied during the school year and some especially noisy work will be requested on a case-by-case basis to happen when school is not in session.
20. This contractor is to comply with all local noise restrictions. See general scope and City of Wilmington ordinances to include but not limited to Chapter 11 and Article III.
21. Temporary sheeting, shoring and bracing as required to perform your work.
22. SDS sheets for all material brought onto the site must be submitted prior to starting work.
23. Provide all insurances per Specifications. See SECTION 005200 A132-2019 - Exhibit A
24. This contractor is responsible for all applicable taxes.
25. Participate in a preconstruction conference with the City Fire Marshal's office.
26. Provide any warning lines/temporary barricades as needed to safely perform your work and protect others.
27. During performance of your own work or subcontractors work, this contractor must have full-time competent onsite supervision (capable of making construction changes (schedule/cost) as needed).
28. Use of the site for staging, storage trailer, parking, etc. shall be as submitted for approved by W-T.
29. All change pricing must be submitted within five (5) days of receipt of requested change unless mutually agreed otherwise. All pricing must be accompanied by a detailed breakdown of the cost.

Lump sum pricing will not be accepted. All change orders requested shall be made in writing. A request for change does not mean a change is authorized. Authorization to proceed with change will follow change request.

30. Prior to proceeding with extra work, written approval must be received from the WT team. Tickets for extra work will not be considered unless signed by an Authorized W-T representative and backed up by a written summary of all associated cost within five (5) days of the performance of such work. Approval of a field ticket is acknowledgement of work completed but does not constitute immediate agreement of payment due.
31. Construction personnel shall use designated entrance and egress areas to the project as direct by W-T.
32. This contractor shall identify all onsite utilities prior to your work. Include documentation and marking prior to removing foundations and footer. This contractor must physically locate existing utilities starting at the curb line to the building, utilizing vacuum truck potholing. WT's utility avoidance policy, section 013520.
33. 3 weeks prior to starting excavation, this contractor must participate in a utility avoidance conference per WT EH&S manual and Utility Avoidance Policy. Additionally, this contractor must call local or state utilities locator service (miss utility) at least 3 days prior to digging. This contractor must keep that permit/ticket current with utility company's during the entire excavation.
34. Perform all layouts and survey for this work.
35. Provide daily clean-up of all material, trash, and debris in order to keep a neat and orderly site.
36. All demolished material under this contract to be placed in dumpsters provided by this contractor, hauled off-site and properly disposed of in a legal manner. See Specification Section 017419, Construction Waste Management for additional requirements. No dumpster deliveries are to be made during pick up and drop off times of the existing Bancroft School.
37. Not debris may be thrown from the 2<sup>nd</sup> or 3<sup>rd</sup> floor windows or from the roof. A trash shoot or other methods may be used so material does not free fall unconfined, must comply with the City of Wilmington requirements and WT EH&S manual.
38. Assume that no trucking can take place between 8:30am – 9:30am and 2:30pm - 4pm. All dumpster and disposal cost for demolition under this scope is to be paid by the demolition contractor
39. All items intended to be scrapped or salvaged should be secured at the end of each shift by this contractor, the prevention of loss or theft from the site or dumpsters is not the responsible of the CM or the owner.
40. This contractor shall replace any damaged paving, curbing, sidewalks or trees that that is scheduled to remain. Additionally, see Drawing C-102, for existing tree to remain at 8th and Pine. The tree, branches and roots must be protected from damage.
41. See site demolition plan, tree demolition is by the site work contractor AFTER your work is complete. It is the demolition contractor option to remove designed trees scheduled to be removed, cut flush and dispose of offsite.
42. Advanced notice to WT and City of Wilmington for any road closures. Closures will need to be coordinated, all WT and local authorities' requirements must be followed. The cost associated with road closures is by this contractor. All flaggers, signage, barricades required for closures are to be provided by this contractor.
43. Contractor to remove entire existing building/structure in its entirety.
44. Removal and safing off of the entire electrical system (Switchgear, transformers, wiring, panels, branch wiring, fixtures and devices) from the building is by this contactor. This Demolition Contractor must contract a licensed electrician to disconnect power to the building and verify that no power is present in the systems to be removed. Disconnect of Primary feeders from the pole to the transformer is by Delmarva Power, but coordinated by this contractor. Secondary feeders from the transformers to the building should be removed. Duct bank 5' outside of the building is to remain. Removal of transformer and transformer pad is by others. Note transformer is located at 7th and Lombard, on the new Bancroft School block.
45. Pole mounted power lines will still be live, maintain OSHA mandated clearances during your

- work.
46. Drain, remove, and dispose of the entire plumbing, fire sprinkler and HVAC system, including but not limited to Boilers pumps, piping, equipment from the building. Capping of water and gas service at the curb is by others. This Contractor must contract a licensed plumber to verify that no gas or water is entering the building prior to removing the plumbing, fire sprinkler or gas piping. Remove any piping within 5' of the building footprint and all under slab piping within building.
  47. Contractor may choose to install a temporary water source during demolition. A backflow preventor and meter must be used.
  48. Cap building storm and sewer lines at the curb 5' outside of the building.
  49. Remove and disposal of all roof mounted and building HVAC equipment is by this contractor. Provide plywood covers or rails at holes created by removed rooftop equipment and ducts to prevent a fall hazard. Provide covers and rails when removing ducts and walls create a fall hazards. Holes must be covered, label and protected per OSHA and WT safety policy. Capture refrigerant, drain, safe-off, HVAC Equipment. This must document the legal disposal of refrigerant.
  50. Remove and dispose of kitchen hood and fire suppression system, food service equipment, walk in coolers and permanently attached food service fixtures. Owner has the right of first refusal of any kitchen equipment. Remove and dispose of (2) ~ 40 gal grease interceptor both below slab in kitchen.
  51. Removal and dispose of window mounted AC units, must capture refrigerant.
  52. This contractor shall remove and dispose of window treatments, window sills, framed walls and ceiling, flooring, wall base, steel and wood stairs, ceramic tile, toilet accessories, toilet compartments, shelving, doors, glass, architectural specialties, chalk/marker/tack boards, casework and all permanently attached building furnishings.
  53. Remove lighting fixtures and dispose of ballasts and lamps per DNREC requirements.
  54. Remove acoustical tile and suspension grid supports, spline acoustical ceiling tiles. Note some areas of the building have a double ceiling, an acoustical drop ceiling underneath an acoustical spline ceiling. A survey must be conducted to verify this condition to account for this condition in your bid.
  55. Remove elevator in its entirety, remove car, rails, wiring/piping, doors, equipment. Dispose of hydraulic fluid must be disposed of properly. Provide temporary safety rail at elevator shaft on both first and second floor. The elevator is a confined space, persons entering must follow WT's and OSHA's confined space policy.
  56. Remove of concrete slabs, footers, piers, foundations, concrete structures, slab on deck, structural steel, joist, metal decking, stair assemblies, stair rails, wood structural beams, exterior facade, exterior brick, masonry/brick/plaster walls, exterior windows and exterior storefront and roof assembly.
  57. Building Demolition contractor to remove any duct bank within 5' of the building footprint and all branch conduits under slab and contained building footprint.
  58. All site demo more than 5' outside building/foundation line is by others unless otherwise noted on the contract drawings or within this scope of work. See scope items concerning utility location.
  59. Carefully salvage designated items as shown on AD-111 and AD-112. Turnover items to Whiting-Turner.
  60. Currently, the existing basement and crawl space is shallower than the proposed finished elevations. Removal of below grade components and foundation walls should be carried out in a manner that ground movement or slope failures will not occur. Shoring design, if deemed necessary, and any necessary permits, should be the responsibility of the contractor. Contractor to provide compacted backfill of all open holes created by removal of building/structure to match adjacent site grading and promote positive drainage. Compaction to be verified by the owner's 3rd party testing agency. Include in your bid, placement and compaction of 500 tons of imported Select fill at basement area.
  61. Exterior Sidewalk removal is by others.
  62. Remove and dispose of fuel oil tank in the basement, include in your bid pumping and disposing of 800 gallons of #2 Heating Oil. Comply with all DNREC requirement, state and local

requirements. See Section 003119 for tank report.

63. Provide asbestos abatement per Specification Section 028200, Asbestos Abatement. This Demolition Contractor is to contract and pay for the Asbestos Abatement. Abatement contractor must be a State of Delaware certified Asbestos Contractor. Asbestos contractor to dispose of waste at an EPA approved landfill as detail in specification. Air monitoring and sampling to be provided by others.
64. Provide 8' post driven perimeter chain line fencing installed at the curb line around the entire block with minimum of 2 cantilevered vehicle gates at new gates at parking lot entrance and 4 man gates. Provide other openings and modification as need for your work. Provide 4 additional month of rental after demolition is complete. Removal of the fencing is by this contractor. Follow WT utility avoidance policy.

### ALLOWANCES

Include the following allowances in the base bid. They will be billed against on a time and material basis during the project with labor rates and unit prices that will include the allowable overhead and profit. Any unused portion will be credited from the contract. The allowances can be used for another purpose at the discretion of the CM at any time:

1. Building Demolition Allowance – Include in the base bid a **\$100,000** allowance for miscellaneous demolition work. This allowance is for additional demolition work above and beyond work that is shown on the bid documents. This allowance to be utilized at the sole discretion of Whiting-Turner.

### ALTERNATES

See Section 01 23 00 for the list of alternates and additional details that may or may not apply to this scope of work. All alternate pricing MUST include all contractor costs including material, labor, overhead & profit, insurance, and P&P bonds.

Insert the following alternate prices into the spaces provided on the bid form.

### **ALTERNATE No. 1: Front Entrance Pediment Salvage by Others**

UNIT PRICES – Note: The owner reserves the right to request lump sum pricing for extra work in lieu of applying unit prices.

1. Import and placement/compaction of select fill, per ton
2. Abate and dispose of floor tile only, non-ACM mastic, per s.f.
3. Abate and dispose of single layer of floor tile and mastic, per s.f.
4. Abate and dispose of ACM Joint Compound on Drywall, per s.f.
5. Abate and dispose ACM mastic behind chalkboards, per s.f.
6. Install and breakdown two stage decontamination, per ea
7. Install and breakdown one stage decontamination, per ea
8. Construction and decontamination of containment area 100-500 s.f., per s.f.
9. Construction and decontamination of containment area greater than 500 s.f., per s.f.

**NOT FOR BID**

**NOT FOR BID**

**SECTION 01 23 00 - ALTERNATES**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. Section includes administrative and procedural requirements for alternates.

**1.3 DEFINITIONS**

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
  - 1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
  - 2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

**1.4 PROCEDURES**

- A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
  - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate. Refer to the Alternates Key Plans for additional information.



PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. Alternate No. 1: FRONT ENTRANCE PEDIMENT

1. Base Bid: Demolish Lombard Street front entrance limestone pediment at roof line while razing the building. Pediment would not be salvaged.
2. Alternate: Lombard Street front entrance limestone pediment would be disassembled/removed by others. This work would take place at the beginning of the abatement phase of the Bancroft Demolition, prior to building demolition. See Drawing 1924-7.

**END OF SECTION**

**SECTION 01 25 00 - SUBSTITUTION PROCEDURES**

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.
- B. Related Requirements:
  - 1. Section 01 21 00 "Allowances" for products selected under an allowance.
  - 2. Section 01 23 00 "Alternates" for products selected under an alternate.
  - 3. Section 01 60 00 "Product Requirements" for requirements for submitting comparable product submittals for products by listed manufacturers.

1.3 REFERENCES

- A. Construction Specifications Institute (CSI)
  - 1. CSI Form 1.5C: Substitution Request During the Bidding/Negotiating Stage
  - 2. CSI Form 13.1A, Substitution Request After the Bidding/Negotiating Phase
- B. ICC Evaluation Service (ICC-ES).

1.4 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
  - 1. Substitutions for Cause: Changes proposed by Contractor that are required due to changed Project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
  - 2. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required to meet other Project requirements but may offer advantage to Contractor or Owner.

1.5 ACTION SUBMITTALS

- A. Substitution Requests: Submit three copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Substitution Request Form:

- a. For submission during the Bidding Phase
  - 1) Use CSI Form 1.5C.
  - 2) Attach form to a Request for Information (RFI) dedicated to the substitution request.
- b. For submission after the Bidding Phase: Use CSI Form 13.1A.

2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:

- a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
- b. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
- c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
- d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
- e. Samples, where applicable or requested.
- f. Certificates and qualification data, where applicable or requested.
- g. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
- h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
- i. Research reports evidencing compliance with building code in effect for Project, from ICC-ES.
- j. Detailed comparison of Contractor's construction schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.
- k. Cost information, including a proposal of change, if any, in the Contract Sum.
- l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.

NOT FOR BID

- m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
- 3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven (7) days of receipt of a request for substitution. Architect will notify Contractor through Construction Manager of acceptance or rejection of proposed substitution within fifteen (15) days of receipt of request, or seven (7) days of receipt of additional information or documentation, whichever is later.
  - a. Forms of Acceptance: Change Order, Construction Change Directive, or Architect's Supplemental Instructions for minor changes in the Work.
  - b. Use product specified if Architect does not issue a decision on use of a proposed substitution within time allocated.

#### 1.6 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials. Engage a qualified testing agency to perform compatibility tests recommended by manufacturers.

#### 1.7 PROCEDURES

- A. Coordination: Revise or adjust affected work as necessary to integrate work of the approved substitutions.

### PART 2 - PRODUCTS

#### 2.1 SUBSTITUTIONS

##### A. **During the Bidding Phase**

- 1. **Substitution requests both for cause and for convenience shall be accepted.**
- 2. Attach substitution request to a written Request for Information (RFI) dedicated solely to the substitution request.
- 3. Submit RFI at least ten (10) days before the due date for bids. This requirement may be changed at the prebid meeting.
- 4. Architect's response
  - a. Architect shall respond to the RFI through the issuance of an addendum to the contract documents.
  - b. If the submittal conditions specified below are not satisfied, Architect shall take no action on the request except to record noncompliance with those condition in its RFI response.

NOT FOR BID

**B. After the Bidding Phase**

1. Substitution requests shall be accepted only for cause. **Substitution requests for convenience shall not be accepted.**
2. Submit substitution request immediately on discovery of need for change, but not later than fifteen (15) days prior to time required for preparation and review of related submittals.
3. If the submittal conditions specified below are not satisfied, Architect will return requests without action except to record noncompliance with those conditions.

**C. Substitutions for Cause**

1. Submittal Conditions: Architect will consider request for substitution submitted by Bidder or Contractor when the following conditions are satisfied:
  - a. Requested substitution is consistent with the Contract Documents and will produce indicated results.
  - b. Requested substitution provides sustainable design characteristics that specified product provided.
  - c. Substitution request is fully documented and properly submitted.
  - d. Requested substitution will not adversely affect Contractor's construction schedule.
  - e. Requested substitution has received necessary approvals of authorities having jurisdiction.
  - f. Requested substitution is compatible with other portions of the Work.
  - g. Requested substitution has been coordinated with other portions of the Work.
  - h. Requested substitution provides specified warranty.
  - i. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

**D. Substitutions for Convenience**

1. Submittal Conditions: Architect will consider request for substitution submitted by Bidder when the following conditions are satisfied..
  - a. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
  - b. Requested substitution does not require extensive revisions to the Contract Documents.
  - c. Requested substitution is consistent with the Contract Documents and will produce indicated results.
  - d. Requested substitution provides sustainable design characteristics that specified product provided.
  - e. Substitution request is fully documented and properly submitted.
  - f. Requested substitution will not adversely affect Contractor's construction schedule.

- NOT FOR BID**
- g. Requested substitution has received necessary approvals of authorities having jurisdiction.
  - h. Requested substitution is compatible with other portions of the Work.
  - i. Requested substitution has been coordinated with other portions of the Work.
  - j. Requested substitution provides specified warranty.
  - k. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

PART 3 - EXECUTION (Not Used)

**END OF SECTION 01 25 00**

**NOT FOR BID**



SECTION 01 25 01 – CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing Contract modifications.

1.2 MINOR CHANGES IN THE WORK

- A. Architect will issue supplemental instructions authorizing Minor Changes in the Work, not involving adjustment to the Contract Sum or the Contract Time, on AIA Document G710, "Architect's Supplemental Instructions" or comparable form.

1.3 PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Construction Manager will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
1. Proposal Requests issued by Construction Manager are for information only. Do not consider them instructions either to stop work in progress or to execute the proposed change.
  2. Within time specified in Proposal Request after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
    - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
    - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    - c. Include costs of labor and supervision directly attributable to the change.
    - d. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
- B. Contractor-Initiated Proposals: If latent or unforeseen conditions require modifications to the Contract, Contractor may propose changes by submitting a request for a change to Construction Manager.
1. Include a statement outlining reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
  2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
  3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
  4. Include costs of labor and supervision directly attributable to the change.
  5. Include an updated Contractor's Construction Schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity

relationship. Use available total float before requesting an extension of the Contract Time.  
6. Comply with requirements in Division 1 Section "Product Requirements" if the proposed change requires substitution of one product or system for product or system specified.

- C. Proposal Request Form: Use AIA Document G709 or approved comparable forms for Proposal Requests.

#### 1.4 CHANGE ORDER PROCEDURES

- A. On Owner's approval of a Proposal Request, Architect will issue a Change Order for signatures of Owner and Contractor on AIA Document G731.

#### 1.5 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: Construction Manager may issue a Construction Change Directive on AIA Document G714. Construction Change Directive instructs Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

1. Construction Change Directive contains a complete description of change in the Work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.

- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.

1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 25 01

SECTION 01 26 50  
CHANGE ORDER REQUEST SUBMISSION FORMAT

The following is a general listing of requirements relating to change order work. Refer to the Contract, General Conditions, Supplementary Conditions, General Scope, and Specification for full requirements.

1. Refer to the Supplementary General Conditions for the Allowable overhead and profit Mark-ups.
2. Any proposed change order / request for the project must be submitted in the format example shown in this specification section.
3. All labor and material costs must be separated with their applicable mark-ups detailed.
4. Whiting-Turner, the Owner, or the Architect may request additional breakdown information, back-up, etc., at their discretion at any time.
5. Each price submitted must include the following:
  - a. Detailed description of the issue.
  - b. Location in the building.
  - c. Reason why it's extra
  - d. Drawing, Specification or other documentation references.
  - e. RFI reference
  - f. Submittal reference
  - g. WT price request reference
6. For price requests or time and material work, obtain approval from the Whiting-Turner project manager in writing prior to proceeding with the extra work.
7. Notify Whiting-Turner in writing immediately (with 24 hours) upon discovering an extra work issue.
8. Any work authorized to proceed on a time and material basis must have the T+M tickets signed daily by Whiting-Turner.
9. Extra work prices or unsigned T+M tickets forwarded after the work is completed will not be accepted.
10. For emergency work that may impact the schedule, verbal cost budgets must be submitted immediately. The work may be authorized to proceed at the Whiting-Turner project manager's and/or owner's discretion.
11. Return extra work price requests in 5 days. Finalize T+M tickets in 5 days.
12. Any item of extra work that cannot be agreed upon at a fixed price will be performed on a time and material basis that is not to exceed an agreed upon budget.

**Labor Bill Rates & Change Request Submission Formats**

**A. Labor Billing Rate Calculation – Example**

Base Rate	\$17.40
Fringe Benefits *@% of base rate	<u>8.53</u>
Subtotal Rate	\$25.93
Insurance & taxes ** @% of subtotal rate	<u>9.07</u>
<b>Subtotal - Labor Rate</b>	<b>\$35.00</b>
Overhead & Profit @ 15%***	<u>5.25</u>
<b>Total – Hourly Billing Rate</b>	<b>\$40.25</b>

**NOTE:**

- \* The fringe benefit includes health, welfare or retirement benefits, vacation, holiday or sick leave pay.
- \*\* The insurance and taxes include employer payment for unemployment insurance, worker's compensation, FICA, Bonds, Gross Receipts, etc.
- \*\*\* Allowable mark-up will decrease on a scale based on the total amount of the proposed change. Refer to the supplementary general conditions for additional information. This note is typical for all of the examples above and below.

**B. Change Directive Calculation**

**1. Trade Contractor**

Labor Billing Rate \$35/hr x 50 hrs	\$1,750.00
Fee (overhead & profit) @15%***	<u>262.50</u>
Subtotal Labor	\$2,012.50
Material or Equipment	\$2,000.00
Fee (overhead & profit) @15%***	<u>300.00</u>
Subtotal Material	\$2,300.00
<b>Total Costs</b>	<b>\$4,312.50</b>

NOT FOR BID

**2. Subcontractor / Trade Contractor**

Sub- Labor Billing Rate \$35/hr x 50hrs	\$1,750.00
Fee (sub overhead & profit) @15%***	<u>265.50</u>
Subtotal-Labor	\$2,012.50

Sub-Material or Equipment	\$2,000.00
Fee (sub overhead & profit) @15%***	<u>300.00</u>
Subtotal-Material	\$2,300.00

**Total Costs-Subcontractor      \$4,312.50**

Fee payable to contractor	
Subcontractor Labor and Material	\$4,312.50
Contractor overhead & profit @ 5%	<u>215.62</u>

**Total Costs      \$4,528.12**

**3. Sub-Subcontractor / Subcontractor / Trade Contractor**

Sub-subcon. Labor Billing Rate \$35/hr x 50hrs	\$1,750.00
Fee (overhead & profit) @15%***	<u>262.50</u>
Subtotal- Labor	\$2,012.50

Sub-subcon. Material or Equipment	\$2,000.00
Fee (overhead & profit) @15%***	<u>300.00</u>
Subtotal-Material	\$2,300.00

**Total Costs – Sub-subcontractor      \$4,312.50**

Fee payable to Sub-Contractor	
Sub-subcontractor Labor and Material	\$4,312.50
Subcontractor overhead & profit @5%	<u>215.63</u>

**Total Costs – Subcontractor      \$4,528.13**

Fee payable to Trade Contractor	
Subcontractor Labor and Material	\$4,528.13
Contractor overhead & profit @5%	<u>226.41</u>

**Total Costs      \$4,754.54**

NOT FOR BID

END OF SECTION

SECTION 01 29 00 – PAYMENT PROCEDURES

1. The following documents are included in section 006200:
  - A. AIA Document G732, Application and Certification for Payment, Construction Manager as Advisor Edition
  - B. AIA Document G703, Continuation Sheet
2. A **PENCIL** (Proof) copy of the proposed Application for Payment must be submitted by the 20<sup>th</sup> of the month to the WT Project Manager.
3. Upon approval of the Pencil copy by the WT Project Manager, **Email** Application for Payment to WT PM. Must be submitted by the 25<sup>th</sup> of the month.
4. Typical errors on invoice submissions are as follows. Please review this list prior to submitting your invoice. Invoices with errors will be returned. Typical errors:
  - A. AIA forms used must be the correct documents.
  - B. AIA forms must be original documents, not copies.
  - C. Invoice should reference the School District's Purchase Order number.
  - D. Math is incorrect.
  - E. Invoice is not notarized .
  - F. Schedule of Values needs to be approved in advance prior to submission of invoice. It should be broken down by phases, floors, areas, systems, materials, labor, allowances, alternates, etc.
  - G. Schedule of Values must list a line item for close-out documents: (As-Builts, Warranties, Operations and Maintenance Manuals, Training Sessions, AIA close-out documents, etc.)
    - i. \$2,500 minimum, OR
    - ii. 3% of total contract amount, which ever is greater.
  - H. Retainage amount is incorrect. Should be 5%.
  - I. Amount billed does not match work in place on site (obtain WT's prior approval)
  - J. Invoice is addressed improperly, should be addressed to:

Christina School District  
925 Bear Corbitt Rd,  
Bear, DE 19701  
(But delivered to Whiting-Turner)
  - K. Insurance certificate has expired. Current insurance must be on file.
  - L. Trade Contractor's Partial Release of Liens not attached
  - M. Invoice is billing for stored materials, copies of shipping receipts, invoices, and an insurance certificate for the building which houses the materials must be attached.
  - N. Invoice is billing for extra work that has not yet appeared on an AIA G732 Change Order.
  - O. Second tier Contractors / Suppliers Partial Release not attached .
  - P. Daily field reports or Safety meeting minutes have not been forwarded to the WT superintendent.
  - Q. Copies of Certified payroll reports have not been submitted.
  - R. Punchlist is not complete (applicable at end of project).
  - S. Close out documents not received or incomplete (applicable at end of project).

END OF SECTION 01 29 00



SECTION 01 31 00 – PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
  - 1. Coordination Drawings.
  - 2. Project meetings.
- B. See Division 1 Section "Execution Requirements" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.

1.2 COORDINATION

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.
  - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
  - 2. Coordinate installation of different components with other contractors to ensure maximum accessibility for required maintenance, service, and repair.
  - 3. Make adequate provisions to accommodate items scheduled for later installation.
  - 4. Where availability of space is limited, coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair of all components, including mechanical and electrical.
- B. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
  - 1. Preparation of Contractor's Construction Schedule.
  - 2. Preparation of the Schedule of Values.
  - 3. Installation and removal of temporary facilities and controls.
  - 4. Delivery and processing of submittals.
  - 5. Progress meetings.
  - 6. Pre-installation conferences.
  - 7. Project closeout activities.
  - 8. Startup and adjustment of systems.
  - 9. Project closeout activities.

1.3 SUBMITTALS

- A. Coordination Drawings: Prepare Coordination Drawings if limited space availability necessitates maximum utilization of space for efficient installation of different components or if coordination is required for installation of products and materials fabricated by separate entities.
1. Content: Project-specific information, drawn accurately to scale. Do not base Coordination Drawings on reproductions of the Contract Documents or standard printed data. Include the following information, as applicable:
    - a. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
    - b. Indicate dimensions shown on the Contract Drawings and make specific note of dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to Architect for resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.
  2. Sheet Size: At least 8-1/2 by 11 inches but no larger than 30 by 40 inches.
  3. Number of Copies: Submit three opaque copies of each submittal. Architect will return one copy.
  4. Refer to individual Sections for Coordination Drawing requirements for Work in those Sections.

1.4 PROJECT MEETINGS

- A. General: Coordinate, schedule and conduct meetings and conferences at Project site with the Construction Manager.
1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify Construction Manager, Owner and Architect of scheduled meeting dates and times.
  2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
  3. Minutes: Record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including Construction Manager, Owner and Architect, within three days of the meeting.
- B. Pre-installation Conferences: Conduct a pre-installation conference at Project site before each construction activity that requires coordination with other construction.
1. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow shall attend the meeting. Advise Construction Manager and Architect of scheduled meeting dates.
  2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
    - a. The Contract Documents.
    - b. Options.
    - c. Related requests for interpretations (RFIs).
    - d. Related Change Orders.
    - e. Purchases.
    - f. Deliveries.
    - g. Submittals.
    - h. Review of mockups.

- NOT FOR BID**
- i. Possible conflicts.
  - j. Compatibility problems.
  - k. Time schedules.
  - l. Weather limitations.
  - m. Manufacturer's written recommendations.
  - n. Warranty requirements.
  - o. Compatibility of materials.
  - p. Acceptability of substrates.
  - q. Temporary facilities and controls.
  - r. Space and access limitations.
  - s. Regulations of authorities having jurisdiction.
  - t. Testing and inspecting requirements.
  - u. Installation procedures.
  - v. Coordination with other work.
  - w. Required performance results.
  - x. Protection of adjacent work.
  - y. Protection of construction and personnel.
3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
  4. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.
  5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.
- C. Progress Meetings: Conduct progress meetings at regular intervals. Coordinate dates of meetings with preparation of payment requests.
1. Attendees: In addition to representatives of Construction Manager, Owner and Architect, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
  2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
    - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's Construction Schedule. Provide digital and hard copies of the construction schedule to the Construction Manager on a monthly basis unless indicated otherwise within the Construction Documents.
    - b. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
      - 1) Review schedule for next period.
    - c. Review present and future needs of each entity present, including the following:
      - 1) Interface requirements.
      - 2) Sequence of operations.
      - 3) Status of submittals.
      - 4) Deliveries.

**NOT FOR BID**

- 5) Off-site fabrication.
  - 6) Access.
  - 7) Site utilization.
  - 8) Temporary facilities and controls.
  - 9) Work hours.
  - 10) Hazards and risks.
  - 11) Progress cleaning.
  - 12) Quality and work standards.
  - 13) Status of correction of deficient items.
  - 14) Field observations.
  - 15) Requests for interpretations (RFIs).
  - 16) Status of proposal requests.
  - 17) Pending changes.
  - 18) Status of Change Orders.
  - 19) Pending claims and disputes.
  - 20) Documentation of information for payment requests.
3. Minutes: Record the meeting minutes.
  4. Reporting: Distribute minutes of the meeting to each party present and to parties who should have been present.
    - a. Schedule Updating: Revise Contractor's Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 31 00

**NOT FOR BID**

SECTION 01 31 10 – PROJECT COORDINATION

**1.01 PROJECT COORDINATION**

- A. Every Trade Contractor shall be responsible for the coordination of the progress of their work with the progress of all other Trade Contractor's work.
- B. Inasmuch as Project completion within the time limit is dependent upon cooperation of those engaged therein, it is imperative that each Trade Contractor perform his work at such time and in such a manner as not to delay or otherwise interfere with work progress of other Trade Contractors. If any Trade Contractor's work depends upon proper execution or results of another Trade Contractor's work, the former shall inspect the work and report any defects therein to the Construction Manager.
- C. Trade Contractors shall afford each other every reasonable opportunity for installation of their work and shall work in conjunction with each other in order to facilitate proper and intelligent execution of work.
- D. Plans are generally diagrammatic, and each Trade Contractor shall coordinate his work with the work of others, so that interference between mechanical and electrical work and architectural and structural work does not occur. Each Trade Contractor shall furnish and install offsets, bends, turns, and the like in connection with his work to avoid interference with work of other Trade Contractors, to conceal work where required, and to secure necessary clearance and access for operation and maintenance. In case of interference or lack of clearance and access, the Construction Manager will be notified immediately, and shall, in turn, notify the Architect. The Architect will decide which work shall be relocated, regardless of which was installed first.
- E. Systems Coordination Drawings
1. Systems Coordination Drawings are required from the Mechanical, Electrical, Fire Protection, and General Trade Contractors with the lead role assigned to the Mechanical Trade Contractor.
  2. The Mechanical Trade Contractor shall prepare 1/4" = 1ft scale Reproducible Systems Coordination Drawings for all areas with piping and ductwork. At critical areas of coordination (risers/shafts, mechanical, electrical and communications rooms), larger scale drawings may be required as determined by all Trade Contractors. Drawings to indicate spatial relationship of all HVAC piping and ductwork.
  3. The Mechanical Trade Contractor shall prepare and submit, to the Construction Manager, a regularly updated schedule indicating the development and review of these drawings with other Trade Contractors. The drawing development and review schedule must follow the project construction schedule.
  4. The Mechanical Trade Contractor shall provide the Reproducible Systems Coordination Drawings to other Trade Contractors for their input and review. The routing is as follows: HVAC, Fire Protection, Plumbing, Electrical, and General Works with the drawings being returned to the Mechanical (HVAC) Trade Contractor.

5. Each Trade Contractor will add the work of his Contract on the System Coordination Drawings to avoid interferences. All piping, equipment, light fixtures, sprinkler heads and in-ceiling equipment, such as rolling gates, must be shown on these drawings to include elevations and dimensions. Trade Contractors shall also consider future access for maintenance clearances required around equipment. If there are items on the systems coordination drawings which modify the design of the contract drawings, each Trade Contractor must highlight these areas by clouding, numbering, and referencing them to the affected contract drawings to allow proper review by each Trade Contractor and the Architect/Engineer.
6. Prior to forwarding the Systems Coordination Drawings to the next Trade Contractor, an approval stamp, initialed and dated, should be affixed by the reviewing Trade Contractor. This approval shall signify that the Trade Contractor will install his work accordingly.
7. During the Systems Coordination Drawing process, the Construction Manager will conduct regularly scheduled meetings. Each Trade Contractor is required to attend these meetings. The Construction Manager is responsible for recording and distributing meeting minutes to all Trade Contractor and the Architect/Engineer. The purpose of the meetings will be to review and discuss interferences and conflicts which required modifications to the Systems Coordination Drawings. All resolutions of interferences and conflicts which required modifications, shall be initialed by the appropriate Trade Contractors on the Systems Coordination Drawings. Conflicts that result after the coordination drawings are signed-off will be the responsibility of the Contractor who installed the work improperly. Coordination participants that fail to cooperate in the coordination Drawings effort, will be responsible for all costs incurred for adjustments to the work made necessary to accommodate installations. Coordination drawings shall be updated on a periodic basis and shall reflect all changes. At each meeting, the Trade Contractors will review and update the Systems Coordination Drawing Schedule.
8. Once reviewed and approved by each Trade Contractor, the Mechanical Trade Contractor will prepare the Final Reproducible Systems Coordination Drawings with the work of all trades included. Submit the Reproducible drawings along with five (5) prints to the Construction Manager who will forward to the Architect for his review.
9. The Mechanical Trade Contractor shall indicate any unresolved conflicts or interferences on the Systems Coordination Drawings. Those should be delineated by clouding, number and referencing to the affected contract drawings.
10. The Architect will review and return to the Construction Manager. The Construction Manager will distribute the number of drawings to the Trade Contractors for installation of their work.
11. The Systems Coordination Drawings **DO NOT REPLACE ANY SHOP DRAWINGS FABRICATION AND LAYOUT DRAWINGS REQUIRED BY SPECIFICATION SECTIONS.**



**1.02 FIELD ENGINEERING**

A. Inspection:

1. Each Trade Contractor shall verify locations of survey control points prior to starting work. Promptly notify Construction Manager of any discrepancies discovered.
2. The Trade Contractor shall verify all measurements of the building and shall be responsible for the correctness of same. No extra charge or compensation will be allowed on account of differences between actual dimensions and the measurements indicated on the drawings; any difference which may be found should be submitted to the Architect for consideration before proceeding with the work.

B. Survey Requirements: The Construction Manager shall secure a professional engineer or surveyor licensed in the State of Delaware to perform the following:

1. Verify grades, lines, levels, locations and dimensions as indicated. Report any errors or inconsistencies in the above, before commencing work.
2. Exercise care in laying out work to keep within lot and property lines. Be responsible for encroachments on rights or property of public or surrounding property owners.
3. Locate and layout building or facilities according to the drawings with respect to their location on property and elevation in relation to grade.
4. Provide and maintain well-built batter boards at corners (if applicable). Establish and safeguard benchmarks in at least two (2) widely separated places. As work progresses, establish benchmarks at each level. Give exact levels of various floors.
5. Maintain complete, accurate log of control and survey work as it progresses.

C. Construction Layout:

The Sitework Trade Contractor shall be responsible to perform the layout and elevations required to complete his work.

Each Trade Contractor shall layout the remainder of his own work and be responsible for all lines, levels, grades, elevations, and measurements.

**1.03 TESTS**

A. The Construction Manager has employed and will pay for the services of a testing agency to perform the following tests and inspection (field):

Soil compaction  
Concrete  
Steel  
Masonry

- NOT FOR BID**
- B. Tests, other than those required by the Specifications to be performed by Construction Manager required by any law, ordinance, rule, regulation or order of any public authority having jurisdiction, shall be made at such time and in such manner as the public authority may require. Each Trade Contractor responsible for that Specification Section shall be solely responsible for such tests.
  - C. Special tests may be ordered by the Architect in accordance with the General Conditions. Where specifications require testing by an independent testing laboratory, the Construction Manager shall be responsible for selection of the testing laboratory. The Construction Manager shall be responsible for the scheduling of all tests. Test reports should be given to the Construction Manager with copies for the Owner and Architect/Engineer.
  - D. All costs of testing required by the Contract Documents shall be borne by the Trade Contractor except costs of special tests which shall be paid for as stipulated in the General Conditions or Specifications.

**1.04 TRADE CONTRACTOR'S OBLIGATIONS**

- A. The Trade Contractor must assume all risks and bear any loss occasioned by neglect or accident during the progress of the work until same shall have been completed and accepted by the Owner. The Trade Contractor agrees to indemnify, defend and save harmless the Owner, Architect, and Construction Manager from all suits and losses or injury to persons or property received or sustained from the Trade Contractor or his agents in the performance of the work under the progress of construction and make good all damage that may consequence the work herein specified. He must also assume all blame or loss by reason of neglect or violation of local or state laws, ordinances and regulations, encroachments upon neighbors, or from any other cause.
- B. The work, in every respect, shall be under the care of the Trade Contractor and at his risk. He shall properly safeguard against any or all injury or damage to the public, to any property, materials, or things, except where stipulated otherwise in the Specifications, and also be responsible for any such damage or injury from his undertaking of this work to any person or persons or thing connected therewith. He shall indemnify and save harmless the Owner, Architect, and Construction Manager from all claims, suits, damages, actions of law, in equity or otherwise (including the costs of defense thereof which shall be assumed by the Trade Contractor) or any kind whatsoever in connection with this work and agreement and shall, if required, show evidence of settlement of any such action before final payment is made here under by the Owner.

**1.05 ALLOCATION OF WORK**

- A. Sleeves, Hangers, and Inserts:
  - 1. Each Trade Contractor shall furnish sleeves and inserts required to accommodate his work, together with instructions regarding their placement and location in the structure. Sleeves and inserts shall be furnished promptly in accordance with the established construction schedule so that they may be built-in as construction

progresses.

2. Trade Contractors to furnish all embeds, sleeves, inserts, etc., that are to be cast in concrete or built in masonry to the appropriate Trade Contractor for installation.
3. Each Trade Contractor shall furnish and install all hangers required to accommodate his work.

**B. Chases and Recesses:**

Each Trade Contractor shall provide all blockouts in his work shown on the Contract Documents and having either or both dimensions greater than 10". Any openings with dimensions smaller than 10" or not shown and required by Trade Contractor shall be the responsibility of the Trade Contractor to make provisions for. Each Trade Contractor shall provide chases and recesses as shown on the Contract Documents required to accommodate the work or the other Trade Contractors. It is the responsibility of the Trade Contractors requiring openings, chases, etc., of a Trade Contractor, to furnish information regarding the size and location promptly in accordance with the established construction schedule, so that they may be built-in as construction progresses and avoid delays. Failure to provide the information promptly will result in the responsible Trade Contractor incurring any costs associated with the delay.

Trade Contractors shall cooperate fully with each other in the performance of above work, as cutting and patching of new work is neither contemplated nor will it be tolerated.

**C. Sealing of Penetrations:**

Each Trade Contractor shall be responsible to seal his own penetrations in walls, floors, and ceilings, using fire resistant, smoke resistant, or acoustical materials, as required, to achieve ratings as indicated.

**D. Equipment Foundations:**

The Concrete Contractor shall provide all foundations and housekeeping pads for equipment furnished under his contract and all interior/exterior foundations and housekeeping pads indicated on the Contract Documents (Architectural, Civil, Structural, Mechanical, Plumbing, and Electrical) for equipment provided by other Trade Contractors. All other foundations, equipment, and housekeeping pads not shown, but required, shall be by the Trade Contractor requiring the same.

Each Trade Contractor shall furnish anchor bolts and other accessories required to anchor his equipment in place, together with instructions regarding their placement and location in the foundation. Anchor bolts and other accessories shall be furnished promptly in accordance with the established construction schedule so that they may be built-in as construction progresses.

**E. Roofing Penetrations:**

All roofing work shall be performed by the Roofing Trade Contractor, including patching penetrations made by the Electrical, Plumbing, and HVAC Trade Contractors. Cutting of roof openings, structural reinforcement, roof curbs, and counterflashing, shall be provided and installed by each Trade Contractor whose work penetrates the roofing surface, including all additional blocking.

**1.06 CORING, CUTTING AND PATCHING**

- A. Responsibility: A Trade Contractor requiring the cutting of openings in new work, or in the existing work installed by others shall have such openings cut and patched by the trade which installed the original work, and such cutting and patching shall be at the expense of the Trade Contractor requiring the opening.
- B. Approval: Approval to do such cutting and patching shall be received from the Architect through the Construction Manager prior to proceeding with the work.
- C. Inspection:
1. Inspect existing conditions, including elements subject to damage or movement during cutting and patching.
  2. After uncovering, inspect conditions affecting performance of work.
- D. Preparation:
- Provide supports to assure structural integrity of surroundings, devices, and methods, to protect other portions of Project from damage.
- Provide protection from elements for areas which may be exposed by uncovering work; maintain excavations free of water.
- E. Performance:
- Execute work by methods to avoid damage to other work and which provide proper surfaces to receive patching and finishing.
- Employ original installer to perform cutting and patching for weather-exposed and moisture-resistant elements and sight-exposed surfaces.
- Restore work with new products in accordance with requirements to Contract Documents.
- Fit work tightly to pipes, sleeves, ducts, conduit and other penetrations through surfaces.
- At penetrations of fire-rated wall, ceiling or floor construction, completely seal voids with fire-resistant materials as required to achieve fire-rating indicated.

Where fire protection materials are damaged or removed, reapply fire protection materials to achieve a rating equivalent to existing construction or as noted.

Refinish surfaces to match adjacent finishes. For continuous surfaces, refinish to nearest intersection; for an assembly, refinish entire unit.

F. Access Doors and Panels

Access doors and panels, SHOWN ON ANY DRAWING, shall be furnished and installed by the Drywall Contractor.

Access doors and panels, NOT SHOWN ON DRAWINGS, but required by the Specifications to access concealed valves, dampers, traps, devices, etc., shall be furnished by the Trade Contractor requiring the same for installation by the Drywall Contractor.

G. Final Cleaning

Final cleaning shall be performed by Construction Manager. Daily cleaning will be by the Trade Contractor(s) and their subcontractor(s).

END OF SECTION 01 31 10

SECTION 01 32 00 – CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
1. Construction Schedule.
  2. Submittals Schedule.
  3. Daily construction reports.
  4. Field condition reports.

1.2 SUBMITTALS

- A. Submittals Schedule: Submit three copies of schedule. Arrange the following information in a tabular format:
1. Scheduled date for first submittal.
  2. Specification Section number and title.
  3. Submittal category (action or informational).
  4. Name of subcontractor.
  5. Description of the Work covered.
  6. Scheduled date for Architect's final release or approval.
- B. Contractor's Construction Schedule: Submit two opaque copies of initial schedule, large enough to show entire schedule for entire construction period and a copy of the digital file on CD.
- C. Daily Construction Reports: Submit two copies at weekly monthly intervals.
- D. Field Condition Reports: Submit two copies at time of discovery of differing conditions.

1.3 COORDINATION

- A. Coordinate preparation and processing of schedules and reports with performance of construction activities and with scheduling and reporting of separate contractors.
- B. Coordinate Contractor's Construction Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.
1. Secure time commitments for performing critical elements of the Work from parties involved.
  2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.



**PART 2 - PRODUCTS**

**2.1 SUBMITTALS SCHEDULE**

- A. Preparation: Submit a schedule of submittals to Construction Manager, arranged in chronological order by dates required by construction schedule. Include time required for review, re-submittal, ordering, manufacturing, fabrication, and delivery when establishing dates.
1. Coordinate Submittals Schedule with list of subcontracts, the Schedule of Values, and Contractor's Construction Schedule.
  2. Submit concurrently with the first complete submittal of Contractor's Construction Schedule.

**2.2 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL**

- A. Time Frame: Extend schedule from date established for commencement of the Work to date of Substantial Completion.
1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- B. Activities: Treat each story or separate area as a separate numbered activity for each principal element of the Work. Comply with the following:
1. Activity Duration: Define activities so no activity is longer than 20 days, unless specifically allowed by Architect.
  2. Procurement Activities: Include procurement process activities for long lead items and major items, requiring a cycle of more than 60 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
  3. Submittal Review Time: Include review and resubmittal times indicated in Division 1 Section "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's Construction Schedule with Submittals Schedule.
  4. Startup and Testing Time: Include not less than 10 days for startup and testing.
  5. Substantial Completion: Indicate completion in advance of date established for Substantial Completion, and allow time for Architect's administrative procedures necessary for certification of Substantial Completion.
- C. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and Final Completion
- D. Contract Modifications: For each proposed contract modification and concurrent with its submission, prepare a time-impact analysis using fragnets to demonstrate the effect of the proposed change on the overall project schedule.

**2.3 CONTRACTOR'S CONSTRUCTION SCHEDULE (GANTT CHART)**

- A. Gantt-Chart Schedule: Submit a comprehensive, fully developed, horizontal Gantt-chart-type, Contractor's Construction Schedule within 30 days of date established for commencement of the Work unless otherwise indicated. Base schedule on the Preliminary Construction Schedule and

whatever updating and feedback was received since the start of Project.

- B. Preparation: Indicate each significant construction activity separately. Identify first workday of each week with a continuous vertical line.
  - 1. For construction activities that require 3 months or longer to complete, indicate an estimated completion percentage in 10 percent increments within time bar.

## 2.4 REPORTS

- A. Daily Construction Reports: Prepare and issue a daily construction report recording the following information concerning events at Project site to the Construction Manager:
  - 1. List of subcontractors at Project site.
  - 2. Equipment at Project site.
  - 3. Material deliveries.
  - 4. High and low temperatures and general weather conditions.
  - 5. Accidents.
  - 6. Stoppages, delays, shortages, and losses.
  - 7. Meter readings and similar recordings.
  - 8. Orders and requests of authorities having jurisdiction.
  - 9. Services connected and disconnected.
  - 10. Equipment or system tests and startups.
- B. Field Condition Reports: Immediately on discovery of a difference between field conditions and the Contract Documents, prepare and submit to Construction Manager a detailed report. Submit with a request for interpretation on CSI Form 13.2A or comparable form approved by Architect. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

## PART 3 - EXECUTION

### 3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At monthly intervals, update schedule to reflect actual construction progress and activities. Issue schedule to Construction Manager one week before each regularly scheduled progress meeting.
  - 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
  - 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
  - 3. As the Work progresses, indicate Actual Completion percentage for each activity.
- B. Distribution: Distribute copies of approved schedule to Construction Manager, Architect and Owner, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.
  - 1. Post copies in Project meeting rooms and temporary field offices.
  - 2. When revisions are made, distribute updated schedules to the same parties and post in the

same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.  
END OF SECTION 01 32 00

**NOT FOR BID**

**NOT FOR BID**

# BANCROFT DEMOLITION SCHEDULE

11/29/23



WHITING-TURNER

Activity ID	Activity Name	Orig Dur	Rem Dur	Start	Finish	2024												2025												
						ep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul		
<b>Bancroft - UPDATE 09 - 10/12/2023</b>		625	394	15-Nov-22 A	15-Apr-25																									
<b>MILESTONES</b>		355	355	05-Dec-23	15-Apr-25																									
<b>PROCUREMENT</b>		393	82	15-Nov-22 A	02-Feb-24																									
<b>CONSTRUCTION</b>		452	394	18-Jul-23 A	15-Apr-25																									
<b>NEW BANCROFT SCHOOL CONSTRUCTION</b>		289	231	18-Jul-23 A	29-Aug-24																									
<b>EXISTING BANCROFT SCHOOL DEMOLITION</b>		220	220	12-Jun-24	15-Apr-25																									
SITE-090	BANCROFT- LAST STUDENT DAY & MOVE OUT	0	0	12-Jun-24*																										
SITE-096	CHR- REMOVE FURNITURE & EQUIPMENT	20	20	12-Jun-24	09-Jul-24																									
SITE-100	CSD ABATE BANCROFT SCHOOL	40	40	10-Jul-24	03-Sep-24																									
SITE-105	CUT & CAP BUILDING UTILITIES-BANCROFT SCHOOL	20	20	10-Jul-24	06-Aug-24																									
SITE-103	INSTALL TEMPORARY FENCING AND SCE ENTRANCES	15	15	10-Jul-24	30-Jul-24																									
SITE-110	EXISTING BANCROFT DEMOLITION	80	80	07-Aug-24	26-Nov-24																									
SITE-120	GRADING	10	10	27-Nov-24	10-Dec-24																									
SITE-130	PHASE 3 SITEWORK	60	60	11-Dec-24	04-Mar-25																									
SITE-140	PLAYGROUND AND FIELD	15	15	05-Mar-25	25-Mar-25																									
SITE-150	SIDEWALKS AND PAVING	10	10	12-Mar-25	25-Mar-25																									
SITE-390	LANDSCAPING	15	15	26-Mar-25	15-Apr-25																									
<b>PROJECT CLOSE-OUT</b>		210	210	19-Jun-24	08-Apr-25																									

NOT FOR BID

NOT FOR BID

SECTION 01 32 10 – CONSTRUCTION SCHEDULE

PART 1 - GENERAL

1.1 Construction Schedule

1. The following Schedule is applicable to all bidders. The durations in the schedule are based on 5 day work weeks.
2. The Construction Schedule as approved by the Construction Manager and Owner will be an integral part of the Contract, and will establish interim work completion dates for the various activities.
3. The Construction Schedule may vary in accordance with construction conditions. Each Trade Contractor shall delay or expedite material and equipment deliveries, and modify the required labor forces to accommodate these varying conditions.
4. Work is to commence upon receipt of the Letter of Authorization to proceed.
5. Within fifteen (15) days after receipt of a “Letter of Authorization to proceed”, each trade Contractor shall submit a detailed preliminary Construction Schedule to the Construction Manager. The schedule will include breakdowns of total man days of field labor into major categories of work, time estimates of various categories of work, and the crew size for each category.
6. Each Trade Contractor shall organize his Construction Schedule per Phase, Building, Area, and/or Floor as required by the Construction Manager.
7. Each Trade Contractor shall be responsible for participating in pull-planning sessions with WT
8. The Construction Manager shall schedule a meeting with the Trade Contractor to receive the contents of each Trade Contractor’s preliminary Construction Schedule, coordinate the sequence of work, and make all revisions required. The Construction Manager shall have the final authority concerning the sequence of work and durations of each activity. Each Trade Contractor shall revise his schedule in accordance with that meeting and submit his schedule to the Construction Manager for approval. The Construction Manager will then develop the Project Construction Schedule. Each Trade Contractor shall schedule and perform his work in accordance with the Construction Manager’s Project Construction Schedule.
9. The Schedule shall be the basis for the dates to start and complete work for various portions of each contract, and to complete work (including changes) for the Project. It shall be the duty of the Trade Contractor to conform to the approved Schedule and to arrange his work in such a manner that it will be installed in accordance with the Schedule.
10. Each Trade Contractor shall submit two (2) copies of an updated Construction Schedule comparing the original schedule to actual work in progress and projected work along with the preliminary application for payment.
11. A representative of each Trade Contractor shall meet with the Construction Manager and furnish to him information necessary for such re-evaluating and updating and, if applicable, information with regard to changes in the work and the Trade Contractor’s proposed effort to overcome any delays incurred.
12. Should any work not be started or completed within five (5) days of the stated scheduled date, the Construction Manger shall have the right to order the Trade Contractor to expedite start and completion of the work by whatever means the Construction Manager deems appropriate and necessary, without additional compensation to the Trade Contractor.

13. Should any work fall to ten (10) or more days behind schedule, the Construction Manger shall have the right to perform the work or have the work performed by whatever method the Construction Manager deem appropriate.
14. Costs incurred by the Construction Manager in connection with “maintaining the Construction Schedule” under this section shall be reimbursed to the Construction Manager by the Trade Contractor.
15. It is expressly understood and agreed that failure by the Construction Manager to exercise the option to either order the Trade Contractor to expedite work, or to expedite the work by other means, shall not be considered precedent-setting for any other activities.
16. The following Construction Schedule is critical to the successful completion of the Project and is an integral portion of the Construction Documents. The Construction Schedule may vary in accordance with the construction conditions. The Trade Contractor shall delay or expedite his material and equipment deliveries and modify the required work forces to accommodate these varying conditions. The attached schedule is a milestone schedule with durations that portions of the project must be completed in. A more detailed construction schedule will be generated after all contracts have been awarded. By submitting a bid, each Trade Contractor is acknowledging that they can complete this work within the durations outlined in the milestone schedule.
17. The schedule is of the essence on this project and each contractor is responsible for completion of its work in coordination with the work of all other contractors within the required sequence and time frame so that the established schedule is met. Each contractor agrees to provide sufficient labor crew size, equipment and/or work overtime, weekends, or shiftwork as necessary to meet the activity durations on this schedule.
18. The attached schedule includes “estimated” start dates for the construction activities. In the interest of the overall project, W-T reserves the right to alter the sequencing of activities in order to accommodate project conditions and/or Owner requirements. It is understood that the contractor shall be obligated to complete its activities within the specified duration regardless of the actual start date.
19. All submittals and shop drawings must be submitted within a minimum of **two (2) weeks** of the notice to proceed with this subcontract, or the dates indicated on the schedule or scope of work, whichever occurs first. All expediting of materials and equipment to meet this schedule is the responsibility of the contractor. Contractor to pay for any quick ship charges if necessary.
20. All work, or applicable portions of the work, shall be sufficiently complete for Owner’s use and occupancy and all required approvals and permits for use and occupancy shall have been issued by the appropriate authorities by the established “Date of Substantial Completion” of the work, or applicable portion thereof.
21. All punchlist work and project closeout documentation shall be completed and approved by the Owner and Architect by the “Date of Final Completion”: which shall be no later than 21 days after the Date of Substantial Completion. Any uncompleted punchlist items after this date will be completed by Whiting-Turner and backcharged to the appropriate contractor or vendor. Final invoices will not be processed until final completion of the work and certification of same by the Owner and Architect.
22. If a contractor misses any portion of a workday due to weather, manpower, or scheduling conflicts, they must make-up this lost time on Saturday of the same week. If two or more days are lost in the same work week, the contractor shall work the immediate Saturday and the Saturday(s) of the following week(s) to make up those lost days.



23. Sundays are not regular work days. Approval must be obtained from Whiting-Turner prior to working. It is expected that contractors will work Saturdays, Sundays, and overtime when days are lost during the week.
24. Failure to properly man the project during normal week days may result in charges for CM supervision on weekends, at the discretion of the CM.
25. The contractor must schedule their work forces to work on all available work at a given time. Therefore, if an area of the building is ready for the contractor's work to begin or continue, the contractor must have manpower onsite working. Contractors will not have the "entire" work area at one time.
26. Each contractor must request information or clarifications in a timely manner, at least two weeks prior to needing the information, so that the time required to receive the clarification does not impact the work. No delays will be accepted related to this issue.
27. Each contractor is required to include in their bid the necessary overtime costs if they are needed to meet the schedule durations in this section.

2.1 Time of Completion

1. The Trade Contractor shall commence work upon receipt of a Letter of Authorization to proceed from either Christina School District or The Whiting-Turner Contracting Company.
2. All work shall be 100 percent (100%) complete and sequenced per the attached schedule unless agreed upon by the Construction Manager prior to the executing of the contract.
3. Work can be completed on Saturdays and Sundays and at extended hours during the week. The Owner shall not be responsible for additional costs for overtime.
4. Normal work hours shall be from 8:00 a.m. to 4:30 p.m., Monday to Friday, and 9:00 a.m. to 5:30 pm on Saturday, when applicable. Work may be completed beyond these hours, as approved by the Construction Manager.
5. Weather Delays: The project substantial completion date, shall only be adjusted due to weather conditions if there are delays above and beyond the following "Adverse Day" allowances based on a seven day work week:
  - A. January (12), February (10), March (5), April (5), May (4), June (2), July (4), August (3 days), September (4 days), October (3 days), November (2 days), and December (6 days). These "Adverse Days" are based on the following reference: State of Delaware Department of Transportation's Standard: "763508 Project Control System."
  - B. Delays requested due to weather must be related to the critical path activity as indicated on the Contractor's Project Schedule.
  - C. Delays due to weather must be reported by the contractor on the day they occur in a written report.
  - D. Any day lost during the week must be made up the same week by overtime and /or weekend work. If the weather is bad on the make-up day, the lost day must be made up the following week.
  - E. The allowance days listed above carry over to the next month if they are not used. Therefore, if only 1 allowance day is used in November, there are (7) days in December. Therefore, there is a total of 60 allowance days in a year.

3.1 See attached Project Schedule

END OF SECTION 01 32 10

SECTION 013 5 00 – SPECIAL PROJECT PROCEDURES

1.0 PROCEDURES

1.1 CONSTRUCTION MANAGER

- A. The Construction Manager shall control, enforce, direct, instruct, and otherwise implement regulations and restrictions as set forth in this section.

1.2 OWNER'S REPRESENTATIVE

- A. All communications with the owner and owner's representative(s) and consultant(s) shall be through the Construction Manager unless otherwise noted in the General Conditions.

1.3 NOISE CONTROL

- A. The Contractor shall execute the Work in this Contract as quietly as practicable to avoid unnecessary disturbances.
- B. Any complaints duly registered by the Construction Manager of unacceptable noise levels shall be cause for the use of special precautions and methods of operation by the Contractor to reduce noise to acceptable levels.
- C. The Owner and Construction Manager shall be the sole judge of the tolerability of noise levels.
- D. Use of portable radios or tape recorders will not be allowed on the premises other than two-way communication radios.
- E. The Contractor shall prepare a "Noise Schedule" as soon as practicable indicated the type of noise inducing work showing the dates, times and duration of such work. The Contractor should note any special instruction and/or time requirement in the Scopes of Work.

1.4 PERSONNEL IDENTIFICATION

- A. All employees of the Contractor and all subcontractors may be required to wear numbered identification badges while on the premises of existing buildings.
- B. The identification badges shall be conspicuously fixed to outer garments above elbow level.
- C. Any of the Contractor's personnel or subcontractor's personnel who do not comply with this requirement at all times will be denied access to the facility or will be escorted off the premises by Security Guards or owner representative(s).

1.5 PERSONNEL PARKING

- A. At no time shall the employees of the Contractor or subcontractor employed by Contractor be allowed to park their vehicles on-site without prior approval from the Construction Manager.

2.0 LIMIT OF OPERATIONS

- A. It shall be noted that, adjacent streets will remain open throughout the duration of this Project. The Demolition Contractor will provide a perimeter fence, which will establish limits of operation.
- B. The Contractor's normal limit of operations shall be confined within the Limits of Work Area as designated on the drawings.
- C. The Owner, Architect, and other Contractors performing Work within these limits of operation, shall be allowed access at all times.
- D. Construction operations must be planned and executed in a manner which allows emergency access to project.

3.0 SCHEDULING AND COORDINATION

3.1 SCHEDULING

- A. All arrangements for work which will involve interference with normal Owner or adjacent properties functions, particularly in occupied areas, or adjacent thereto, shall be scheduled a minimum of 14 days in advance with the Construction Manager to provide for minimum of disruption and inconvenience.

3.2 OUTAGES

- A. Utility and service outages shall be kept to a minimum, and will be permitted only with written approval of the Construction Manager and the Owner.
- B. All requests for the outages shall be made a minimum of fourteen working days in advance of their need.
- C. Requests for outages will not be considered unless they include an identification of all areas which will be affected by the proposed outage. Blank outage forms will be provided by the Construction Manager upon request.
- D. All outages shall occur **after normal working hours**. All costs including premium time shall be included in the Bid amounts.

END OF SECTION 01 35 00

SECTION 01 35 20 – EH&S PLAN

**CONTRACTOR / SUBCONTRACTOR EH&S MANUAL**

All contractors and subcontractors on Whiting-Turner’s projects bid and awarded after January 1, 2019 or earlier if provided in the Subcontract by Whiting- Turner, are expected to be in full compliance with all applicable requirements of the Whiting-Turner Contracting Company’s Contractor/Subcontractor EH&S Manual (“Manual”). This Manual incorporates current Whiting- Turner requirements along with new practices that have become available and generally accepted in the industry. To obtain a copy of the Manual please contact the Whiting-Turner Project Manager on your project.

The information contained in this Manual is not intended to serve as a substitute for the exercise of good engineering judgment by the engineers nor as a substitute for determinations made by contractors/subcontractors of appropriate manner and methods of operations and safety aspects of work under their control. This Manual is also not intended to be all inclusive or replace a contractor’s or subcontractor’s corporate or site-specific safety program and is not intended to, nor shall it, supersede any more stringent federal, state, local and other applicable laws, codes, rules, regulations, and/or practices. All contractor’s and subcontractor’s site-specific safety programs must meet or exceed the requirements of the Whiting-Turner EH&S program, the contract documents and all federal, state, local and other applicable laws, codes, rules, regulations, and/or practices. In the event of any conflicts between the material contained therein and any more stringent laws, codes, rules, regulations, and/or practices, the more stringent laws, codes, rules, regulations, and/or practices shall govern.

This Manual and all information contained therein is confidential and intended for the sole use of contractors and subcontractors on Whiting-Turner projects. Contractors/subcontractors are prohibited from distributing this information to any third parties. The Whiting-Turner Contracting Company expressly disclaims warranties for the information contained in this Manual and makes no representations to third parties regarding the reliability, suitability, correctness, or completeness of such information. Whiting-Turner assumes no responsibility or liability and shall not be responsible and/or liable for damages or losses of any kind, including but not limited to direct, indirect, incidental, exemplary, special or consequential damages or losses, arising from, attributable to and/or resulting from the use of such information by third parties however caused and on any theory of liability, whether in contract, strict liability or tort.

For contractor/subcontractor convenience only, a synopsis of the Manual requirements is attached hereto. This synopsis is not intended to, nor shall it alleviate contractors’/subcontractors’ obligations to comply with the requirements of the Manual as applicable to their work.

*(Revised 1/2/19)*

**The Whiting-Turner Contracting Company  
Contractor/Subcontractor EH&S Manual Synopsis**

**DISCLAIMER:** For Contractor/Subcontractor's convenience only, the following is a Synopsis of some of the more significant provisions of The Whiting-Turner Contracting Company's Contractor/Subcontractor EH&S Manual ("Manual") requirements. This Synopsis is not intended to, nor shall it alleviate Contractor/Subcontractor's obligations to comply with all of the requirements of the Manual as applicable to Contractor/Subcontractor's scope of work, whether or not they are included in the Synopsis.

The information in the Manual and this Synopsis are not intended to serve as a substitute for the exercise of good engineering judgment by the engineers nor as a substitute for determinations made by Contractor/Subcontractor of appropriate manner and methods of operations and safety aspects of work under their control. The Manual and this Synopsis are also not intended to be all inclusive or replace a contractor's or subcontractor's corporate or site-specific safety program and is not intended to, nor shall they, supersede any more stringent federal, state, local and other applicable laws, codes, rules, regulations, and/or practices. All contractor's and subcontractor's site-specific safety programs must meet or exceed the requirements of the Whiting-Turner EH&S program, the contract documents and all federal, state, local and other applicable laws, codes, rules, regulations, and/or practices. In the event of any conflicts between the material contained therein and any more stringent laws, codes, rules, regulations, and/or practices, the more stringent laws, codes, rules, regulations, and/or practices shall govern.

The Contractor/ Subcontractor EH&S Manual, this Synopsis, and all information contained therein is confidential and intended for the sole use of contractors and subcontractors on Whiting-Turner projects. Contractors/subcontractors are prohibited from distributing this information to any third parties. The Whiting-Turner Contracting Company expressly disclaims warranties for the information contained in the Manual and this Synopsis and makes no representations to third parties regarding the reliability, suitability, correctness, or completeness of such information. Whiting-Turner assumes no responsibility or liability and shall not be responsible and/or liable for damages or losses of any kind, including but not limited to direct, indirect, incidental, exemplary, special or consequential damages or losses, arising from, attributable to and/or resulting from the use of such information by third parties however caused and on any theory of liability, whether in contract, strict liability or tort.

**Pre-Construction Submittals**

1. Contractor/subcontractor must identify and submit the qualifications of a safety representative/competent person to Whiting-Turner as the primary, on-site contact for safety related issues.
  - The safety representative may be a supervisor and they shall have as a minimum, the OSHA 30-hour Outreach Training Program for Construction.
  - The subcontractor will provide a first aid/CPR/AED trained, competent person when one or more of the subcontractor's employees are working
2. Contractor/subcontractor must submit a completed prequalification form and respond in writing to Whiting-Turner's requests for additional information/explanation.
3. A site-specific safety plan (SSSP) shall be developed for the project by each contractor/subcontractor. The plan should address hazards and mitigation strategies related to the scope of work for the project. Activity Hazard Analysis (AHA) for major phases of work, submitted with the company safety program may be accepted in lieu of SSSP – at the discretion of the Whiting-Turner project team.
4. Site-specific Safety Data Sheets (SDS) are required to be submitted prior to bringing any chemical product

on site. A current chemical inventory is to be maintained with Whiting- Turner.

5. An Activity Hazard Analysis (AHA) shall be submitted ten days prior to the start of work.
6. A competent person's acknowledgement form must be completed, and their qualifications submitted for activities where OSHA requires a competent person.

### **Safety Management**

1. All on site personnel, (contractor/subcontractors, tiered contractors/subcontractors, and their employees) are required to participate in a mandatory safety orientation session prior to commencing with any work on site. Contractor/subcontractor shall provide a translator for any non-English speaking employees during orientation and any job wide meetings/stand- downs. Employees may be asked to attend orientation again for repeat violations or deficiencies.
2. Each contractor/subcontractor is required to designate a site safety representative (SSR). SSR shall be on site at all times and shall have the knowledge and authority of the competent person. SSR shall be able to conduct site walks with Whiting-Turner personnel to ensure the safety of contractor's/subcontractor's workers on the project. Manpower totals below include all tiered contractor/subcontractor employees. Proof of training must be submitted prior to mobilization or at orientation. The qualifications for the SSR are as follows:
  - Minimum requirement proof of OSHA 30 hour submitted
  - Contractors/subcontractors with (30) or more workers on site will be evaluated by the Whiting-Turner's management team along with Whiting-Turner's EH&S Manager regarding the contractor's/subcontractor's site-specific safety performance. If the contractor's/subcontractor's past or current site safety performance indicates improved safe work practices and conditions are needed to help ensure the safety of the contractor/subcontractor crews and others, Whiting-Turner at its discretion, may require the contractor/subcontractor to provide a fulltime Site Safety Representative to be present onsite with no other collateral duties.
3. The contractor's/subcontractor's supervisor(s) and safety representative must make frequent and regular inspections of their work areas and activities.
  - Hazards identified that are under their control must be corrected immediately and all other identified hazards must be reported to the Whiting-Turner superintendent.
  - One documented inspection shall be conducted each week.
4. The contractor's/subcontractor's on-site supervisor and the contractor's/subcontractor's designated on-site safety representative must schedule and attend a pre-construction safety meeting with the Whiting-Turner Superintendent to discuss the contractor/subcontractor safety requirements.
  - The pre-construction safety meeting should take place at least five (5) working days before startup to allow for review of required documentation.
5. The subcontractor shall provide a translator whenever there are non-English speaking tradespersons on site.
6. Contractor/subcontractors, who in turn contract out parts of their work, have sole responsibility to see that their lower tier contractors comply with project safety requirements. Additionally, Whiting-Turner's Project Manager and/or Whiting-Turner's Superintendent shall be notified that the lower tier contractors are arriving at least five (5) days before work starts. The Contractor/subcontractors will be held directly accountable for



all lower tier contractors. Contractors/subcontractors must provide a competent person onsite fulltime to oversee and direct lower tier contractors' while actively performing work.

The subcontractor's superintendent(s) and/or designated safety representative must attend the weekly coordination meeting where safety issues will be addressed.

8. Emergencies shall be handled through the Whiting-Turner Field Office according to the posted Emergency Action Plan.
9. All work-related injuries, regardless of severity, must be reported to Whiting-Turner immediately. An accident/incident investigation report must be completed by the appropriate subcontractor supervisor and submitted to Whiting-Turner within 24 hours of the incident. Further, all work-related injuries will be recorded on an injury log. A completed injury log will be submitted to Whiting-Turner by the 5th of the month for the previous month.
10. Incidents involving the public, regardless of severity, must be reported to Whiting-Turner immediately. An accident/incident investigation report must be completed by the appropriate subcontractor supervisor and submitted to Whiting-Turner within 24 hours of the incident.
11. Only communication radios are permitted on Whiting-Turner projects.

### **General Safe Work Practices and Guidelines**

#### **The following are prohibited on Whiting-Turner Projects**

1. The use of the following administrative controls as a means of fall protection
  - Controlled Access Zone as a means of fall protection
  - Controlled Decking Zone as a means of fall protection
  - Safety Monitor System as a means of fall protection
2. The use of load handling equipment to hoist personnel—please see the Manual for exceptions and provisions
3. Working from the midrail or top rail of any lift
4. The use of cell phones for signaling of cranes and equipment
5. The use of open hooks during lifting operations/picks.
6. Fish tapes or lines made of metal or any other conductive material when potential for contact with energized circuits exists
7. The use of particle board, medium density fiber board (MDF) or similar material as floor hole covers
8. The use of open turnbuckles as part of the perimeter cable system
9. Other construction processes below steel erection are prohibited unless overhead protection for the employees below is provided
10. Harassment of any kind, to any person
11. Smoking or use of vaporized equipment (except in designated areas)
12. Radios, media players, headphones, or other listening devices
13. Guns or weapons of any kind
14. Use or possession of alcohol or drugs of any kind (except for prescription drugs)
15. Riding on equipment that is not equipped with proper seating and seat belt
16. Open fires, fire barrels, or hot boxes
17. The use of metal ladders

#### **Carbon Monoxide Exposure Prevention**

1. In enclosed or poorly ventilated spaces tools and equipment shall be powered by electricity, batteries, or

- compressed air.
2. All fuel driven equipment being used indoors or in partially enclosed spaces must have scrubbers where carbon monoxide exposure exists.
  3. When using gasoline powered generators and compressors, place them outside away from air intakes to ensure that the exhaust is not being drawn back indoors.

#### **Concrete and Masonry**

1. Each contractor/subcontractor, with employees exposed to a fall 6' or greater to a lower level must ensure that effective fall protection measures and rescue procedures are addressed in their company Activity Hazard Analysis prior to beginning work on site. This is to include the name and qualifications of the designated competent person.

#### **Confined Space Entry**

1. It is Whiting-Turner's position that all confined spaces are permit required until proven otherwise [in writing] by the contractor/subcontractor's competent person.
2. All confined spaces, regardless of classification, shall have continuous multi-gas/4-gas air monitoring while the space is occupied by tradespersons.

#### **Cranes and Derricks**

1. Personnel hoisting requirements - The use of load handling equipment to hoist personnel is prohibited unless the employer can demonstrate that other methods would be more hazardous and is able to comply with the personnel hoisting requirements that are established in the standard.
2. Hoisting personnel on Whiting-Turner projects shall be considered a critical lift or activity, and therefore shall meet all requirements of a critical lift before the lift may begin.
3. A crane checklist must be completed prior to each initial lift.
4. Post Assembly – a post assembly inspection is required for all Crawlers and Tower Cranes by a person properly trained and qualified to inspect such equipment.
5. Boom-tip anemometer or equivalent device is required.
6. All loads to be lifted at Whiting-Turner project sites shall have a tag line attached.
  - The competent person shall determine the size, rope materials, and length of the tag line.
  - The line shall be attached in a way that maintains control of the load to reduce the risk of caught-in/-between and struck-by hazards to employees and surroundings during any lift.

#### **Critical Lifts**

1. The Whiting-Turner Contracting Company identifies a critical or special lift as
  - any lift where the total weight of the load and the deductions for the equipment combined exceeds 75% of the capacity of the crane capacity chart at the specific boom length and radius of the load,
  - any lift where there will be more than one (1) crane or piece of load handling equipment attached to the load at a time;
  - any lift that involves the lifting of personnel;
  - any lift where the contents of the lift are considered hazardous to health or environment, and an accidental release could result harm to either;
  - any lift where encroachments precautions are required for power lines.

#### **Demolition**

1. Contractor/subcontractor shall verify that all local ordinances and permitting issues have been addressed as they relate to demolition.
2. Generic safety data sheets for demolished material must be provided by the creating contractor.

3. Task lighting—which meets or exceeds the requirements of the standard—shall be provided by the demolition contractor/subcontractor.

#### **Electrical Hazards Prevention**

1. Whiting-Turner requires that all projects are 100% GFCI compliant. An Assured Equipment Grounding Conductor Program may be used in addition to—but not in lieu of—the GFCI program.
2. The installing contractor, i.e. the electrical contractor/subcontractor, shall test each power receptacle for proper installation including polarity, grounding, etc. and forward that documentation to Whiting-Turner before the circuit is used.
3. The electrical contractor/subcontractor will conduct and document monthly tests after the initial installation.
4. Only round, heavy-duty (type S, SJO, SJTW, ST, SO, STD) extension cords are acceptable for use on a construction site; at least 12 gauge or larger.
5. Damaged cords may only be repaired by a qualified electrician in accordance with manufacturer’s requirements for such repairs.
6. Where feasible, all extension cords will be suspended (8’) above the floor or working surface.
7. Extension cords shall not be fastened with staples, hung from nails, or suspended with non- insulated wire.
8. All temporary lighting circuits must originate from GFCI protected breakers.
9. Temporary wiring must be rated for all conditions it may be subjected to and be installed as per NEC, OSHA, NFPA and Authorities Having Jurisdiction requirements

#### **Energy Control**

1. Lockout/tagout (LOTO) shall not be considered for use until all other avenues of attaining a “zero-energy state” have been exhausted.
2. All contractor/subcontractors working with electrical systems are required to have a written Lockout/tagout procedure. A competent person shall be responsible to control all aspects of the LOTO procedure. They will ensure coordination with the appropriate tradesmen.
3. If a system can be locked out through design or by other means, this will be the preferred method.
4. The lockout device shall be substantial enough to prevent removal.
5. The lock shall be a separately keyed lock for use only with the lockout system.
6. The lockout device must be tagged with the name of the employee and their company. There shall be one lock for each employee (including Whiting-Turner) exposed to the system.
7. The use of 100% LOTO must be maintained until the completion of the task. Verification by all competent persons in charge of the LOTO shall be completed prior to re-energizing the system.
8. In the event an employee is discovered tampering with or violating the LOTO procedure, the employee will be removed from the project indefinitely.
9. A log shall be maintained on site that identifies the following:
  - Date of usage
  - Number of locks and tags used
  - Contractors involved
  - Time of LOTO initiation
  - Time of LOTO removal
  - Designated competent persons
  - Location of LOTO Devices
10. Electrical or piping & instrumentation drawings or identifying specific locations of the LOTO devices shall accompany the LOTO log.

#### **Excavations**

1. Prior to the commencement of excavation activities where the excavation will be greater than 3 feet in depth,

- a pre-excavation checklist must be completed by the contractor/subcontractor's competent person and submitted to Whiting-Turner upon request.
2. Underground utility installations must be identified and marked prior to beginning any excavation. To prevent unintentional contact, all necessary measures must be employed to locate underground utilities prior to excavating. Acceptable methods include but are not limited to the following: test pitting, ground penetrating radar (GPR), use of as-built drawings and any other obtainable information.
  3. A competent person must be identified on Whiting-Turner's competent person designation form and their qualifications submitted to Whiting-Turner prior to the start of work.
  4. All excavations shall be protected by snow fence, at a minimum.
  5. Persons walking or working adjacent to a trench with vertical/shear walls that is equal to or greater than six (6) feet in depth must be protected from fall hazards unless it has been determined by the competent person that it is infeasible or creates a greater hazard.
  6. Persons crossing an excavation that is equal to or greater than six (6) feet in depth must be protected from fall hazards by means of a guardrail system.
  7. See Utility Location and Avoidance Policy for additional requirements.

**Fall Protection and Prevention**

1. Prior to creating a hole or opening in any elevated work surfaces, contractors/subcontractors must submit an elevated surface modification permit.
2. Particle board, medium density fiber board (MDF) or similar material is prohibited from being used as floor hole covers on Whiting-Turner projects. All holes must remain properly covered, secured, and labeled / signed.
3. Each contractor/subcontractor, with employees exposed to a fall 6' or greater to a lower level must ensure that effective fall protection measures and rescue procedures are addressed in their company Activity Hazard Analysis prior to beginning work on site. This is to include the name and qualifications of the designated competent person.
4. A Personal Fall Arrest System (PFAS) [comprised of a full body harness, double lanyards, anchorage point and anchorage connector], a personal fall restraint system (PFRS) [comprised of a full body harness, lanyard, anchorage point and anchorage connector], a guardrail, or safety net system must be in place to protect all trade persons from exposure to falls working at or above 6 feet.
5. Employees working on ladders must be at least one and a half times the height of the ladder away from any perimeter, shaft, stairway, and opening where the fall distance exceeds 6'. If that distance isn't feasible, a conventional fall protection method must be employed.
6. Stilts are only permitted in broom swept areas, where there is no change in elevation.
7. Every hatchway and chute floor opening shall be guarded by a hinged floor-opening cover. The opening shall be barricaded with railings to leave only one exposed side. The exposed side shall be provided either with a swinging gate or so offset that a person cannot walk into the opening.
8. An extension platform outside a wall opening onto which materials can be hoisted for handling shall have a standard railing that meets handrail standards. However, one side of an extension platform may have removable railings to facilitate handling materials; in this instance a personal fall restraint or arrest system shall be utilized to protect the exposed worker.
9. Perimeter cable shall not be less than 3/8" steel cable.
10. Corner uprights must be braced so that the required tension may be maintained.
11. The cable must be terminated with three U-bolt wire rope clips that maintain an efficiency rating of at least 80% of the wire rope's breaking strength as proven through product documentation (e.g. Crosby clips).
12. Perimeter cable shall not be used as part of a personal fall arrest or fall restraint system unless designed to be used in that manner by a registered engineer.
13. The use of open turnbuckles as part of the perimeter cable system is prohibited.
14. All guardrail systems [with the exception of scaffold systems or where it can be proven to create a greater

hazard] must be equipped with orange perimeter screening or mesh to prevent the ability to breach the system by climbing through rails. The installation of the screening must be compliant with Whiting-Turner's orange perimeter screening guidelines.

15. A fall restraint system must be employed when working from articulating boom lifts.
16. A PFAS is not required when climbing up or down a ladder. Fall protection shall be considered by the competent person if employees work from a ladder 6' or more above a lower level and are exposed to a fall.
17. Steel erectors and metal decking installers must utilize 100% fall protection devices at all times when working over 6'.
18. Horizontal lifelines must be designed by an engineer and installed under the supervision of a qualified person. A safety factor of two must be maintained.
19. Adequate fall protection devices must be provided, installed, and used at all loading platforms by the contractor/subcontractor wishing to remove existing perimeter protection prior to its removal.
20. All anchorage points utilized in a personal fall arrest system must be capable of supporting a load of no less than 5000 lbs.
21. Retraining documentation—to include instructor's name and qualifications, training literature and sign-in sheet—must be submitted to Whiting-Turner on company letterhead.

**Fire Prevention and Protection**

1. A 20 lb. ABC dry chemical fire extinguisher or equivalent must be provided for each 3,000 square feet of protected building area. An extinguisher shall be placed at every stairwell on each level.
2. Residential-like wood framing construction shall have a 20 lb. ABC dry chemical fire extinguisher or equivalent for each 1,500 square feet of protected building area.
3. Storage of flammable/combustible liquids on or inside of buildings under construction shall be no more than one-day supply.
4. Provide a 20-pound ABC dry chemical type extinguisher between 25'-75' from areas where flammable liquids are being handled.

**Housekeeping**

1. Clean-as-you-go practices are required.
2. Sort and organize material, sweep daily, and standardize activities to aid in the elimination of storage of excess/unused material in active work areas
3. Work that may temporarily block emergency exits, safety showers, elevators, corridors, and hallways will require prior Whiting-Turner approval.
4. Materials stored in the vicinity of the area where work is performed should be limited to only those materials that will be used in the same shift.
5. Any material stored in a work area longer than 24 hours must be approved by Whiting-Turner.
6. Gang boxes, toolboxes, and sea containers/conex boxes shall not have materials stored on top of them.
7. All chemicals brought on site must be approved by Whiting-Turner.
8. The user of the chemical must provide Whiting-Turner an SDS prior to bringing the substance on site.
9. Chemical/gas cylinders (welding, purging, leak detection cylinders, etc.) must be secured.
10. All dedicated chemical storage areas must have safety data sheets (SDS) available at the storage location.

**Mobile Elevated Work Platform**

1. Employees must keep both feet on the floor of the basket; use of guardrails to gain additional height is prohibited on Whiting-Turner project sites.
2. Where aerial and scissor lifts are used on concrete slabs, any floor depressions or grade changes are required to be barricaded to restrict travel onto that area.
3. The area(s) below the basket or platform of aerial lifts shall be cordoned off using reinforced danger tape—or something of equivalent or greater tensile strength—and by using signage to identify the overhead hazard

- when a potential for falling objects exists
4. Field modifications are not allowed on aerial lifts. Aerial lifts shall not be used to hoist, raise, or position material outside of the platform or basket unless manufactured to do so.

### **Personal Protective Equipment**

1. Prescription eyeglasses and sunglasses that do not comply with ANSI Z87.1 are prohibited.
2. Aluminum hardhats, and bump caps are not permitted on Whiting-Turner projects.
3. For security and identification purposes, all hardhats shall display the contractor/subcontractor name and/or decal identifying the employer as well as the employee's name.
4. Employees exposed to electrical voltages of 600 V or greater shall wear hardhats that meet the requirements of ANSI Z89.2 type Hardhats
5. Hand protection is required when employee's hands are exposed to hazards such as those from skin absorption of harmful substances, cuts or lacerations, abrasions, punctures, chemical burns, thermal burns, and harmful temperature extremes.
6. High visibility vests/gear are required by each person on site.
7. Long pants and shirts with at least a 4" sleeve is required. Shorts, cut offs, tank tops, and net shirts are not permitted.

### **Scaffolds**

1. Contractor/subcontractor whose employees will need to access a scaffold system for work shall have a competent person present to inspect and sign off on the scaffold prior to the start of work each day.
2. Employees erecting or dismantling a scaffold are required to utilize appropriate fall protection at heights six (6) feet or above unless proven to be infeasible or more hazardous as determined by their company's competent person.
3. All scaffolds, including carpenters' bracket scaffolds, over six (6) feet in height shall have guardrails on all open sides. If guardrails cannot be used on a walking/working platform, contractor/subcontractors are required to use another means to protect employees from a fall.
4. Cross-braces are not considered to be an adequate guardrail (fall protection) system and shall not be used as a top or mid rail on Whiting-Turner projects.
5. Contractors shall utilize a scaffold tag system. The scaffold tag system shall be color coded and visible. The competent person shall inspect the scaffolding system before each work shift. The competent person shall sign and date the scaffold tag.
  - Green tags are reserved for complete systems
  - Red tags are reserved for erection/dismantling activities and for scaffolds with deficiencies in the system
  - Yellow tags are reserved for systems that require the use of both PFAS and guardrail systems for incomplete scaffold systems or platforms.

### **Signs, Signals and Barricades**

1. All caution and danger tape used on Whiting-Turner project sites shall be of the reinforced type and shall be supplemented with a tag/label affixed with the responsible party's name, company, contact number, and potential hazard.
2. All flagmen shall be trained on appropriate procedures before controlling traffic, as required by the Manual on Uniform Traffic Control Devices (MUTCD) and any municipal or state guidelines.
3. All flagmen shall utilize sign paddles and shall be outfitted with high visibility garments, as required by current ANSI standards. All PPE and traffic control equipment shall be outfitted with reflectorized material for night work as required by current ANSI standards.

### **Stairways and Ladders**



**NOT FOR BID**

All aluminum and commercially manufactured wooden ladders shall not be used on Whiting- Turner projects. Fall protection shall be considered by the competent person if employees work from a ladder 6' or more above a lower level and are exposed to a fall.

Employees working on ladders must be at least one and a half times the height of the ladder away from any perimeter, shaft, stairway, and opening where the fall distance exceeds 6' without employing additional means of fall protection.

Subcontractors shall provide ladders with duty ratings that meet the needs of their employees. Workers are required to select ladders that are capable of safely supporting their weight and the weight of their tools.

**Steel Erection**

1. Fall protection provided by the steel erector shall remain in the area where steel erection activity has been completed to be used by other trades; if / when Whiting-Turner accepts and takes custody of the system.
2. All tradespersons, including connectors, engaged in steel erection activities on a walking/working surface with an unprotected side or edge more than six (6) feet above a lower level shall be protected from fall hazards by a conventional fall protection method.
3. Roof penetrations are to be made only when equipment is ready to be installed.
4. Safety latches on hooks shall not be disengaged or made inoperable.

**Welding and Cutting**

1. A Hot Work Permit must be completed daily by each contractor/subcontractor performing all welding, burning/cutting operations.
2. Contractor/subcontractors are responsible for providing a fire watch and a charged, 20lb ABC dry chemical fire extinguisher for each welding and burning activity.
3. A fire watch is always required to remain in place during the hot work activity and for a minimum of one half (1/2) hour after the welding or burning operation has been completed.
4. Additional permits may be required by the local Fire Department and will be at the contractor/subcontractor's expense.
5. All shields shall be compatible with a hardhat.
6. All cylinders shall be considered in storage at the end of each shift; cylinders must have gauges removed and caps in place.

END OF SECTION 01 35 20

**NOT FOR BID**



ENVIRONMENTAL,  
HEALTH & SAFETY

# Contractor/Subcontractor EH&S Manual

Rev 1—November 15, 2018

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**DISCLAIMER:** The information contained in this Manual is not intended to serve as a substitute for the exercise of good engineering judgment by the engineers nor as a substitute for determinations made by contractors/subcontractors of appropriate manner and methods of operations and safety aspects of work under their control. This Manual is also not intended to be all inclusive or replace a contractor's or subcontractor's corporate or site-specific safety program and is not intended to, nor shall it, supersede any more stringent federal, state, local and other applicable laws, codes, rules, regulations, and/or practices. All contractor's and subcontractor's site-specific safety programs must meet or exceed the requirements of the Whiting-Turner EH&S program, the contract documents and all federal, state, local and other applicable laws, codes, rules, regulations, and/or practices. In the event of any conflicts between the material contained therein and any more stringent laws, codes, rules, regulations, and/or practices, the more stringent laws, codes, rules, regulations, and/or practices shall govern.

This Manual and all information contained therein is confidential and intended for the sole use of contractors and subcontractors on Whiting-Turner projects.

Contractors/subcontractors are prohibited from distributing this information to any third parties. The Whiting-Turner Contracting Company expressly disclaims warranties for the information contained in this Manual and makes no representations to third parties regarding the reliability, suitability, correctness, or completeness of such information. Whiting-Turner assumes no responsibility or liability and shall not be responsible and/or liable for damages or losses of any kind, including but not limited to direct, indirect, incidental, exemplary, special or consequential damages or losses, arising from, attributable to and/or resulting from the use of such information by third parties however caused and on any theory of liability, whether in contract, strict liability or tort.



## 1. Contractor/Subcontractor EH&S Requirements

### Policy Statement

The following establishes Whiting-Turner's minimal EH&S requirements for all contractors/subcontractors on a Whiting-Turner project. This Manual is not meant to be all inclusive and it does not, in any way, excuse the contractor/subcontractor from adhering to the entirety of the Owner's requirements and OSHA's 29 CFR 1926 Safety and Health Guidelines for Construction nor is it a substitute for the contractor/subcontractor's own site-specific safety program. The contractor/subcontractor's own site-specific safety program must meet or exceed the requirements of the Whiting-Turner Contractor/Subcontractor EH&S Manual, the Contract documents and the most current federal, state, local or other applicable codes and regulations.

### General Requirements

1. Each contractor/subcontractor must identify and submit the qualifications of a safety representative/competent person to Whiting-Turner as the primary, on-site contact for safety related issues.
  - a. The safety representative may be a supervisor and they shall have, at a minimum, the OSHA 30-hour Outreach Training Program for Construction.
  - b. The contractor/subcontractor will provide a first aid/CPR trained person when one or more of the contractor/subcontractor's employees are working
2. The contractor/subcontractor's supervisor(s) and safety representative must make frequent and regular inspections of their work areas and activities.
  - a. Hazards identified that are under their control must be corrected immediately and all other identified hazards must be reported to the Whiting-Turner Project Superintendent.
  - b. One documented inspection shall be conducted each week and made available at Whiting-Turner's request.
3. The contractor/subcontractor's on-site supervisor and the contractor/subcontractor's designated on-site safety representative must schedule and attend a pre-construction safety meeting with the Whiting-Turner Superintendent and Site Safety Manager to discuss the contractor/subcontractor safety requirements.
  - a. The pre-construction safety meeting should take place at least five (5) working days before startup to allow for review of required documentation.
4. The contractor/subcontractor shall provide a translator whenever there are non-English speaking workers on site. Subcontractor supervisors must be able to communicate in English.
5. Contractor/subcontractors, who in turn contract out parts of their work, have sole responsibility to see that their lower tier contractors comply with project safety requirements. Additionally, Whiting-Turner's Project Manager and/or Whiting-Turner's Superintendent shall be notified that the lower tier contractors are arriving at least five (5)



days before work starts. The Contractor/subcontractors will be held directly accountable for all lower tier contractors. Contractors/subcontractors must provide a competent person onsite fulltime to oversee and direct lower tier contractors' while actively performing work.

6. The contractor/subcontractor's superintendent(s) and/or designated safety representative must attend the weekly coordination meeting where safety issues will be addressed. Emergencies should be handled through the Whiting-Turner Field Office according to the posted Emergency Action Plan.
7. All work-related injuries, regardless of severity, must be reported to Whiting-Turner immediately. An accident/incident investigation report must be completed by the appropriate contractor/subcontractor supervisor and submitted to the Whiting-Turner project team within 24 hours of the incident. Further, all work-related injuries will be recorded on the injury log. A completed injury log will be submitted to the Whiting-Turner project team by the 5th of the month for the previous month.
8. Incidents involving the general public, regardless of severity, must be reported to Whiting-Turner immediately. An accident/incident investigation report must be completed by the appropriate contractor/subcontractor supervisor and submitted to the Whiting-Turner project team within 24 hours of the incident.
9. Each contractor/subcontractor with chemicals on site shall have a spill kit on the project with the appropriate materials for adequate and prompt clean-up. In addition, their site-specific safety plan shall address spill prevention and containment measures.
10. Only communication radios are permitted on Whiting-Turner projects.

### **Activity Hazard Analysis (AHA) and Pre-task Planning (PTP)**

#### **Activity Hazard Analysis.**

For each phase or major type of work/definable feature of work an AHA will be completed to identify the following:

- Health and safety considerations
- Description of steps to be performed
- Hazards associated with each step
- Required action to eliminate or control the hazard
- Focus four hazards and controls
- Contractor/subcontractor supervision sign-off

**The AHA is required to be submitted to the Whiting-Turner project team ten (10) days prior to start of the task.** The contractor/subcontractor shall not be released to work until the AHA is received by the Whiting-Turner Superintendent or their designee.

Contractors/subcontractors involved in abatement, demolition, steel erection, confined space, and lockout/tagout operations must submit their site-specific safety plan for review by the Whiting-Turner Superintendent or Area EH&S Manager prior to the start of work.

**Pre-task Planning.**

This daily plan is designed to take place at the start of each work shift. Contractor/subcontractor supervisors are encouraged to meet with their crews to discuss the tasks to be accomplished and the steps that need to take place to work safely. All tradespersons should review and sign the relevant PTP for their assigned work. The main components of the Pre-task Plan will include the following:

- Evaluating the work area
- Potential hazard checklist
- Required actions to eliminate or control the hazard
- Crew sign-off

A copy of the PTP, if used, shall be kept near the work location.

The information the supervisors are relaying to the tradespersons is the same that was developed in the AHA however, the PTP will greater define the plan for that phase of work as it applies to each crew performing the work.

**Aerial and Scissor Lifts**

Fall protection is required in all aerial on Whiting-Turner projects. Contractor/subcontractor employees shall comply with their company's or project requirements for fall protection when working from a scissor lift. Climbing above the platform of any lift is prohibited; workers observed committing this unsafe act will be removed from the project for a minimum of 3 days—prior to returning to work they must be retrained by their employer. Manufacturer instructions must be followed for movement of any lift.

**Chemicals and Other Potentially Hazardous Materials**

A copy of the contractor/subcontractor's site-specific Chemical Inventory List and site specific SDS must be submitted to the Whiting-Turner project team and updated as applicable. The chemical inventory list shall be reviewed on a monthly basis by a qualified person. A Project Hazcom Station [containing a hard copy all safety data sheets applicable to the site] will be established and maintained in the Whiting-Turner Project Office. The Whiting-Turner Hazcom Station does not eliminate the need or requirement for the Contractor/subcontractor to establish and maintain a site-specific chemical inventory.

In the event unknown and/or potentially hazardous materials are encountered during construction, that portion of the work will stop, and Whiting-Turner will be notified immediately. Work will not resume until the Whiting-Turner Project Manager, Superintendent, EH&S Manager or third-party administrator authorizes it.

**Communication and Compliance**

Contractor/subcontractor management personnel is responsible for ensuring that all EH&S principles, policies and procedures are clearly communicated and understood by their respective employees. Managers and supervisors are expected to enforce all requirements uniformly.

All persons working on a Whiting-Turner project are responsible for using safe work practices. In addition, it is expected that each person follows all procedural safeguards and assists in maintaining a safe work environment.

### **Disciplinary Action**

When safety policies and procedural safeguards are violated or frequent involvement in accidents or infractions is revealed, disciplinary action must be considered. The intent of any disciplinary action taken is to convey the severity or potential severity of the infraction and bring about desired safe work practices.

When a person is observed committing an unsafe act, they must be informed by means of a written safety notice and he/she must attend the next scheduled jobsite safety orientation. In addition, employees observed committing unsafe acts while performing a task that exposes them to fall, electrical, caught-in/between or struck-by hazards must be retrained by their employer prior to attending the jobsite orientation and returning to work. At the discretion of Whiting-Turner management, depending on the severity of the violation by a contractor/subcontractor employee, the person may be suspended from the project for an allotted time or removed from the project permanently.

When a contractor/subcontractor implements their own company procedures for safety infractions committed by their employees on a Whiting-Turner job site, the contractor/subcontractor shall notify Whiting-Turner and provide a copy of the notice of infraction and related disciplinary actions to Whiting-Turner.

### **Drug & Alcohol Testing**

All contractors/subcontractors are required to perform testing as required to comply with all owner requirements and Whiting-Turner's policy for a drug free workplace.

### **Employee Safety Training**

A site-specific safety orientation shall be conducted prior to allowing any workers access to the field. All employees completing the orientation will be issued a numbered orientation sticker or badge to be displayed on their person.

- Additional OSHA Construction Standards that require specific training include, but are not limited to:
  - o Hazard Communication Training - 29 CFR 1926.1200.
  - o Stairway and Ladder Safety Training - 29 CFR 1926.1050.
  - o Fall Protection Training - 29 CFR 1926. 503
  - o Personal Protective Equipment - 29 CFR 1926.95
  - o Scaffold Training - 29 CFR 1926.450

Contractors/subcontractors are responsible for ensuring their employees receive proper training before authorizing them to work on site.

### **Weekly Safety Meetings**

Project workers must attend at least one safety meeting each week. Copies of meeting minutes must be submitted to the Whiting-Turner project team with the Contractor/subcontractor Daily Progress Report for the day the meeting is held. Meeting minutes must indicate the name of the Contractor/subcontractor and date of the meeting. The supervisor(s) and the attendees must sign minutes.

## 1.1. Bloodborne Pathogen Exposure Prevention

### Introduction

This baseline expectation applies to all contractor/subcontractor employees who could be *reasonably anticipated*, as a result of performing job duties, to come in contact with blood and other potentially infectious bodily fluids. Whiting-Turner employees trained and certified in first aid and cardio pulmonary resuscitation (CPR), who might be *reasonably anticipated* to come in contact with bodily fluids also must follow the guidelines set forth in this section.

### Procedures

- When dealing with blood or other bodily fluids, Whiting-Turner and contractor/subcontractor employees are required to follow universal precautions. Accordingly, all human blood and other human body fluids are treated as if known to be contaminated with bloodborne infectious diseases.
- Contractors/subcontractors must provide their employees with disposable latex free gloves and one-way resuscitation masks for use in the event of an emergency.
- All certified first aid providers are required to wear disposable latex free gloves and eye protection while performing first aid on an injured individual. If rescue breathing or CPR is performed, a one-way resuscitation mask shall be provided for the protection of the injured and the provider.
- All blood spills shall be immediately contained and cleaned with an anti-viral solution, or by a solution of 5:1 water to bleach. In the event of a serious accident, the Whiting-Turner project team shall contract an outside biohazardous materials firm.
- Any material saturated with blood or other bodily fluid must be considered regulated waste. Discarded band-aids and gauze containing small amounts of blood products are not considered regulated waste. Disposal of all regulated waste must be conducted by an outside biohazardous waste firm or emergency medical personnel.

## 1.2. Carbon Monoxide Exposure Prevention

### Introduction

Carbon monoxide (CO) is a highly-toxic, flammable, non-irritating, tasteless, odorless gas that is slightly lighter than air. CO is one of the most common asphyxiants encountered in the construction industry. CO is produced in copious amounts by internal combustion engines such as automobiles, diesel powered compressors, welding machines, concrete mixers, and forklifts. Some of the common symptoms of carbon monoxide poisoning are shortness of breath, headache, dizziness, muscular weakness, and nausea.

### Procedures

- The use of fuel powered engines and tools—which could potentially increase the likelihood of carbon monoxide exposures beyond the permissible exposure limit—are prohibited in poorly ventilated areas on Whiting-Turner projects.
- In enclosed or poorly ventilated spaces tools and equipment shall be powered by electricity, batteries, or compressed air.
- When using fuel powered generators and compressors, place them outside away from air intakes to ensure that the exhaust is not being drawn back indoors.
- All fuel driven equipment being used indoors or in partially enclosed spaces—that does not meet the Final Tier 4 engine requirements—must have scrubbers where carbon monoxide exposure exists.
- Equipment meeting the Final Tier 4 emissions standards are permitted—continuous air monitoring for the concentration of CO is required.
- Where the potential for exposure beyond the permissible exposure limit is probable—using any device that discharges the products of combustion into a work area—the following testing requirements shall be followed:
  - Monitor the work area continuously for the concentration of carbon monoxide,
  - Monitor several different points within the area at the working/breathing heights of employees.
  - Remove the employees from the area when the concentration of carbon monoxide reaches 35 PPM. Supplemental ventilation and reduction or elimination of the source shall be provided to reduce the concentration below 35 PPM before the employees are allowed to resume work in the area.



### 1.3. Concrete and Masonry

#### Introduction

Each contractor/subcontractor working on a Whiting-Turner project will comply with 29 CFR 1926, Construction Industry Regulations, Subpart Q – Concrete and Masonry Construction in addition to the following guidelines.

#### Procedures

##### General requirements.

- No construction load may be placed on a concrete structure unless a qualified person, knowledgeable in structural design, determines that the structure is capable of supporting the load.
- Protruding reinforced steel—and similar protrusions—onto or into which employees could fall, must be protected and maintained by the creating contractor to eliminate the hazard of impalement.
- Contractors/subcontractors whose work involves working at heights 6 feet or above a lower level must submit a fall protection and rescue procedures to Whiting-Turner, including the name and qualifications of the designated competent person.
- Eyewash stations and washing facilities must be provided per 29 CFR 1926.50(g) and 29 CFR 1926.51(f)(1), respectively.
- Ensure that proper concrete washout stations are provided and maintained to prevent runoff of liquids and to consolidate solids for disposal.

##### Equipment and tool requirements.

- Powered and rotating concrete troweling machines must have a “dead man” switch that automatically shuts off power whenever the hands of the operator are removed from the machine.
- Masonry saws must be provided with a semi-circular guard.
- Machines and equipment must be locked and tagged out of service before employees can perform any maintenance or repair work.

##### Cast-in-place concrete requirements.

- Formwork must be designed, fabricated, erected, supported, braced, and maintained so it can support all anticipated lateral and vertical loads.
- All shoring equipment must be inspected prior to erection to determine if it meets the requirements specified in the formwork drawings.
- Erected shoring equipment must be inspected immediately prior to, during, and after concrete placement.
- Wherever single post shores are used on top of one another a qualified designer must prepare the design of the shoring and an engineer qualified in structural design must inspect the erected shoring prior to concrete placement. Written documentation must be provided to Whiting-Turner prior to the start of the pour.
- Forms and shores shall not be removed until the employer determines that the concrete has gained sufficient strength.

- Fall protection shall be maintained while employees are climbing rebar including point to point movement anytime they are exposed to falls six (6) feet or greater.
- Fall protection is required on all decks where gaps or voids exist in the decking 10” or greater. At the building’s perimeter where the decking steps down to allow for a beam pour, the height of the rails shall be increased accordingly to ensure that guardrail protection remains adequate for persons working on the deck.
- Areas where form stripping is to be performed must be properly barricaded with tape or fence and signage must be posted on all sides. This should include areas below stripping.
- Protruding nails in stripped lumber shall be removed or bent immediately.
- Outrigger platforms used for material movement in and out of the building via a crane or forklift must be designed by an engineer and incorporate 100% fall protection systems. Workers using the platform must utilize PFAS if any guardrail is removed.

### **Concrete forms, falsework, and vertical shoring.**

- The concrete contractor/subcontractor shall install guardrails along all perimeter edges and interior floor openings.
  - The installation of the perimeter guardrail system must progress as the leading-edge progresses forward.
  - Proper guardrail heights shall be maintained during the formwork phase and again after the concrete has been placed; the proper top-rail height is between 39”-45” above the walking/working surface and the mid-rail is half that distance.
  - If at any time a worker breaches the height of a guardrail system, that worker shall be protected by a personal fall arrest system or a tiered guardrail system that provides adequate protection.
    1. If the distance from a person’s walking/working surface and the top-rail is less than 39 inches, that person has breached the fall protection system and another method of protection must be employed.
    2. Likewise, if the distance from a person’s walking/working surface and the top-rail exceeds 45 inches, that person is considered to have inadequate protection and another method of protection must be employed.

### **Masonry requirements.**

- A limited access zone must be established prior to the start of any masonry work.
- The zone must be equal to the height of the wall, plus four feet.
- Employees that are working at heights greater than six (6) feet and are reaching more than 10 inches below the level of the walking / working surface on which they are working, must be protected from falling by personal fall arrest systems.
- For overhand bricklaying from a scaffold, fall protection is required if the working side of the scaffold has a gap greater than 14” between the scaffold and structure.

## 1.4. Confined Spaces

### Introduction

No Whiting-Turner or contractor/subcontractor employee shall enter into any type of confined space until it has been identified and labeled by their respective employer's competent person and all applicable safety requirements contained in 29 CFR 1926 Subpart AA – Confined Spaces in Construction and this section have been met. All contractors/subcontractors involved in confined space activities shall submit a program—which meets or exceeds all federal, state and local regulations as well as the directives contained herein—to Whiting-Turner prior to the commencement of work in said spaces.

### Procedures

#### General.

All confined spaces, regardless of classification, shall have continuous multi-gas/4-gas air monitoring while the space is occupied by tradespersons. Atmospheric testing shall also be performed prior to persons entering the space.

#### Pre-entry assessment.

Prior to confined space entry, each employer must ensure that a competent person identifies all confined spaces in which one or more of the employees it directs may work, identifies each space that is a permit space, through consideration and evaluation of the elements of that space, including testing.

It is Whiting-Turner's position that all confined spaces are permit required until proven otherwise [in writing] by the contractor/subcontractor's competent person. Depending upon the type of confined space identified, specific criteria must be satisfied before entry.

#### Signage.

All confined spaces shall be labeled. If the workplace contains permit spaces, the entry supervisor shall inform employees by posting danger signs at all entrances of confined spaces. The signs will be legible in English and in the predominant language of non-English reading workers. At a minimum, the following information will be included:

**DANGER**  
**PERMIT-REQUIRED CONFINED SPACE**  
**DO NOT ENTER**

#### Authorized entry.

If permit spaces exist in the workplace, only authorized employees may enter the spaces. The entry supervisor shall take effective measures to prevent unauthorized employees from entering into permit spaces. No work will be permitted in confined spaces until the contractor/subcontractor has initiated, maintained, completed, and posted a permit accepted by a designated Whiting-Turner employee.

**Modification of non-permit spaces.**

If non-permit spaces are modified, or experience any change that causes an increased hazard to entrants, the supervisor of the exposed employees, shall ensure that the space is reevaluated by the competent person.

**Permit required spaces.**

If permit spaces are identified, the following program elements, at a minimum, must be addressed in a written project specific confined space procedure.

- Environmental Controls – to ensure that pre-entry precautions (i.e. hazard evaluations, operating procedures, isolation methods, safety equipment, etc.) have been implemented.
- Atmospheric Testing – for oxygen content, explosive vapors, toxic substances and carbon monoxide to ensure that acceptable entry conditions exist.
- Assigned Duties – of each participant must be established and clearly communicated.
- Rescue Equipment and Emergency Services – develop and implement procedures for summoning rescue and emergency services, for rescuing entrants from permit spaces, for providing necessary emergency services to rescued employees and for preventing unauthorized personnel from attempting a rescue.
- Entry Permit System – used to record critical data and serve as official entry authorization must be implemented and managed accordingly following the completion of permit space work.
- Training – of employees expected to enter permit required confined spaces must be provided to ensure that understanding of assigned duties and the requirements of 29 CFR 1926.1207.
- Medical Surveillance Program – for all employees who must enter permit spaces shall be established to ensure that they have been medically evaluated and cleared to work in such spaces.

## 1.5. Cranes and Derricks

### Introduction

Each contractor working on a Whiting-Turner project will comply with 29 CFR 1926 Subpart CC – Cranes & Derricks in Construction in addition to the following guidelines.

### Procedures

#### General requirements.

- No crane or hoist shall be placed in service on a Whiting-Turner project until an annual, third party inspection and supplemental reports are submitted to the Whiting-Turner project team indicating that the crane or hoist meets the manufacturer's inspection criteria.
- If the manufacturer's inspection criterion does not exist, a structural engineer, familiar with crane or hoist's design and dynamics, may develop or use existing inspection criteria.
- Whiting-Turner requires all crane operators to be certified or qualified in accordance with the requirements of Subpart CC.
  - Copies of all certifications shall be submitted to the Whiting-Turner project team prior to the start of work.
  - A certified operator license must be provided where state or local ordinances require additional certifications.
- Mobile crane movement on site must be in accordance with manufacturer's recommendations.
- The swing radius of cranes must be properly barricaded at all times while working on site.
- Wire rope, its attachments, fittings, sheaves, and safety devices must be inspected according to the manufacturer's recommendations. Copies of the inspections must be submitted to the Whiting-Turner project team.
- Wedge sockets and fittings must be the proper size to match the wire rope and must not move when holding the wire rope under load. The dead end must be terminated according to ANSI B30.5 and must not be attached, in any manner, to the live side of the load line.
- An anti-two-block or warning device is required on all cranes except those engaged in driving piles.
- A qualified rigger must inspect the rigging prior to each lift.
- All windows in cabs must be safety glass that produces no visible distortion that will interfere with the safe operation of the machine.
- Outriggers shall be fully extended unless proven to be a hindrance to the safe operation of the crane or infeasible by the operator. In all cases, the use intermediate outriggers may only be considered if it is permitted by the manufacturer.
- Whiting-Turner's crane checklist shall be completed prior to each initial lift.

**Lift plans.**

- All pick & place lifts—excluding standard deliveries—requires a formal lift plan.
  - This plan must be submitted to the Whiting-Turner project team for record and review prior to the commencement of the lift.
  - Whiting-Turner personnel shall not approve lift plans; however, Whiting-Turner reserves the right to reject lift plans or require additional information if deemed necessary.
- All completed documentation with reference to the lift—including Whiting-Turner Crane Authorization Form—shall be onsite prior to beginning and for the duration of the activity.

**Ground conditions.**

- Unless otherwise agreed upon, the Whiting-Turner Superintendent must ensure that appropriate ground preparations are provided—firm, drained and graded.
- The agreement of acceptable ground conditions and notification of known underground hazards shall be considered completed once the competent persons have signed the Whiting-Turner Crane Authorization Form.

**Controlling loads.**

- All loads to be lifted at Whiting-Turner project sites shall have a tag line attached.
  - The competent person shall determine the size, rope materials, and length of the tag line.
  - The line shall be attached in a way that maintains control of the load to reduce the risk of caught-in/-between and struck-by hazards to employees and surroundings during any lift.
  - Where encroachment precautions are required, taglines must be of nonconductive material.

**Assembly/disassembly.**

- Manufacturer
  - When assembling or disassembling equipment (or attachments), the contractor shall comply with all applicable manufacturer exclusions and procedures for assembly or disassembly.
- General Requirements
  - Assembly/disassembly must be directed by a person who meets the criteria for both a competent person and a qualified person, or by a competent person who is assisted by one or more qualified persons.

**Power line safety. (Up to 350 kV)**

- Equipment Operations
  - Before beginning equipment operations, the employer must identify the work zone.
  - If during the operations any part of the equipment will get closer than 20 feet to a power line, the employer must ensure that (a) The power line is de-energized and visibly grounded at the worksite, (b) No part of the equipment gets closer



than 20 feet to the power line; or (c) A table in the standard is used to determine the minimum safe distance based on the line's voltage.

### **Inspections.**

- Copies of all required inspections completed shall be submitted to the Whiting-Turner project team after completion of the inspection for record at the project site.
- Inspections are required during the following intervals and specifications
  - Modified equipment – Modified equipment must be inspected by a qualified person after the modifications have been completed, but prior to initial use.
  - Repaired and Adjusted Equipment – Repaired and adjusted equipment must be inspected by a qualified person after the repairs or adjustments have been completed, but prior to initial use.
  - Post Assembly – Upon completion of assembly, a qualified person must inspect the equipment to assure that it is configured in accordance with manufacturer equipment criteria.
  - Post Assembly – a post assembly inspection is required for all Crawlers and Tower Cranes by a person properly trained and qualified to inspect such equipment.
  - Each Shift – A competent person must begin a visual inspection prior to each shift the equipment will be used, which must be completed before or during that shift.
  - Monthly – Each month that the equipment is in service it must be inspected in accordance with the criteria established in the standard.
  - Annual Comprehensive – At least every 12 months the equipment must be inspected by a qualified person in accordance with the criteria established in the standard.
  - Severe Service – When the equipment is used enough that there is a reasonable possibility of damage or excessive wear the employer must stop using the equipment and have it inspected by a qualified person using the inspection criteria established in the standard.
  - Equipment Not in Regular Use – Equipment that has been idle for three (3) months or more must be inspected by a qualified person using the inspection criteria established in the standard.
- Any crane with a deficiency that could potentially affect the safe operation of the equipment shall be taken out of service immediately and remain so until documented repairs have been made.

### **Safety devices.**

- The following safety devices are required on all equipment unless otherwise specified in 29 CFR 1926 Subpart CC:
  - Crane level indicator
  - Boom stops (except for derricks and hydraulic booms)
  - Jib stops (if jib is attached)
  - Locks on equipment with foot pedal brakes

- o Integral holding device/check valves on hydraulic outrigger jacks and hydraulic stabilizer jacks
- o Rail clamps and rail stops on equipment on rails (except for portal cranes)
- o Horn
- o Boom-tip anemometer or equivalent device

**Operations.**

- Contractors must comply with all manufacturer procedures applicable to the operational functions of equipment, including its use with attachments.

**Authority to stop operation.**

- Whenever there is a concern about safety, the operator has the authority to stop and refuse to handle loads until a qualified person has determined that the safety concern has been resolved.

**Signals.**

- A signal person must be provided in each of the following situations:
  - o When the point of operation is not in full view of the operator
  - o When the view in the direction of travel is obstructed when the equipment is traveling
  - o When site specific safety concerns are an issue because either the operator or the person handling the load determines that it is necessary.
- Types of Signals
  - o Signals to operators must be by hand, voice, audible, or new signals.
  - o Whiting-Turner prohibits the use of cell phones for signaling of cranes and equipment
- Suitability – The signals used and means of transmitting them must be appropriate for the site conditions.
- During Operations – During the operations the ability to transmit signals must be maintained. If that ability is interrupted the operator must safely stop all operations until the ability to transmit is re-established and a proper signal is given and understood.
- Safety Problems - If the operator becomes aware of a safety problem and needs to communicate with the signal person, the operator must safely stop all operations.
- The operations must not resume until the operator and signal person agree that the problem has been resolved.
- Only One Signaler - Only one person may give signals to a crane or derrick at a time, except for those giving the emergency stop signal.
- Safety Problems Alert - Anyone who becomes aware of a safety problem must alert the operator or signal person by giving the stop or emergency stop signal.
- Communication with Multiple Cranes/Derricks - Where a signal person is in communication with more than one crane/derrick, a system must be used for identifying the crane/derrick each signal is for as follows:
  - o For each signal, prior to giving the function/direction, the signal person must identify the crane/derrick the signal is for or must use an equally effective method of identifying which crane/derrick for which the signal is intended.

- Testing Signal Transmission Devices - The devices used to transmit signals must be tested on site before beginning operations to ensure that the signal transmission is effective, clear, and reliable.
- Dedicated Channels - Signal transmission must be through a dedicated channel, except:
  - Multiple cranes/derricks or more than one signal person may share a dedicated channel for coordinating operations; and
  - Where a crane is being operated on or adjacent to railroad tracks, and the actions of the crane operator need to be coordinated with the movement of other equipment or trains on the same/or adjacent tracks.
- Language - The operator, signal person and lift director (if applicable), must be able to effectively communicate in the language used.

**Work area control.**

- Swing radius hazards – Workers must be protected from foreseeable risks of being struck by and/or pinched or crushed by the equipment's rotating superstructure.
- Training – Affected tradespersons must be trained to recognize struck by and pinch/crush hazard areas posed by the rotating superstructure.
- Barriers – Control lines, warning lines, railings or similar barriers must be erected to mark the boundaries of the hazardous areas. All barriers must be equipped with a warning sign (such as “danger-swing/crush zone”).
- Protecting tradespersons in the hazard area – Before a worker goes to a location in the hazard area that is out of the view of the operator, the worker (or someone instructed by the worker) must ensure that the operator is informed that he/she is going to that location.

**Keeping clear of the load.**

- Hoisting routes - Where available, hoisting routes that minimize the exposure of tradespersons to hoisted loads must be used.
- Workers in fall zone - While the operator is not moving a suspended load, no worker must be within the fall zone except for the following:
  - Workers engaged in hooking, unhooking, or guiding a load
  - Workers engaged in the initial attachment of the load to a component or structure
  - Workers operating a concrete hopper or concrete bucket

**Safety criteria for tradespersons in fall zone.**

When affected tradespersons must be in the fall zone the following criteria must be met:

- The materials being hoisted must be rigged to prevent unintentional displacement.
- Hooks with self-closing latches or its equivalent must be used.
- A qualified rigger must do the rigging.

**Safety criteria for lifting over occupied buildings.**

Every reasonable effort should be made to avoid lifting over an occupied building. In cases where the competent person for this operation has determined that a lift over an occupied building is necessary and other options are infeasible, the following criteria must be met:

- Prior to the lift, the area of the top two floors that is within the fall zone shall be evacuated
  - o If the contractor's/subcontractor's qualified, competent person determines it—after a thorough hazard assessment—that evacuation is not necessary, this decision shall be submitted to the Whiting-Turner project team in writing. In addition, the contractor's/subcontractor's competent person must ensure that the critical lift protocols are followed.
- All affected paths of access and egress must be barricaded to prevent access to the restricted area or fall zone
- Signage notifying occupants of the activity and their new path of travel shall be conspicuously posted.

**Safety criteria for receiving a load.**

Only tradespersons receiving the load can be within the fall zone when the load is being landed.

**Safety criteria for tilt up or tilt down operations.**

During tilt up or tilt down operations the following criteria apply:

- No worker may be directly under the load.
- Only tradespersons essential to the operation can be in the fall zone but may not be directly under the load.

**Workers essential to the operation.**

Workers are essential to the operation only if the following apply:

- It is infeasible for the worker to perform the operation from outside the fall zone and;
- The worker is physically guiding the load; or
- The worker is closely monitoring and giving instructions regarding the loads movement; or
- The worker must detach the load or initially attach the load to another component or structure.

**Operator qualification and certification.**

- Qualification or certification - The employer must ensure that the operator is qualified or certified in accordance with the standard. Employer options for getting affected operators qualified or certified follow:
  - o Certification by an accredited crane operator testing organization;
  - o Qualification by an audited employer program;
  - o Qualification by the U.S. military; or
  - o Licensing by a government entity.
- Exceptions to qualification and certification requirements - Operators of derricks, side-boom cranes, or equipment with a maximum manufacturer-rated hoisting/lifting capacity of 2,000 pounds or less are exempt from qualification and certification requirements.

**Signal person qualifications.**

- Qualification Requirements - The employer must ensure that signal persons meet the following qualification requirements before giving any signals to operators:
  - o Obtain documentation from a third party qualified evaluator showing that the signal person meets the qualification requirements established in the standard; or
  - o Obtain documentation from the employer's qualified evaluator (not a third party) showing that the signal person meets the qualification requirements established in the standard.
- Documentation Availability - The employer must make signaler qualification documentation available at the site where the signal person is employed.
- Knowledge Requirements - Each signal person must demonstrate the following:
  - o Knowledge and understanding of the type of signals used. If hand signals are used, the signal person must know and understand the Standard Method for hand signals;
  - o Competence in the application of the types of signals used;
  - o Basic understanding of the equipment operation and limitations, including the crane dynamics involved in swinging and stopping loads and boom deflection from hoisting loads;
  - o Knowledge and understanding of the relevant requirements of the standard covered in the sections on Signals-General Requirements, Signals - Hand Signal Chart, and Signal Person Qualifications; and
  - o That he or she meets the qualification requirements through successful completion of an oral or written test and a practical test.

#### **Qualifications of maintenance & repair employees.**

- Maintenance, inspection, and repair personnel are permitted to operate the equipment only where specified requirements are met as established in the standard.

#### **Hoisting personnel.**

- Personnel hoisting requirements - The use of equipment to hoist personnel is prohibited unless the employer can demonstrate that other methods would be more hazardous and is able to comply with the personnel hoisting requirements that are established in the standard.
- Hoisting personnel on Whiting-Turner project sites shall be done only after review of the plan and deemed feasible by Vice President and the Area EH&S Manager assigned to the project.
- Hoisting personnel on Whiting-Turner projects shall be considered a critical lift or activity, and therefore shall meet all requirements of a critical lift before the lift may begin.

## 1.5.1 Critical Lifts

### Introduction

The goal of this section is to assure that crane lifts which meet the criteria stated below are done with understanding of the regulatory requirements as well stated guidelines contained herein.

The Whiting-Turner Contracting Company identifies a critical or special lift as

- any lift where the total weight of the load and the deductions for the equipment combined exceeds 75% of the capacity of the crane capacity chart at the specific boom length and radius of the load,
- any lift where there will be more than one (1) crane or piece of load handling equipment attached to the load at a time;
- any lift that involves the lifting of personnel;
- any lift where the contents of the lift are considered hazardous to health or environment, and an accidental release could result harm to either;
- any lift where encroachments precautions are required for power lines.

### Lift Plan Development

#### The load.

- Identify loads weight, center of gravity, and dimensions, and the sources of that information.
- Identify any components that could shift during the lift and develop a method to secure any items identified if required.
- Identify load attachment points and assure they are suitable for the load to be handled, while maintaining load integrity.
- Identify the requirements to be met for the loads orientation and securement prior to the release of the load handling equipment and rigging.

#### Load handling equipment.

- Identify the load handling equipment and the anticipated configuration(s).
- Assure the load handling equipment can handle the total anticipated load, including the rigging, accessories, and attachments in the intended configuration(s).
- Ensure the load handling equipment is in compliance with the requirements of the site, the manufacturer or qualified person, industry-recognized standard, local, state, and federal regulations.
- Establish the process to setup, erect, or install, and dismantle the load handling equipment using the information provided by the following:
  - The manufacturer
  - A qualified person
  - Site specific recommendations
  - Applicable regulatory requirements
- Identify all required inspections and tests on the load handling equipment that need to be performed. Additional inspections may be necessary for repetitive critical lifts.



**Rigging.**

- Establish rigging method that will support and secure the load and is suitable for the activity.
- Ensure that the rigging method and the equipment have the capacity to support the load in the configuration or geometry required by considering the following:
  - Dynamic Effects
  - Adverse environmental conditions, temperature, wind, lightning etc.
  - Position of the center of gravity relative to rigging support points
  - D/d ratio
- Identify the weight of the rigging, accessories, and attachments, as well the sources of that information
- Establish the process to ensure that rigging equipment meets the manufacturer's specifications, regulations, and industry-recognized standards (e.g. ASME B30.9, B30.20, and B30.26) and onsite requirements.
- Identify all necessary inspections and tests for the rigging equipment and that they are carried out prior to the lift
- For repetitive lifts ensure a more frequent inspection process is in place.
- Establish the process to install and disassemble the rigging equipment using the manufacturers' information and other applicable standards.
- Ensure that the rigging will be protected from damage during the activity.

**The travel path.**

- Identify the path of travel for the load and the load handling equipment
- Establish a process to minimize the exposure to overhead loads by way of barricades, spotters, or lookouts to ensure only authorized personnel are allowed into the fall zone
- Ensure the load and the load handling equipment has adequate clearance to prevent contact with site-specific hazards or obstructions during the activity
- Ensure a tagline of proper type and length is obtained for load control
- Ensure that the path taken if pick and carry operation is instituted that level and substantial support are established.

**Personnel.**

- Identify the tasks to be completed prior to, during, and after the load handling activity, and the personnel required to complete each task.
- Identify the specialized training required for these tasks and ensure copies of these training completion documents are attached to the plan.

**Site, services, and ancillary equipment.**

- Identify the equipment necessary to assist the load handling operation, (high reach, personnel lift, boom lift etc.)
- Identify and ensure specialized training is completed and copies of the completion are attached to the lift plan if required.
- Ensure that ground conditions for equipment support and that proper all underground hazards and placement have been identified and marked for adequate clearance.

- Ensure that all equipment is used and operated in accordance with manufacturer, regulatory and industry standards.

**Communication system.**

- Identify the suitable communication system to be used during the activity. Acceptable methods for Whiting-Turner project sites are:
  - Voice or radio signals
  - Hand signals
  - Other methods of signals are available but would require review prior to being permitted in respect to effectiveness and applicability.
- Identify back up system to be used in the event of interruption from initial communication system plans

**Site control.**

- Identify vehicular and pedestrian access and traffic controls to be used.
- Ensure the plan addresses the following:
  - Vehicular and pedestrian traffic in and around the site that could potentially be affected by the load handling activity
  - Potential interference for other site activities and the controls to used
  - Location of barricades or other measures which may be put in place to restrict traffic or prohibit interference during the load handling activity

**Contingency considerations.**

- The plan should address, at minimum, the following potential events that could cause deviation from the original lift plan:
  - Equipment malfunction or loss of power (e.g. loss of power, fouled rigging, radio communication failure etc.)
  - Adverse changes to the environment (weather, visibility)
  - Deviation from the planned load characteristics identified
  - Adverse changes to the site conditions (surrounding activities, change in ground conditions, and unauthorized entry to the fall zone).

**Emergency action plan.**

- Review the existing Emergency Action Plan and coordinate modifications created by the load handling activity if applicable.

**Pre-lift meeting.**

The lift director shall conduct the meeting and the Whiting-Turner supervisor in charge of the operation or other designated person from Whiting-Turner shall attend the meeting along with all associated personnel to the lift.

- At a minimum, the following elements should be reviewed with all load handling activity personnel:
  - Overview of the load handling activity
  - LHE, rigging, and other equipment involved in the load handling activity

- o The sequence of events and step-by-step procedures for the entire load handling activity
- o Safety measures, as required (e.g. work task plan action items)
- o Load handling activity personnel assignments, addressing
  1. Individual responsibilities (e.g. location, time, task)
  2. Work location hazards (e.g. pinch points)
  3. Communication methods
  4. Personal protective equipment requirements
  5. Qualification(s) of assigned personnel
- Concern raised during this meeting shall be addressed prior to proceeding with the load handling activity
- At the completion of the pre-lift meeting, the lift director should confirm that the attendees understand the plan and respective roles and responsibilities during the load handling activity
- For repetitive lifts, the lift director should decide the frequency of pre-lift meetings. Pre-lift meetings are not required prior to each repetition of the load handling activity.

#### **Executing the critical lift plan.**

- Preparation for the load handling activity - the lift director should confirm that all setup and preparation requirements of the plan are in place and all required inspections and tests on the LHE(s) and rigging equipment have been completed.
- Initiating the Load Handling Activity - immediately prior to performing the load handling activity, the lift director should ensure that either:
  - o All requirements of the plan continue to be met and no conditions exist that would preclude implementation of the plan; or
  - o If a deviation exists, the load handling activity is not initiated until the deviation is addressed by a qualified person or the lift director determines that conditions are acceptable to allow the activity to begin.
- During the Load Handling Activity - the lift director should ensure that the load handling activity continues to comply with the plan.
  - o If the operation deviates from the plan, the load handling activity should be stopped and evaluated to determine if
    1. The load handling activity can resume according to plan;
    2. The contingency measures can be implemented
    3. The plan can be readily modified at the site to accommodate an unexpected condition or event; or
    4. The load handling activity can no longer be implemented a planned, requiring a modified plan to be prepared. In such case, the load and the LHE shall be secured, if possible, until a new plan can be developed
    5. Changes or modifications to the plan should be communicated to all affected load handling personnel prior to initiating the change.
    6. If the load handling activity is stopped for any reason, only the lift director may initiate restart.
- After the completion of the load handling activity, the lift director should

- o Review the development, planning, and execution of the load handling activity with the load handling personnel. Items for review should include, but not be limited to, the requirements of all previous sections.
- o Identify potential measures to improve future load handling activity
- o Communicate any recommendations identified during the activity to the appropriate personnel for future considerations
- For repetitive lifts, decide the frequency of post-lift reviews and evaluation of the lift plan. Post-lift reviews may not be required after each repetitions of the load handling activity.

## 1.5.2 Tower Cranes

### Introduction

Certain projects, due to size and scope, require the use of tower cranes. The quantity and location of towers cranes will vary from project to project. In some cases, due to project requirements, multiple tower cranes may be in a manner resulting in an overlapping operating zone (i.e. area where the operating zone or radius of working jib intersects the operating zone of another tower crane). While this will increase the hook access across the working deck and enhance the effectiveness of each crane, it brings with it significant safety concerns. For that reason, Whiting-Turner has established the following guidelines. In addition, notice to the Federal Aviation Administration (FAA) guidelines set forth in 14 CFR—Aeronautics and Space, Part 77—Safe, Efficient Use, and Preservation of Navigable Airspace, must be adhered to.

### Procedures

Employers using tower cranes must comply with specific provisions in the standard that cover the following subjects:

- Erecting, Climbing and Dismantling
- Signs
- Safety Devices
- Operational Aids
- Inspections

### Overlapping operating zones.

Multiple tower cranes operating with an overlapping operating zone have the potential to come into contact with each other. Such an occurrence has the potential to cause damage to the crane and/or its components; cause the crane or cranes to fail and topple; and/or cause severe injury and even death to tradespersons and/or the public. The safe operation of multiple tower cranes with an overlapping operating zone is determined by the communication and coordination of experienced and skilled operators. Nevertheless, by taking a proactive approach to safety and risk management, there is an opportunity to promote safe crane operations and minimize the potential for crane related accidents resulting from overlapping operating zones.

Written operating procedures must be developed and implemented to coordinate lifting tasks in the overlapping operating zone to prevent contact, collision, or interference between a component or suspended load of one crane with a component or suspended load of another crane. The following safety procedures / protocols should be considered if a project has multiple tower cranes with an overlapping operating zone to minimize, if not eliminate, the potential for contact/collision between cranes.

- Establish a means and protocol for communicating between the crane operators when a crane operates in the overlapping zone. Communicating protocols may include the following:
  - Crane operators must have the ability to communicate to each other (via radio - same channel)

- Reduce distracting background noise on radios by ensuring crane operators, monitor, and limited riggers have separate radio channels
- Include protocols that all crane operators must follow before entering another crane's operating zone. Consider including the following:
  - Visually ensure it is safe to enter the other crane's operating zone
  - Communicate entry intent into that zone to the other operator
  - Receive an acknowledgement response from the other operator. If the entering operator does not receive acknowledgement from the other operator than the entering operator must not proceed with entering the other operator's operating zone
- Standardize the language used for all communication between crane operators (English)
- Consider limiting the number of individuals that can communicate directly with the operators (i.e. individuals on the working deck or other requesting use or support of the crane, etc.)
- Establish clearance requirements for loads passing over or near another tower crane
- Proximity alarms must be utilized to decrease the potential for tower crane contact/collision. Various zone protection and boundary protection safety systems exist in the marketplace (e.g. TAC-3000 Tower Crane Collision / Accident Avoidance Safety System)
- Consider creating a 'right-of-way' procedure giving one crane priority for working in the overlapping operating zone.
- Consider assigning a monitor to observe / supervise all crane activity and provide that monitor with the ability to stop all crane activity should violations of protocol occur, or potentially hazardous situations be observed. The following elements / activities should be considered related to use of said monitor:
  - Monitor shall be equipped with radio to communicate with all crane operators
  - Demonstrate bright, highly visible outerwear unique to the monitor so to be easily distinguishable to the operators and other tradespersons (e.g. bright colored vest and/or hardhat, etc.).
  - Monitor shall be solely dedicated to its role as monitor and shall not participate in any other activities on the project while acting as monitor
  - Monitor shall observe crane activity to ensure that proper protocol is followed
  - Monitor shall listen to communication between operators to ensure that protocol is followed:
    - If operators fail to communicate with each other as protocol requires, the monitor shall issue a reminder to the operators requiring compliance to protocol
  - Monitor shall record instances when operators fail to comply with protocol and inquire why the violation took place
  - Violations in protocol should be copied to the appropriate supervisor / Superintendent and safety personnel of the responsible trade. Documentation shall also be made available to Whiting-Turner
  - Monitor should have the ability to stop crane activity if required to maintain safe crane operations. Methods for delivering an "ALL STOP" directive may include the following:



1. Outfit monitor with air horn to be used to alert a stop directive to operators. Test procedure in field to identify most effective method for communicating signal to operators.
  2. Outfit monitor and operators with a separate and dedicated radio to deliver the stop directive. The separate radio is reserved for stop directive between monitor and operators only and would ensure that operators receive directive.
    - Monitor shall be a competent person and subject to Whiting-Turner approval
- Help to better identify the counter deck of the lower crane by installing bright flags or other markings on the back of the counter deck.
  - Identify counter deck radius of lower crane on the current working deck by means of flags, cones, or other clear delineators to be conspicuously visible. Confirm that delineators are clearly visible to operators and other crane related personnel.
  - Formal overlapping operating zone plan shall be distributed to and acknowledged by the responsible contractor's Superintendents, foremen, operators, monitor(s), and safety personnel – at a minimum.
  - Disciplinary procedures to address violations in protocol, etc. should be included.
    - Appropriate disciplinary procedures should be identified and implemented on the responsible party if crane contact or associated accident, etc. takes place (e.g. removal of operator or responsible party from the project).
    - Responsible trade shall identify how it will determine who the responsible party is should an occurrence take place requiring disciplinary action.
    - Whiting-Turner shall be copied on all recorded non-conformances with protocol as well as related disciplinary procedures/actions.
  - If it is determined that only one tower crane is needed for a given activity or shift of work, the overlapping work zone plan must address the crane that is not in use to avoid interference with the working crane. Procedures for this situation may include the following:
    - If the non-working crane is the higher crane it can be allowed to weathervane and the working crane (lower) can work unobstructed.
    - If the non-working crane is the lower crane:
      1. Non-working crane shall be operated, but not used, to keep non-working crane from *weathervaning* or movement of the non-working crane into the working crane's operating zone.
      2. Investigate to determine whether the non-working crane is outfitted with a locking mechanism to keep the crane from *weathervaning* except under extreme weather conditions. If this is the case, the non-working crane can be locked to prevent *weathervaning* into the working crane's operating zone. At certain wind speeds (determined by crane manufacturer) the lockdown function will be overridden, and the non-working crane will be allowed to weathervane. Weather conditions and wind speed causing this override will require all crane activity to stop in this scenario.

## 1.6. Demolition

### Introduction

Each contractor/subcontractor performing demolition on a Whiting-Turner project will comply with 29 CFR 1926, Construction Industry Regulations, Subpart T – Demolition, in addition to the following guidelines.

### Procedure

#### Preparatory operations.

- Prior to initiating demolition activities, a competent person must make an engineering survey of the building to determine the condition of the structure and identify areas subject to unplanned collapse. A copy of this inspection must remain on site.
- All utilities must be shut off, capped, or locked out of service beyond the building line before demolition work is initiated.
- Prior to the start of work, a hazard assessment must be performed to identify any hazardous chemicals, gases, explosives, flammable materials, or similarly dangerous substances that may have been used on the property.
- Where employees are exposed to fall hazards, guardrail and personal fall arrest systems must be used. All hole covers must be identified and secured against accidental displacement.
- Any openings cut in a floor for the disposal of materials can be no larger than 25% of the aggregate of the total floor area, unless the lateral supports of the removed flooring remain in place.
- Contractor/subcontractor shall verify that all local ordinances and permitting issues have been addressed as they relate to demolition.
- Safety data sheets for known demolished material must be provided by the demolition contractor.
- Task lighting—which meets or exceeds the requirements of the standard—shall be provided by the demolition contractor/subcontractor.

#### Stairs, passageways, and ladders.

- Access to a structure being demolished shall be restricted; tradespersons shall be rerouted to designated stairways, passageways, and ladders. All other points of access shall remain closed.
- All designated access points shall clearly be marked, inspected periodically, and maintained in a clean, safe condition.

#### Chutes.

- No material may be dropped to a point outside the building unless that area is delineated with a protective barricade and the distance to any point does not exceed 20 feet.
- All chutes must be entirely enclosed except for openings equipped with enclosures at or slightly above the floor level for the insertion of materials.
- At all stories below the top floor chute openings shall remain closed.

- A substantial gate must be installed in each chute at or near the discharge end. A competent person must be assigned to control the operation of the gate and the backing and loading of trucks.
- Chutes must be designed and constructed of such strength as to eliminate failure due to the impact of material and debris loaded into them.
- Fall protection may be required where chute opening may create a fall exposure

**Removal of walls, masonry sections and chimneys.**

- Masonry walls, including sections of walls, will not be permitted to fall onto the floor of the building under demolition unless an engineer has determined that the floor can withstand the imposed load.
- No wall section, more than one story in height, will be permitted to stand alone without lateral bracing unless it was designed to stand alone.
- Structural or load-supporting members of any floor will not be cut or removed until all stories above such a floor have been demolished or removed.

**Removal of walls, floors, and material with equipment.**

- Mechanical equipment will not be used on floors unless the floors are of sufficient strength to safely support the equipment.
- Mechanical equipment will only be used for its intended purpose according to the manufacturer's recommendations.
- Curbs or stop logs must be installed and maintained by the demo subcontractor where a possibility exists for equipment going over the edge.

**Removal of steel construction.**

- Steel construction will be dismantled column length by column length, tier by tier.
- When floors have been removed planking—18" wide by 2" thick—must be used by employees engaged in razing the steel framing.

**Mechanical demolition.**

- No employees will be permitted in an area where "ball" or "clam" work is being performed. Only employees necessary for the performance of the operation may be permitted in this area.
- The area must be identified with warning barricades and signs.
- During this operation continuous observations, by the competent person, must be made to identifying potential areas of failure.

## 1.7. Electrical Hazards Prevention

### Introduction

Use of electricity on the jobsite poses serious hazards, with employees potentially becoming exposed to such dangers as electric shock, electrocution, fires, and explosions. All Whiting-Turner employees and contractors/subcontractors working on a Whiting-Turner project will comply with NFPA 70E Electrical Safety Practices and 29 CFR 1926, Construction Industry Regulations, Subpart K – Electrical, in addition to the following guidelines.

### Procedures

#### Working on or near exposed energized parts.

- It is Whiting-Turner's policy that no one works on live electrical circuits. If a situation arises where it is impossible to perform a task with the circuit de-energized, the Whiting-Turner Superintendent or Project Manager shall contact the Vice President and submit a formal request detailing why the circuits cannot be deenergized with a live electrical work plan prior to performing the work. An Area EH&S Manager must review the plan. A formal pre-construction meeting shall occur prior to any such work occurring.
- Only qualified electricians may work on electric circuit parts that have not been de-energized under the procedures of 1910.333.
- Such persons must be capable of working safely on energized circuits and shall be familiar with the proper use of special precautionary techniques, personal protective equipment, insulating and shielding materials and insulated tools.
- All work must be completed with strict compliance to NFPA 70-E requirements and guidelines.
- The contractor/subcontractor shall provide proof of training for all tradespersons when requested by Whiting-Turner.
- Light switches and receptacles must be protected by permanent or temporary cover plates prior to energizing the circuit.

#### Ground fault circuit interrupters.

- All 120-volt, single-phase 15 and 20 ampere receptacle outlets which are not part of the permanent wiring of the structure and which are in use by employees shall have approved GFCI's.
- Whiting-Turner requires that all projects are 100% GFCI compliant. An Assured Equipment Grounding Conductor Program may be used in addition to—but not in lieu of—the GFCI program. If permanent power outlets are to be utilized portable GFCI units shall be provided and utilized.
- All GFCI receptacles and circuit breakers shall be tested monthly to ensure the GFCI is properly functioning and protecting the worker. It is the responsibility of the electrical contractor/subcontractor to perform inspection and testing. The documentation shall be made available upon request.

**Electric tools.**

- All portable electric tools such as saws, hammers, drills, vibrators, and float machines must bear the label of a Certified Testing Agency, such as Underwriters Laboratories, CSA, ETL, or the like.

**Extension cords.**

- Only round, heavy-duty (type S, SJO, SJTW, ST, SO, STD) are acceptable for use on a construction site; at least 12 gauges or larger.
- Cords must be maintained in their original design configuration.
- Any cord which is damaged or has the grounding pin removed shall be removed from service, including power tools.
- Whenever an extension cord is plugged into permanent power, a GFCI is required between the extension cord and the receptacle.
- All electrical cords shall be out of the hallway, corridor, aisle, stairway, doorways, and exit areas where a tripping hazard may occur.
- All electrical cords shall be protected from damage by equipment, carts, trucks, and other rolling objects.
- Where possible, all extension cords will be suspended (8') above the floor or working surface.
- Extension cords shall not be fastened with staples, hung from nails, suspended with non-insulated wire, or hang from fire sprinklers.
- Extension cords shall not be run thru or laid over sharp metal objects that could subject the cord to cuts and possible unintentional energization.

**Temporary wiring.**

- All temporary wiring and lighting must meet current NEC codes.
- Temporary lighting must never be put on the same circuit as temporary receptacles.
- All temporary lighting circuits must originate from GFCI protected breakers.
- Temporary wiring must be rated for all conditions to which it may be subjected and installed per the requirements of NEC, OSHA, NFPA, and other authorities having jurisdiction.

**Temporary lighting.**

- The minimum illumination level 5 foot-candles; this shall be maintained by the electrical contractor at all times.
- Installation of temporary lighting must be per manufacturer's specifications and in compliance with OSHA, NFPA, NEC and local codes.

**Fish tapes.**

- Fish tapes or lines made of metal or any other conductive material are prohibited when the potential for contact with energized circuits exist; non-conductive tapes and lines will be used instead.

## 1.8. Energy Control Policy

### Introduction

The intent and purpose of this procedure is to reduce or eliminate the danger of the unexpected release of stored or residual energy that could cause injury or death to the employee or to the public. Each contractor/subcontractor working on a Whiting-Turner project will comply with 29 CFR §1926.417, “Locking and Tagging of Circuits”, in addition to 29 CFR §1910.147, “The Control of Hazardous Energy” along with the following guidelines.

### Procedures

- Lockout/tagout (LOTO) shall not be considered for use until all other avenues of attaining a “zero-energy state” (all potential sources of any type including re-energization or stored) have been exhausted.
- All contractors/subcontractors working with electrical systems are required to have a written lockout/tagout procedure. A competent person shall be responsible to control all aspects of the LOTO procedure. They will ensure coordination with the appropriate tradesmen.
- If a system can be locked out through design or by other means, this will be the preferred method.
- The lockout device shall be substantial enough to prevent removal.
- The lock shall be a separately keyed lock for use only with the lockout system.
- The lockout device must be tagged with the name of the employee and their company. There shall be one lock for each employee (including Whiting-Turner) exposed to the system.
- If working in a multi-shift environment each worker shall remove their respective locks at the end of their shift. If work on the system is to continue, the next shift worker shall be present to install his lock immediately following removal of the lock from the previous shift. The creating contractor shall have a system in place to ensure that exposure is eliminated by controlling the potential hazardous energy by means of LOTO.
- Workers shall not leave locks on after the completion of their task. This does not apply to the competent person or supervisor. The use of 100% LOTO must be maintained by the responsible contractor/subcontractor until the completion of the task. Verification by all competent persons in charge of the LOTO shall be completed prior to re-energizing the system.
- If the energy isolation device cannot be locked out and a tag must be used, authorization from the Area EH&S Manager and Vice President is required prior to start of work.



- Tag out devices, including the means of attachment, shall be substantial enough to prevent accidental removal.
- The tag shall warn against energizing the tagged-out system such as: do not start, do not open, do not close, do not energize, do not operate, etc.
- The name of each employee shall be displayed on respective tags.
- The competent person shall be responsible for removing the tag and activating the system after all exposed employees have removed their tags.
- In the event an employee is discovered tampering with or violating the LOTO procedure, the employee will be removed from the project indefinitely.

### **Training and Documentation**

- Each employer utilizing LOTO must establish a program and utilize procedures for affixing appropriate lockout or tagout devices to energy isolating devices, and to otherwise disable machines, piping, or equipment to prevent unexpected release of stored or residual energy to prevent injury to employees.
- Each employee affected by the LOTO procedure shall be trained in the procedure. Records of training will be kept on site and be made available to Whiting-Turner upon request.
- Each contractor/subcontractor involved in LOTO procedures shall maintain a log on site that identifies the following:
  - Date of usage
  - Number of locks and tags used
  - Persons involved
  - Time of LOTO initiation
  - Time of LOTO removal
  - Designated competent persons
  - Location of LOTO Devices
- Electrical or piping and instrumentation drawings identifying specific locations of the LOTO devices shall accompany the log.
- Locks shall only be removed by the person who applied the lock. In extreme circumstances, after “all reasonable means” to contact the employee who was responsible for the lock were exhausted, the Whiting-Turner Superintendent shall request a meeting with the Area EH&S Manager and contractor’s/subcontractor’s competent person. This process is to ensure that the contractor’s/subcontractor’s competent person has considered and documented all the necessary steps to keep the workforce safe prior to removing the lock. The decision to remove a lock rests solely with the contractor’s/subcontractor’s

competent person. However, the decision to remove a lock may be overridden by the Area EH&S Manager, if deemed necessary.

## 1.9. Excavations Policy

### Introduction

The intent of this policy is to limit and/or eliminate the dangers associated with excavation and trenching operations that could expose tradespersons to the possibility of severe injury or death. Each contractor/subcontractor working on a Whiting-Turner project will comply with 29 CFR 1926, Construction Industry Regulations, Subpart P – Excavations, in addition to the following guidelines.

### Procedures

Prior to the commencement of excavation activities where the excavation will be greater than three (3) feet in depth, a pre-excavation checklist must be completed by the contractor's/subcontractor's competent person and submitted to the Whiting-Turner project team.

#### Specific excavation requirements.

- Subcontractors whose employees will be entering trenches or excavations must ensure that a comprehensive training program in the recognition, identification, evaluation, and control of excavation hazards must be provided to all tradespersons prior to working in an excavation or trenching operation. This must also include a review of the geo-technical report.
- Underground utility installations must be identified and marked prior to beginning any excavation. To prevent unintentional contact, all necessary measures must be employed to locate underground utilities prior to excavating. Acceptable methods include but are not limited to the following: test pitting, ground penetrating radar (GPR), use of as-built drawings and any other obtainable information.
- When an excavation is performed within 3 feet of any utility line, a non-damaging method of excavation shall be used. The non-damaging method shall be hand digging with nonconductive tools. Other non-damaging methods, such as soft digging, vacuum digging, pneumatic hand tools, may be considered subject to approval by the competent person.
- A competent person must be identified on Whiting-Turner's competent person acknowledgment form and their qualifications submitted to the Whiting-Turner project team prior to the start of work.
- The competent person will be on-site during all excavation work to determine the soil type and its stability by performing one visual and one manual test in accordance with 29 CFR 1926, Subpart P Appendix A.
- Inspections must be conducted daily and after every rainstorm or other hazard-increasing occurrence. Daily inspection reports must be submitted to the Whiting-Turner project team upon request.
- All trenches, unless otherwise specified, shall be protected by snow fence, at a minimum.

#### Requirements for protective systems.

- Excavations greater than 5 feet in depth must be protected by one or more of the following systems as determined by the subcontractor's competent person:
  - o Sloping / benching of sides to allowable configurations and slopes as per soil type.
  - o Shielding (i.e. trench boxes) or shoring which shall have the manufacturer's tabulated data and specifications—or a professional engineer stamp—and current annual inspection documentation; all the aforementioned must be on site.
  - o Using a slope or shield system designed by a registered professional engineer. Refer to 29 CFR Subpart P, Appendix B.
- Temporary and permanent spoils shall not exceed the angle of repose and shall be kept back at least two feet from the edge of an excavation.
- A registered professional engineer must design sloping or benching systems for excavations greater than 20 feet in depth.

#### **Requirements for fall protection.**

- Persons walking or working adjacent to a trench with vertical/shear walls that is equal to or greater than six (6) feet in depth must be protected from fall hazards unless it has been determined by the contractor's/subcontractor's competent person that it is infeasible or creates a greater hazard.
- Person crossing an excavation that is equal to or greater than six (6) feet in depth must be protected from fall hazards by means of a guardrail system.

#### **Training Requirements**

- Subcontractors whose employees will be entering a trench or excavation must have received training on recognizing and avoiding hazardous atmospheres, caught-in/between hazards due to cave-in/collapse, entrapment due to access & egress hazards, struck-by falling objects and equipment and falls into excavations.
- Atmospheric monitoring, if deemed necessary by the competent person or other competent party, must be documented, and conducted by someone trained in the use of atmospheric monitoring equipment.

## 1.10. Fall Protection and Prevention Policy

### Introduction

Falls continue to be the leading cause of fatalities in the construction industry; in consequence, Whiting-Turner has zero tolerance for failure to comply with all provisions of our fall protection and prevention policy. Any tradespersons found violating said policy must be retrained. In addition, at the discretion of Whiting-Turner personnel, violators may be permanently removed from the project. Any contractor/subcontractor with any fall exposure must submit to Whiting-Turner the resume of their competent person trained in fall protection techniques. All Whiting-Turner employees and all contractor/subcontractor employees working on a Whiting-Turner project shall comply with 29 CFR 1926, Construction Industry Regulations, Subpart M - Fall Protection, in addition to the following guidelines.

### Procedures

#### General fall protection requirements.

- Each contractor/subcontractor, with employees exposed to a fall 6' or greater to a lower level must ensure that effective fall protection measures and rescue procedures are addressed in their company activity hazard analysis (AHA) prior to beginning work on site. This is to include the name and qualifications of the designated competent person.
  - Exception: The provisions of this part do not apply when inspectors and competent persons are briefly inspecting, investigating, or assessing workplace conditions.
  - Exception: Fall protection policy includes any surface, except ladders, vehicles, or trailers.
  - Under the terms of 1926.500, fall protection is not required for employees who are on vehicles and trailers when the employee must be on the vehicle or trailer to perform his or her duties. For example, if the employee must climb on the tractor trailer rigs to connect the rigging for loading and unloading materials and equipment, the employer will utilize the sound judgement of their competent person for Fall Protection activities to determine how to best proceed.
- If at any time during work at heights, it is observed that the means as stated in the subcontractor's AHA for protecting the workers from falls are perceived as ineffective, work will be suspended until the subcontractor's competent person assesses the situation and makes necessary corrections. If corrections determined by the competent person involve modified work practices listed in the subcontractor's AHA, then these changes must be completed, and any necessary retraining must be provided to affected workers prior to allowing the continuation of the subcontractor's work at heights.
- At no time shall a safety monitor system be used as a sole means of fall protection.
- The use of controlled access zones (CAZ) and controlled decking zones (CDZ) as a means of fall protection are prohibited on Whiting-Turner projects.
- A Personal Fall Arrest System (PFAS) [comprised of a full body harness, double lanyards, anchorage point and anchorage connector], a personal fall restraint system

- (PFRS) [comprised of a full body harness, lanyard, anchorage point and anchorage connector], a guardrail, or safety net system must be in place to protect all trade persons from exposure to falls working at or above 6 feet.
- Employees must be protected from falling objects by the installation of toe boards, barricades, or canopy structures.
  - Employees working on ladders must be at least one and a half times the height of the ladder away from any perimeter, shaft, stairway, and opening where the fall distance exceeds 6'. If that distance is not feasible, a conventional fall protection method must be employed.
  - Stilts are only permitted in broom swept areas, where there is no change in elevation.
  - Non-roofing activities – contractors/subcontractors other than roofers who must perform work on roofs must develop a written/drawn plan showing the roof area where work is planned to take place to protect their workers from potential exposure to falls. The plan must be provided to the Whiting-Turner team for review by Whiting-Turner's Superintendent and EH&S Manager.

#### **Floor and wall holes and openings.**

- Prior to creating a hole or opening in any elevated work surfaces, contractors/subcontractors must submit an elevated work surface modification permit.
- All floor and roof openings into which persons can accidentally walk or fall through shall be guarded by a physical barrier or covered.
- All floor and roof holes through which equipment, materials, or debris can fall shall be covered.
- All floor holes greater than 12" x 12" must have a Whiting-Turner floor hole cover sign in place. Smaller holes shall be labeled "hole" in accordance with the OSHA standard.
- Coverings for floor and roof openings shall be of sufficient strength to support two times the maximum intended load that may be imposed and shall be secured in place to prevent accidental removal or displacement.
- Conduits, trenches, and manhole covers and their supports, when exposed to vehicles or equipment, shall be designed to carry a truck rear axle load of two times the maximum anticipated load.
- Particle board, medium density fiber board (MDF) or similar material is prohibited from being used as floor hole covers on Whiting-Turner projects.
- Wall openings 18" or greater in width from which there is a drop of 6' feet or greater and the bottom of the opening is less than 39" above the working surface, shall be guarded with a top rail or a top rail and intermediate rail or a standard guardrail. A toe board or enclosing screen shall be provided where the bottom of the wall opening, regardless of width, is less than 3 ½ inches above the working surface.
- Wall opening protection shall meet one of the following requirements:
  - o Barriers of such construction and mounting that, when in place at the opening, the barrier can withstand a load of at least 200 pounds applied in any direction (except upward) with a minimum of deflection at any point on the top rail or corresponding member.



- A hinged floor-opening cover shall guard every hatchway and chute floor opening. Or the opening shall be barricaded with railings to leave only one exposed side. The exposed side shall be provided either with a swinging gate or so offset that a person cannot walk into the opening.
- An extension platform outside a wall opening onto which materials can be hoisted for handling shall have a standard railing that meets handrail standards. However, the inside of an extension platform may have removable railings to facilitate handling materials. Workers removing guardrails must utilize personal fall prevention equipment to tie off while working on or near platforms that are not 100% protected by guardrail.

### **Fall protection systems.**

- **Guardrail Systems**
  - The top rail height of a guardrail system must be 42", + or - 3". Midrail heights must be half of that distance.
  - Perimeter cable shall not be less than 3/8" steel cable.
  - Corner uprights must be braced so that the required tension may be maintained.
  - The cable must be terminated with three U-bolt wire rope clips that maintain an efficiency rating of at least 80% of the wire rope's breaking strength as proven through product documentation (e.g. Crosby clips).
  - The U-bolt clips must have the U-bolt section on the dead or short end of the rope and the saddle on the live or running end of the rope.
  - The use of any combination of hook turnbuckles as part of the perimeter cable system is prohibited.
  - A Personal Fall Arrest System (PFAS) must not be attached to a guardrail system unless a registered professional engineer designs the system to accommodate the PFAS; documentation of that design must be maintained on site.
  - The top rail of guardrail systems must be able to withstand a force of 200 lbs. in all directions, without failure, and must be smooth surfaced to prevent hand injuries.
  - The contractor/subcontractor installing the perimeter cable guardrail system shall submit a design with details on how the system will be installed and maintained.
  - All guardrail systems [with the exception of scaffolds systems or where it can be proven to create a greater hazard] must be equipped with orange perimeter screening or mesh to prevent the ability to breach the system by climbing through rails. The installation of the screening must be compliant with Whiting-Turner's orange perimeter screening guidelines. The orange perimeter screening policy satisfies the requirement of flagging a wire rope guardrail system every 6' for high visibility.
- **Personal Fall Arrest Systems and Fall Restraint Systems**

- o A PFAS must be used when working from suspended scaffolds, when breaching any guardrail systems, and when working near unprotected floor openings and perimeter edges.
- o A fall restraint system must be employed when working from articulating boom man lifts.
- o A competent person must assure that fall distance calculations have been evaluated in each circumstance where a PFAS is used.
- o A PFAS is not required when climbing up or down a ladder. Fall protection shall be considered by the competent person if employees work from a ladder 6' or more above a lower level and are exposed to a fall.
- o Employees must use positive fall protection devices when working in proximity to any leading edge.
- o Retractable lanyards must incorporate either a 3/16" steel wire cable or a nylon strap with a minimum width of 1".
- o All anchorage points utilized in a personal fall arrest system must be capable of supporting a load of no less than 5000 lbs.
- o Steel erectors and metal decking installers shall utilize 100% fall protection devices at all times when working at 6' or above.
- o Horizontal lifelines must be designed by a registered engineer and installed under the supervision of a qualified person. A safety factor of two must be maintained.
- o Adequate fall protection devices must be provided, installed, and used at all loading platforms by the contractor/subcontractor wishing to remove existing perimeter protection prior to its removal.
- o Rescue procedures must be provided in writing when using a personal fall arrest system.

### Training Requirements

- Each employee exposed to a fall hazard must be trained by a competent person in the recognition and avoidance of such a hazard. Proof of training shall be made available to Whiting-Turner upon request.
- Specific training includes, but is not limited to the following:
  - o The type of fall exposures expected
  - o The correct procedures for erecting, maintaining, dismantling, and inspecting of any fall protection system used by the employee
- When employee lacks the understanding and demonstrative skill required for the proper application of fall protection systems, the employer shall provide retraining of such employee(s).
- Retraining documentation—to include instructor's name and qualifications, training literature and sign-in sheet—must be submitted to the Whiting-Turner project team on subcontractor's letterhead.



## 1.11. Fire Protection and Prevention

### Introduction

Each contractor/subcontractor working on a Whiting-Turner project must comply with 29 CFR 1926, Construction Industry Regulations, Subpart F – Fire Protection and Prevention, in addition to the following guidelines.

### Procedures

#### General requirements.

- Contractor/subcontractors involved in any spark producing activity must plan to provide adequate fire extinguishers no less than 10' from their work.
- Contractor/subcontractor fire watch personnel must be trained in the use and limitations of fire extinguishers.
- Client requirements permit procedures, fire watches, shields and blankets must be considered when developing site-specific fire prevention procedures.
- All firefighting equipment must be clearly visible and access to the equipment must be maintained at all times.
- Travel distance to a fire extinguisher shall not exceed 100 feet.
- Each portable fire extinguisher shall undergo an annual certification & have an inspection tag affixed. These services shall be performed by qualified, authorized, certified and actively licensed fire extinguisher companies.
- Portable fire extinguishers must be inspected monthly. The documentation must be a weather resistant tag attached to the extinguisher. A fire extinguisher log is recommended for back-up.

#### Fire prevention.

- Temporary offices or trailers, when located inside of a building under construction, must be constructed of fire retardant materials.
- Combustible materials, such as cardboard, wooden pallets, etc., must be removed from the work area immediately.

#### Flammable liquids.

- All storage, handling or use of flammable liquids shall be under the supervision of qualified persons.
- All sources of ignition shall be prohibited in areas where flammable liquids are stored, handled, and processed. Suitable NO SMOKING OR OPEN FLAMES signs shall be posted in all such areas.
- Contractor/subcontractor must provide and mount a 20lb ABC fire extinguisher between 25'-75' from flammable storage.
- Flammable liquids shall not be stored in areas used for exits, stairways or used for safe passage of people.
- Dispensing systems shall be electrically bonded and grounded.

- Above ground storage tanks shall be double-walled or provided with a secondary means of containment. Secondary containment shall have a capacity at least equal in volume to that of the largest tank plus 10 percent of all other tanks enclosed. Provision shall be made for draining off accumulations of ground or rainwater or spills. Drain plugs shall remain in place except when draining.
- A metal cabinet meeting the requirements of NFPA 30, Flammable and Combustible Liquids, shall be provided for the storage of more than a total of 25 gallons of flammable liquids and greases in buildings used for other than storage or processing. Not more than a total of 60 gallons shall be stored in any one cabinet. Individual containers must be metal, kept tightly closed, and shall not exceed five (5) gallons capacity.
- Smoking or open flames within 50 feet of where flammables are being used or transferred or where equipment is being fueled is prohibited.
- Areas in which flammable liquids are transferred, in quantities greater than 5 gallons from one tank or container to another tank or container, shall be separated from other operations by 20 feet or by a five-foot partition, having a fire resistance of at least one hour. Drainage or other means shall be provided to control spills, Natural or mechanical ventilation shall be provided to maintain the concentration of flammable vapor at or below 10 percent of the lower flammable limit.
- Workers shall be required to guard carefully against any part of their clothing becoming contaminated with flammable liquids. They shall not be allowed to continue work when their clothing becomes contaminated and must remove or wet down the clothing as soon as possible.
- Equipment using flammable liquid fuel shall be shut down during refueling, servicing or maintenance.
- Where an automatic extinguishing system is provided, the system shall be designed and installed in accordance with NFPA recommendations.
- In every inside storage room there shall be one clear aisle maintained at least three feet wide.
- Outdoor portable tanks shall be at least 20 feet from buildings. Individual tanks shall be at least 5 feet apart.
- The dispensing units shall be protected against collision damage.
- Handling of all flammable liquids by hand shall be in safety containers with flame arresters. This requirement shall not apply to those flammable liquid materials that are extremely hard to pour, that may be handled in original shipping containers. For quantities of one gallon or less, only the original container or approved metal safety cans shall be used for storage, use and handling of flammable liquids.
- Storage of flammable/combustible liquids on or inside of buildings under construction shall be no more than one-day supply.

### **Paints and painting.**

- Paints, varnishes, lacquers, thinners, or other volatile painting materials and containers shall be kept tightly closed when not in use and shall be stored in accordance with NFPA recommendations.

- Unopened containers of paint, varnishes, lacquers, thinners, and other flammable paint materials shall be kept in a well-ventilated location, free of excessive heat, smoke, sparks, flame, or direct rays of the sun.
- Paint-soiled clothing and drop cloths, when not in use, shall not be stored on site.
- Paint scraping, and paint-saturated debris shall be removed daily from the premises.
- Ventilation adequate to prevent the accumulation of flammable vapors to hazardous levels shall be provided in all areas where painting is done, or paints are mixed.

**Liquid petroleum gases.**

- Storage, handling, installation and use of liquefied petroleum gases and systems shall be in accordance with NFPA 58. LP gas shall not be stored indoors.
- Liquefied petroleum gas containers and equipment shall not be used in unventilated spaces below grade in pits, below decks and other such spaces where dangerous accumulations of heavier-than-air gas may accumulate due to leaks or equipment failure.
- Equipment using liquefied petroleum gas shall be shut down during refueling operations.
- Filling of fuel containers for motor vehicles from bulk storage containers shall be performed not less than 10 feet from the nearest masonry-walled building, or not less than 25 feet from the nearest building or other construction and, in any event, not less than 25 feet from any building opening.
- Filling of portable containers or containers mounted on skids from storage containers shall be performed no less than 50 feet from the nearest building.

**Gasoline power.**

- Fire
  - Only approved containers are allowed for the storage of flammable liquids. An approved container is one which is constructed of metal, has a spring-loaded top that allows venting of fumes and contains a flash arresting screen and spout cover.
  - Provide a 20-pound ABC dry chemical type extinguisher between 25'-75' from area where flammable liquids are being handled
  - "No Smoking" and "No Open Flame" signs must be conspicuously posted in service, refueling, or flammable liquid storage areas.
  - All drums shall be properly labeled in accordance with 29 CFR 1910.1200 Hazard Communication.
- Fumes
  - Gas engines exhaust carbon dioxide and carbon monoxide. Dioxide is heavier than air; monoxide slightly lighter. A mixture of the gases usually is heavier than air although heat may cause it to rise. Both are without color, taste or smell. Light concentrations cause headache and nausea. Death is swift in heavy concentrations. A few minutes may be too long. Do not discount this hazard. If anyone exhibits symptoms, do not attempt rescue without proper personal protection equipment.
  - Do not run gas engines in pits, manholes or confined spaces.



- o If gas engines are to be used inside buildings, excavations, crawl spaces under basement floors, hoist engineers' shanties, then the following must be done:
  1. Ventilation shall be required
  2. Testing the space for carbon monoxide shall be done before starting the engines
  3. Continuous monitoring

**Temporary heating devices.**

- Fresh air must be supplied in quantities sufficient to maintain the health and safety of all employees. If a competent person deems natural airflow inadequate, then mechanical ventilation must be provided.
- Heaters used in the vicinity of tarpaulins, canvas or similar coverings must be located at least 10' from the covering and be secured to prevent ignition due to wind.
- Open fires are not allowed on Whiting-Turner projects.
- All gas piping shall be labeled and flagged or painted; shutoff valves shall remain in place.
- Whiting-Turner permits the use of direct fired and indirect fired heaters for temporary power. Clearance from combustibles shall be maintained per the manufacturer's requirements. Direct fired temporary heaters must be equipped with the following:
  - o High temperature limit switch—monitors operating temperature of equipment; provides automatic shutdown.
  - o Air proving control—continuously monitors operating airflow, provides automatic shutdown.
  - o Low voltage reset—provides protection for insufficient incoming power.
  - o Redundant solenoids—dual gas valves as required, for redundant gas flow protection.
  - o Electronic ignition sequence—flam safety start-up with continuous electronic monitoring of equipment in firing mode of operation.

***Note: Housekeeping is the best defense against fires. All trash and debris shall be placed in proper containers.***

## 1.12. Hand and Power Tools Policy

### Introduction

All Whiting-Turner Employees and Contractors/subcontractors working on a Whiting-Turner project must comply with 29 CFR 1926, Construction Industry Regulations, Subpart I – Tools – Hand and Power, the manufacturer’s safety recommendations, and the following guidelines.

### Procedures

#### General requirements.

- Hand and power tools must be maintained in a safe condition, per manufacturer’s guidelines.
- If the tool is designed to accommodate a guard, the guard must be in place while the tool is being used.
- Tools manufactured with a handle shall be used with the handle in place.
- All two-handed tools must be used with two hands.
- Additional personal protective equipment (PPE), such as a face shield or hearing protection, may be required while operating a tool. If so, they must be in use.
- Any person found making a tool guard inoperable will be immediately removed from the site.

#### Hand tools.

- Drift pins, wedges, chisels, and other impact tools must be kept free of mushroomed heads.
- Wrenches must not be issued or used when the jaws are sprung, and slippage is probable.

#### Electric powered tools.

- All power tools must be double insulated or provided with a three wire, grounded connection.

#### Pneumatic power tools.

- Each connection on a pneumatic tool and air hose must be secured with a “whip-check” or similar device.
- All air hoses, with an inside diameter exceeding ½ inch, must have a flow reduction device (OSHA valve) at the supply source to reduce pressure in case of hose failure.
- Compressed air must not be used for cleaning unless the pressure is reduced to less than 30 psi and appropriate guarding and PPE are in place.

#### Fuel powered tools.

- Fuel powered tools must be stopped and turned off while being refueled, serviced, or maintained.

#### Powder-actuated tools.

- Users of powder actuated tools must be properly trained and certified to operate the equipment. Certification must always be kept on the user's person while the tool is in use.
- The manufacturer, or a representative thereof, must train workers in the safe use of powder-actuated tools.
- The tool must be tested each day, according to manufacturer's recommendations, before loading to see that safety devices are in proper working condition.
- Tools must not be loaded until just prior to the intended firing time.
- Loaded tools must not be left unattended.
- All tools must be used with the correct shield, guard or attachment recommended by the manufacturer.
- Unspent shots must be disposed of according to the manufacturer's recommendation and must be removed from the site by the user each day.

**Abrasive wheels and tools.**

- The RPM rating on all grinding machine motors must not exceed the speed rating of the grinding wheel attachment.
- The grinding wheel shall be compatible with the grinder for which it is being used (i.e. proper size and type).
- All abrasive wheels must be closely inspected, and ring tested before mounting to ensure they are free from cracks or defects.

**Woodworking tools.**

- All portable, power driven circular saws must be equipped with guards above and below the base plate or shoe.
- When the tool is withdrawn from the wood, the lower guard must automatically and instantly return to the covering position.
- Any worker found disabling a blade guard will be immediately removed from the site.
- Saws must have the electrical cord unplugged when making blade adjustments or changing blades.

### 1.13. Hearing Conservation

#### Introduction

Whiting-Turner recognizes that excessive noise can cause permanent hearing loss if appropriate administrative or engineering controls or personal protective equipment is not used. Limiting exposure to excessive noise through engineering controls is Whiting-Turner's preferred method of control.

#### Procedures

##### Permissible Noise Exposures

Duration per day, hours	Sound level dba, slow response
8	90
6	92
4	95
3	97
2	100
1 ½	102
1	105
½	110
¼ or less	115

- Protection against the effects of noise exposure must be provided when the sound levels exceed those shown in the table above. The measurement must be observed on the A-scale of a sound level meter at slow response.
- When employees are subjected to sound levels exceeding those shown above, feasible administrative or engineering controls must be utilized.
- If such controls fail to reduce sound levels within the levels shown above, personal protective equipment must be provided and used to reduce the noise exposure.
- In all cases where the sound levels exceed the values shown in the table above, a continuing, effective hearing conservation program must be administered.
- If the noise levels are determined to cause an 8-hour TWA exposure greater than 85 dba, the contractor/subcontractor must provide a comprehensive hearing conservation program before continuing work. At a minimum this program shall include:
  - o Noise survey data for typical work they perform.
  - o Noise dosimetry data for typical exposures from the work they perform.
  - o Training records for employees working on the Whiting-Turner Project.

## 1.14. Hexavalent Chromium

### Introduction

Hexavalent chromium (Cr(VI)) compounds are widely used in the chemical industry as ingredients and catalysts in pigments, metal plating and chemical synthesis. Hexavalent chromium can also be found in the construction industry through welding on stainless steel or on hexavalent chromium painted surfaces. The major health effects include lung cancer, nasal septum, skin ulcerations, and contact dermatitis. The purpose of this policy is to prevent employee exposure to hexavalent chromium compounds during construction activity. Each contractor working on a Whiting-Turner project must comply with 29 CFR §1926.1126, Chromium (VI), in addition to the following guidelines.

### Procedures

#### Permissible exposure limit.

- Since this construction activity is limited to specialty work, Whiting-Turner will direct the Contractor/subcontractor to provide specific Activity Hazard Analysis (AHA) meetings to address potential exposure.
- The Employer must ensure that no employee is exposed to an airborne concentration Cr(VI) in excess of 5 micrograms per cubic meter of air ( $5 \text{ ug/m}^3$ ) calculated as an 8-hour time-weighted average (TWA).
- Engineering controls are the preferred method to achieve the Permissible Exposure Limit (PEL).

#### Exposure determination.

- The contractor/subcontractor must determine the 8-hour TWA exposure for each employee exposed to Cr(VI). This may be accomplished using two options; scheduled or performance-oriented monitoring.
- Scheduled Monitoring
  - The contractor/subcontractor must perform initial monitoring to determine the 8-hour TWA for each employee based on a sufficient number of personal breathing zone samples.
  - If the contractor/subcontractor does representative sampling, it must be conducted on the employee(s) expected to receive the highest exposure.
  - If the monitoring indicates that employee exposures are below the action level (1/2 the PEL or  $2.5 \text{ ug/m}^3$ ), the employee may discontinue monitoring.
  - If the monitoring indicates that employee exposures are at or above the action level, the contractor/subcontractor must perform periodic monitoring at least every six months.
- Performance-Oriented Monitoring
  - If this option is chosen, the contractor/subcontractor must determine the 8-hour TWA for each employee based on any combination of air monitoring, historical data, or objective data sufficient to accurately characterize employee exposure to Cr(VI).

**Methods of compliance.**

- As stated previously, engineering and work practice controls must be used to reduce and maintain employee exposure to Cr(VI) to or below the PEL.
- If feasible engineering and work practice controls are insufficient to reduce exposure below the PEL, then respiratory protection must be used.
- The contractor/subcontractor will not be allowed to rotate employees to different jobs to achieve compliance with the PEL.

**Respiratory protection.**

- Respiratory protection use must comply with OSHA's Respiratory Protection requirements.
- The contractor/subcontractor must provide respiratory protection in the following circumstances:
  - o Periods necessary to install or implement feasible engineering or work practice controls.
  - o Work operations where an employer has implemented all feasible engineering and work practice controls and such controls are not sufficient to reduce the PEL.
  - o Emergencies

**Protective work clothing and equipment.**

- Where there may be a hazard to the skin or eyes from exposure to Cr(VI) the contractor/subcontractor must provide protective clothing or equipment to the employee.
- The contractor/subcontractor must ensure that the employees remove all clothing and equipment that may be contaminated with Cr(VI) when the work is complete or at the end of the shift.
- The contractor/subcontractor must ensure that chromium-contaminated clothing is not removed from the workplace.
- When contaminated protective clothing or equipment is removed for laundering or cleaning, the contractor/subcontractor must ensure that it is stored and transported in impermeable bags or containers.
- The contractor/subcontractor must inform any person who launders or cleans clothing or equipment of the potential effects of exposure to Cr(VI) and that the clothing or equipment should be laundered or cleaned in a manner that minimizes skin or eye contact.

**Hygiene areas and practices.**

- Where protective clothing and equipment is required, the contractor/subcontractor must provide change rooms that comply with 29 CFR 1926.51.
- Where skin contact may occur, the contractor/subcontractor must provide hand-washing facilities that comply with the previously noted standard.

**Medical surveillance.**



- The contractor/subcontractor must make medical surveillance available, at no cost, to employees who meet the following criteria:
  - Those who are or may be occupationally exposed to Cr(VI) at or above the action level for 30 or more days a year
  - Those who are experiencing signs or symptoms of adverse health effects associated with Cr(VI) exposure
  - Those exposed in an emergency

**Communication.**

- Must follow the same communication of hazardous chemicals highlighted in Whiting-Turner's Hazard Communication Program.

**Recordkeeping.**

- The contractor/subcontractor must maintain the following data records:
  - Air monitoring
  - Historical monitoring
  - Objective data
  - Medical surveillance

## 1.15. Housekeeping

### Introduction

These requirements apply to all work performed by Whiting-Turner employees, contractors/subcontractors, and vendors. Each contractor/subcontractor working on a Whiting-Turner project will comply with 29 CFR 1926, Construction Industry Regulations, Subpart C – General Safety and Health Provisions

### Procedures

- Work areas and paths of ingress/egress must be kept clear and free of obstructions by material/debris.
  - Clean-as-you-go practices are required.
  - Require contractors/subcontractors to sort and organize material, sweep daily, and standardize activities to aid in the elimination of storage of excess/unused material in active work areas
  - Materials shall not be stored in a manner that will block, restrict, impede, or prevent access to an egress path or emergency equipment, such as fire extinguishers, emergency eyewash or shower, emergency shutoff buttons or emergency disconnect devices.
  - Work that may temporarily block emergency exits, safety showers, elevators, corridors, and hallways will require prior Whiting-Turner approval.
- Power Cord Management:
  - All cords must be inspected before use.
  - At no time shall cords be strung across exits or in front of emergency equipment.
  - Run cords overhead in a supported fashion with nonconductive material, when feasible.
  - Run cords around perimeters, when feasible.
  - Tape cords down or use cord covers if they present a tripping hazard.
  - Support all cords that run through floors or ceilings with appropriate means.
  - All cords must be stored and put away after use. (i.e. not coiled up on floor).
  - All extension cords must be equipped with GFCI protection or be plugged into an outlet equipped with GFCI protection.
  - If the above listed safety requirements cannot be met, temporary wiring must be installed to facilitate proper cord management.
- Material Storage:
  - Materials stored near the area where work is performed should be limited to only those materials that will be used in the same shift.
  - Any material stored in a work area longer than 24 hours must be approved by Whiting-Turner.
  - Store all items neatly in cabinets or on shelves.
  - Gang boxes, toolboxes, and sea containers/conex boxes shall not have materials stored on top of them.

- o If more storage area is needed, contact Whiting-Turner Superintendent.
- Chemical Storage:
  - o All chemicals brought on site must have been specified for use on the project.
  - o The user of the chemical must provide Whiting-Turner an SDS prior to bringing the substance on site.
  - o All chemicals and equipment containing chemicals must be stored in approved areas (i.e. chemical cabinet).
  - o Contractors are responsible for removing all unused chemicals from the Whiting-Turner project site at the completion of their contract.
  - o All chemical containers must be properly labeled.
  - o Chemical/gas cylinders (welding, purging, leak detection cylinders, etc.) must be secured at all times.
  - o All dedicated chemical storage areas must have safety data sheets (SDS) available at the storage location.
- Material/Waste Disposal:
  - o Waste disposal methods shall be specified within each contract/subcontractor's Activity Hazard Analysis (AHA) and Work task Plan (PTP).
  - o All hazardous waste must be disposed of in accordance with Federal, State, and Local regulations and shall comply with applicable Whiting-Turner hazardous waste programs.
  - o All hazardous waste must be properly labeled.
  - o Hazardous waste materials must be discarded into proper disposal containers
  - o Non-hazardous waste must be disposed of into appropriate recycle or disposal containers.

## 1.16. Materials Handling and Rigging Policy

### Introduction

Material handling and rigging incidents account for many tradespersons compensation claims annually. Each contractor working on a Whiting-Turner project must comply with 29 CFR 1926, Construction Industry Regulations, Subpart H – Materials Handling, Storage, Use and Disposal, in addition to the following guidelines.

### Procedures

#### General material storage.

- Aisles and passageways shall be kept clear at all times for the safe movement of material handling equipment and employees.
- Materials shall not be stored within 6' of any hoist way or interior floor opening.
- Materials shall not be stored within 10' of an exterior wall which does not extend above the material.

#### Rigging.

- General Requirements
  - Before each use rigging equipment, including its fastenings and attachments, must be inspected by a competent person/qualified rigger.
  - Inspections must also be conducted during use and where additional service conditions warrant.
  - Defective or damaged slings must be removed from service immediately and destroyed or tagged out of service.
  - Taglines shall be utilized to minimize worker exposure to falling and swinging loads.
- Lifting Chains
  - Alloy steel lifting chains must have a permanently affixed, durable identification tag stating size, grade, rated capacity, and sling manufacturer.
  - Attachments, including, but not limited to hooks, rings, oblong links, pear-shaped links or other welded or mechanical links, must have a rated capacity at least equal to the lifting chain.
  - Job made shop hooks or links, makeshift fasteners formed from rebar or bolts or other such attachments are not allowed on Whiting-Turner projects.
  - Additional lifting chain inspection criteria is based upon the frequency of use, the severity of the service conditions, the nature of the lifts being made, and the experience gained on the service life of slings used in similar circumstances.
  - Lifting chains shall be inspected, prior to each use.
- Wire Rope Slings
  - The manufacturer's safe working loads must be followed at all times.

- o Wire rope must not be used if, in any length of eight diameters, the total number of visible broken wires exceeds 10% of the total number of wires.
  - o Wire rope must not be used if it shows signs of excessive wear, corrosion, or defects.
  - o Slings shall not be shortened with knots, bolts, or other makeshift devices.
  - o Slings must be protected from sharp edges with padding, softeners, or similar devices.
  - o Shock loading of a sling is prohibited, and slings must not be pulled from under a load when the load is resting on the sling.
- Synthetic Slings
    - o Each synthetic sling must be identified with the name of the manufacturer, rated capacities, and type of material.
    - o Synthetic slings must be immediately removed from service if any of the following conditions are present; acid or caustic burns, melting or charring of any of the sling surface, snag, puncture, tear or cut, broken, or worn stitches or distorted fittings.
    - o Slings must be protected from sharp edges with padding, softeners, or similar devices.

## 1.17. Medical Services Staffing Policy

### Introduction

Each contractor/subcontractor must have one person on site with a valid certificate in first aid and cardio pulmonary resuscitation (CPR) while actively engaged in work activities. The Whiting-Turner Contracting Company will have, at all times, an individual on site with a valid certificate in first aid and cardio pulmonary resuscitation (CPR).

### Procedures

- In addition to the first aid kit Whiting-Turner supplies, each contractor's/subcontractor's first aid kit must be in compliance with Whiting-Turner's Bloodborne Pathogen Policy.
- The contents of the first aid kit shall be placed in a weatherproof container with individual sealed packages for each type of item and must be inspected at least weekly.
- Emergency telephone numbers shall be conspicuously posted.
- Where the eyes or body of any person may be exposed to injurious corrosive materials (e.g. during concrete placement), suitable facilities for quick drenching or flushing of the eyes and body must be provided within the work area for immediate emergency use.



## 1.18. Mobile Elevated Work Platforms

### Introduction

Each contractor/subcontractor using an aerial lift on a Whiting-Turner project must comply with 29 CFR §1926.453, in addition to the following guidelines.

### Procedures

- Only authorized and trained individuals may operate aerial lifts. Companies will make verification of training available to Whiting-Turner upon request.
- Aerial lifts shall be inspected by the trained operator each day prior to use, in accordance with the manufacturer's requirements.
- All aerial and scissor lifts shall be tagged according to Whiting-Turner's scaffold tagging policy
- Fall protection requirements for aerial lift use shall comply with the manufacturer's recommendations.
- Worker must use personal fall arrest systems (PFAS) or personal fall restraint systems (PFRS)—whichever the manufacturer requires—when working from articulating boom platforms.
- Workers must keep both feet on the floor of the basket; use of guardrails or toe boards to gain additional height is prohibited on Whiting-Turner projects. Persons observed committing this unsafe act will be removed from site for a minimum of 3 days; their employer must retrain them prior to their return to the site.
- Where aerial and scissor lifts are used on concrete slabs, any floor depressions or grade changes are required to be barricaded to restrict travel onto that area.
- The area(s) below the basket or platform of aerial lifts shall be cordoned off using reinforced danger tape—or something of equivalent or greater tensile strength—and by using signage to identify the overhead hazard if/when the possibility of falling objects exist.
- Field modifications are not allowed on aerial lifts. Aerial lifts shall not be used to hoist, raise, or position material outside of the platform or basket unless manufactured to do so.

## 1.19. Motor Vehicles, Mechanized Equipment, and Marine Operations Policy

### Introduction

Each contractor/subcontractor working on a Whiting-Turner project will comply with 29 CFR 1926, Construction Industry Regulations, Subpart O – Motor Vehicles, Mechanized Equipment, and Marine Operations in addition to the following guidelines.

### Procedures

- All operations requiring the use of heavy equipment will require a pre-planning meeting, contractors/subcontractors must include strategies to prevent injuries to tradespersons and the public.
- All fuel driven equipment being used indoors or in partially enclosed spaces—that does not meet the Final Tier 4 engine requirements—must have scrubbers where the potential for carbon monoxide overexposure exists.
- Equipment meeting the Final Tier 4 emissions standards are permitted—continuous air monitoring for the concentration of CO is required.
- Keys are to be removed at the end of the shift and cab doors locked.
- All material handling equipment, with an obstructed view to the rear, must have a back-up alarm that is functional and distinctly audible.
- A “spotter”, wearing an ANSI approved high visibility traffic vest, may be used in lieu of an alarm, but only if such devices are not routinely supplied on such a vehicle. Vehicles must never back “blind” on a Whiting-Turner project.
- If the competent person determines that the back-up alarm is not sufficient, a spotter must be present to help facilitate the rear operation of the equipment.
- Equipment and dump trucks equipped with faulty back-up alarms shall be repaired within 24hrs or taken out of service until back-up alarms are repaired. During that 24hr period, to remain in service, a spotter must be present to help facilitate the rear operation of the equipment.
- Forklift operator training records must be submitted to the Whiting-Turner project team prior to site use.
- A seatbelt must be provided and used when operating equipment on a Whiting-Turner project.
- All windows must be in full working condition. Any equipment with broken glass of any size, including mirrors will be taken out of service.

- Equipment without a rollover protective structure (ROPS) or seatbelt is not allowed on any Whiting-Turner project unless it was manufactured in such a way and determined to be more hazardous with such protections.
- Use of cell phones and radios are not permitted while operating machinery.
- No one may work within 20' of motorized equipment like an excavator, backhoe, loader etc. unless that person's presence is fundamental to the operation underway and the operator can observe the person at all times.
- All equipment with a rotating superstructure shall have swing radius protection or a designated spotter.

**Hoisting personnel.**

- Personnel hoisting requirements - The use of load handling equipment to hoist personnel is prohibited unless the employer can demonstrate that other methods would be more hazardous and is able to comply with the personnel hoisting requirements that are established in the standard.
- Hoisting personnel on Whiting-Turner project sites shall be done only after review of the plan and deemed feasible by Vice President and the Area EH&S Manager assigned to the project.
- Hoisting personnel on Whiting-Turner projects shall be considered a critical lift or activity, and therefore shall meet all requirements of a critical lift before the lift may begin.

## 1.20. Personal Protective Equipment

### Introduction

All Whiting-Turner and contractor/subcontractor employees on Whiting-Turner projects must wear all the personal protective equipment necessary to complete their jobs safely. Mandatory personal protective equipment required on the project site includes, but is not limited to, hardhat, safety glasses, high visibility vests, and sturdy leather work boots. A competent person onsite will determine additional necessary equipment. Each contractor/subcontractor working on a Whiting-Turner project site will comply with 29 CFR 1926, Construction Industry Regulations, Subpart E – Personal Protective and Lifesaving Equipment; in addition to the following guidelines.

### Procedures

- All Whiting-Turner employees, contractor/subcontractor employees and visitors to project sites are required to wear safety glasses that comply with ANSI Z87.1.
  - Dark lenses are not to be worn inside of buildings, in enclosed areas, or at night.
  - Tinted lenses must be worn on light colored membrane roofs.
  - Prescription eyeglasses and sunglasses that do not comply with ANSI Z87.1 are prohibited.
  - A full-face shield is required while grinding concrete.
  - Face shields are required for: welding, burning, and cutting; using abrasive wheels; chop saws; portable grinders or files, chippings concrete, stone, or metal; drilling or working under dusty conditions; using explosive actuated fastening or nailing tools; overhead work; work with hazardous liquids or gases.
  - Face shields must be compatible with a hard hat.
- All Whiting-Turner employees, contractor/subcontractor employees and visitors to project sites are required to wear hardhats that comply with ANSI Z89.1.
  - Aluminum hardhats, and bump caps are not permitted on Whiting-Turner projects.
  - For security and identification purposes, all hardhats shall display the contractor/subcontractor name and/or decal indicating for whom the employee works as well as the employee's name.
  - Employees exposed to electrical voltages of 600V or greater shall wear hardhats that meet the requirements of ANSI Z89.2 type hardhats.
- All Whiting-Turner employees, contractor/subcontractor employees and visitors to project sites are required to wear substantial leather work boots.
  - Employees working with jackhammers, tampers and similar equipment are required to utilize metatarsal guards over their work boots.
- Where necessary, each employee shall use equipment with filter lenses that have a shade number appropriate for the work being performed for protection from injurious light radiation.

- Hand protection is required when employee's hands are exposed to hazards such as those from skin absorption of harmful substances, cuts or lacerations, abrasions, punctures, chemical burns, thermal burns, and harmful temperature extremes.
- Workers exposed to roofing tar must wear long sleeved shirts and gloves. Workers who are directly exposed to hot tar must also wear a full apron and face shield.
- Personal protective equipment labeled "WT" or Whiting-Turner" is reserved for the use of Whiting-Turner employees only.

### **Roles and Responsibilities**

Contractor/subcontractor management shall

- provide necessary PPE and training,
- monitor use of PPE,
- provide replacement PPE when needed,
- identify any new hazards that would require the use of PPE; and
- be responsible for the assurances of PPE adequacy, maintenance, and sanitation.

Contractor/subcontractor employees shall

- properly use and care for assigned PPE and
- immediately inform supervisor if PPE is damaged or not effective.

### 1.21. Respiratory Protection

Any contractor/subcontractor with employees who are required to wear respiratory protection must submit their company's respiratory protection program prior to start of work. Compliance with this requirement applies to filtering face-piece respirators (N95 Respirators) as well.

All programs shall meet or exceed Whiting-Turner policies as well as the most current federal, state, and local regulatory requirements.



## 1.22. Sanitation Guidelines

### Introduction

Each contractor working on a Whiting-Turner project will comply with 29 CFR 1926, Construction Industry Regulations, Subpart D - Occupational Health and Environmental Controls; employers shall establish and maintain basic sanitation provisions for all employees in all places of employment as specified in the following paragraphs.

### Procedures

#### Drinking water supply.

- An adequate supply of drinking water shall be provided; cool water shall be provided during hot weather.
- Only approved potable water systems shall be used for the distribution of drinking water.
- Portable drinking water dispensers shall be designed, constructed, and serviced to ensure sanitary conditions; shall be capable of being closed, and shall have a tap.
- Containers shall be clearly marked as “drinking water” and shall not be used for other purposes.
- Workers shall use cups when drinking from portable water coolers/containers.
- Unused disposable cups shall be kept in sanitary containers and a waste receptacle shall be provided for used cups.

#### Non-potable water.

- On outlets dispensing non-potable water, signs cautioning that the water is unsafe for drinking, washing, or cooking will be conspicuously posted

#### Toilets.

- When sanitary sewers are not available, one of the following facilities, unless prohibited by local codes, shall be provided: chemical toilets, recirculating toilets, or other toilet systems as approved by state/local governments.
- Each toilet facility shall be equipped with a toilet seat and toilet seat cover. Each toilet facility - except those specifically designed and designated for females - shall be equipped with a metal, plastic, or porcelain urinal trough. All shall be provided with an adequate supply of toilet paper and a holder for each seat.
- Toilet facilities shall be so constructed that the occupants shall be protected against weather and falling objects; all cracks shall be sealed, and the door shall be tight-fitting, self-closing, and capable of being latched.
- One toilet facility shall be provided for every ten (10) persons on site.
- Separate toilet facilities shall be provided for each sex.
- Provisions for routinely servicing and cleaning all toilets and disposing of the sewage shall be established before placing toilet facilities into operation.

**Washing facilities.**

- Washing facilities shall be provided at toilet facilities and as needed to maintain healthful and sanitary conditions.
- Each washing facility shall be maintained in a sanitary condition and provided with water (either hot and cold running water or tepid running water), soap, and individual means of drying. However, where it is not practical to provide running water, hand sanitizers may be used as a substitute.
- Whenever employees are required by a standard to wear protective clothing, change rooms with storage facilities for street clothes and separate storage facilities for protective clothing shall be provided.

**Vermin control.**

- Enclosed workplaces shall be constructed and maintained, as far as practical, to prevent the entrance or harborage of rodents, insects, and other vermin. An effective extermination program shall be instituted where the presence of such vermin is detected.

### 1.23. Scaffolds

#### Introduction

Each contractor/subcontractor working on a Whiting-Turner project will comply with 29 CFR 1926, Construction Industry Regulations, Subpart L – Scaffolds, in addition to the following guidelines.

#### Procedures

- Scaffolds are required to be designed, erected, and inspected by a competent person in accordance with OSHA 1926 – Subpart L Scaffolding Standards.
- Contractors/subcontractors erecting scaffolding must submit a scaffold erection plan/drawing to the Whiting-Turner team showing a section view of necessary components including ties/braces, platforms and means of access.
- Employees erecting or dismantling a scaffold are required to utilize appropriate fall protection at heights six (6) feet or above unless proven to be infeasible or more hazardous as determined by their company's competent person.
- Base plates/screw jacks and mudsills or other adequate firm foundation are required to be used as part of a complete support scaffold.
- All scaffolds, including carpenters' bracket scaffolds, over six (6) feet in height shall have guardrails on all open sides, unless otherwise specified by the manufacturer. If guardrails cannot be used on a walking/working platform, contractors/subcontractors are required to use another means to protect employees from a fall.
- Cross-braces are not considered to be an adequate guardrail (fall protection) system and shall not be used as a top or mid rail on Whiting-Turner projects.
- Contractors shall comply with Whiting-Turner's scaffold tagging policy. The scaffold tag system shall be color coded and visible. The competent person shall inspect the scaffolding system before each work shift. The competent person shall sign and date the scaffold tag.
  - Green tags are reserved for complete systems
  - Red tags are reserved for erection/dismantling activities and for scaffolds with deficiencies in the system
  - Yellow tags are reserved for systems that require the use of both PFAS and guardrail systems for incomplete scaffold systems or platforms.
- Scaffold tags are required at each entry point of the scaffold system.
- Each contractor/subcontractor using the scaffold system shall have its competent person place a tag at each point of entry for their employees.

- In the case of stair towers, the responsible party's competent person shall put the tags in place and inspect the stair towers daily.
- Fall protection is required when walking/working at six (6) feet or above.
- The scaffold erection competent person will consider/determine if a horizontal, diagonal brace shall be in place to prevent the scaffold from racking.
- Scaffold working platforms are required to have a fully planked deck (5 planks). Walking platforms for use during the erection/dismantling of a scaffold are required to be at least two (2) planks wide.
- Walking/working surfaces are required to be made of scaffold grade planks. Planking is to be inspected by the competent person erecting the scaffold prior to installation during the scaffold erection. Damaged planks found during the initial inspection and all concurrent inspections are to be immediately removed from service and replaced.
- Walking/working surfaces are required to comply with the following.
  - Planking that does not extend at least six (6) inches past the bearing surface are required to be secured in such a manner to prevent accidental displacement.
  - Planking that is less than ten (10) feet in length is not to extend more than twelve (12) inches past the bearing surface and planking greater than ten (10) feet in length is not to extend past the bearing surface more than eighteen (18) inches without adequate barricades to prevent employees from stepping on the cantilevered end. All planking must rest on bearers.
- Contractors/subcontractors are to provide a proper and safe access/egress for employees working on a scaffold. Only approved built-in scaffold stairs or ladders are to be used for access and egress while working on scaffolds.
- Contractors/subcontractors are required to load materials (brick, block, stone, etc.) as close to the load bearing surface as possible. Loading in the center of the scaffold bay is not permitted. Scaffolds shall be designed to support 4x the intended load; load capacity ratings shall not be exceeded.
- Contractors/subcontractors performing work on scaffolding are required to complete a daily scaffold inspection prior to allowing their employees on the scaffold. The above-mentioned inspection is required to be completed by an employee competent in scaffold safety.
- Contractors/subcontractors are responsible for training their employees and must submit the training documentation to Whiting-Turner upon request.
- Rolling/mobile scaffold systems 30" or less in width (baker-type scaffolds) are required to have guardrails on all sides unless otherwise specified by manufacturer or local jurisdiction having authority; all wheels are required to be locked when an employee is on the working

platform. Outriggers are required when the height of scaffold exceeds 3x the base width or according to the manufacturer's recommendation, whichever is more stringent. Self-propelling/skateboarding is not permitted.

- Suspended scaffolds shall be designed, constructed, operated, inspected, tested, and maintained as specified in the operating manual for the device; all operating instructions and design specification shall be submitted to the Whiting-Turner project team prior to installation and a copy shall remain on the jobsite.

## 1.24. Signs, Signals and Barricades

### Introduction

All employees of the Whiting-Turner and its contractors/subcontractors will comply with 29 CFR 1926, Construction Industry Regulations, Subpart G, Signs, Signals and Barricades.

### Procedures

- Signs must be posted to warn others that a temporary hazard exist in the area where the subcontractor is working.
- Barricades must be utilized to deter the passage of persons or vehicles when necessary.
- Required signs will comply with the OSHA standards described in 1926.200.
- Where areas may require additional awareness or present unique danger, the use of warning tape may be necessary.
  - For areas that require additional caution, (e.g. uneven surfaces, wet surfaces) yellow caution tape should be used. Caution tape does not prohibit access.
  - For areas where entry and travel are prohibited, (e.g. areas where fall protection is being erected or areas with overhead work being performed) red danger tape should be used. Danger tape is intended to prohibit access.
  - Caution/danger tape has limitations; therefore, it shall not be used in lieu of physical barricades when an occurrence calls for a physical barricade.
  - The intent of the warning tape is to notify of hazards that may arise during construction activities. Every effort must be made to correct these situations with permanent solutions in a timely fashion.
  - All caution and danger tape used on Whiting-Turner project sites shall be of the reinforced type and shall be supplemented with a tag/label affixed with the responsible party's name, company, contact number, and potential hazard.
- All flagmen shall be trained on appropriate procedures before controlling traffic, as required by the Manual on Uniform Traffic Control Devices (MUTCD) and any municipal or state guidelines.
- All flagmen shall utilize sign paddles and shall be outfitted with high visibility garments, as required by current ANSI standards. All PPE and traffic control equipment shall be outfitted with reflectorized material for night work as required by current ANSI standards.
- All crane and hoist signals shall comply with applicable ANSI standards.
- All traffic control devices shall comply with the MUTCD and any applicable Municipal or State guidelines.



- All signs shall be secured in such a way that would allow venting in the event of high winds.

### 1.25. Silica Exposure Control Plan

Exposure to silica can lead to silicosis, a serious and sometimes fatal respiratory disease. Silicosis develops from being exposed to and breathing in silica dust. Excessive amounts of silica dust may be generated during activities such as, but not limited to: sandblasting, rock drilling, roof bolting, foundry work, stonecutting, drilling, quarrying, brick/block/concrete cutting, gunite operations, lead-based paint encapsulate applications, asphalt paving, cement products manufacturing, demolition operations, hammering, and chipping and sweeping concrete or masonry, drywall sanding and concrete saw cutting.

Any contractor/subcontractor whose work potentially exposes their workers to silica above allowable limits is required to submit their company's Silica Exposure Control Plan to Whiting-Turner prior to start of work. The contractor's/subcontractor's plan must be in compliance with the requirements set forth in 29 CFR 1926.1153.

Releases of plumes of silica laden dust are prohibited on Whiting-Turner projects. Observation of such activities will require cessation of the task and a meeting with the creating contractor/subcontractor to determine what engineering or work practices need to be put in place to ensure these releases are reduced and/or eliminated as prescribed in their silica exposure control plan.

## 1.26. Stairways and Ladders

### Introduction

Each contractor working on a Whiting-Turner project will comply with 29 CFR 1926, Construction Industry Regulations, Subpart X – Stairways and Ladders, in addition to the following guidelines.

### Procedures

#### General requirements.

- A stairway or ladder must be provided at all personnel points of access where there is a break in elevation of 19” or more.
- A double-cleated ladder or two or more separate ladders must be used when ladders are the only means of egress from a working area with 25 or more employees.
- All aluminum and commercially manufactured wooden ladders shall not be used on Whiting-Turner projects.

#### Stairways.

- When doors from an office or storage trailer open directly onto a stairway, a platform must be provided, and the swing of the door must allow an additional 20” to prevent the door from striking an employee.
- Workers are not allowed to use metal pan stairs unless they have been fitted with wooden filler blocks or poured with concrete.
- Incomplete/unsafe stairways must be physically blocked off to prevent unauthorized use; barricade tape would be an insufficient restrictive method.
- Stairways with four or more risers or rising more than 30”, whichever is less, must have a handrail and a stair rail along each unprotected side or edge.

#### Ladders.

- All hazards must be evaluated by a competent person when employees are engaged in work from a ladder 6’ or more above an adjacent surface.
- Fall protection shall be considered by the competent person if employees work from a ladder 6’ or more above a lower level and are exposed to a fall.
- Employees working on ladders must be at least one and a half times the height of the ladder away from any perimeter, shaft, stairway, and opening where the fall distance exceeds 6’ without employing additional means of fall protection.
- Contractors/subcontractors shall provide ladders with duty ratings that meet the needs of their employees.
- Workers are required to select ladders that are capable of safely supporting their weight and the weight of their tools.
- When employees ascend or descend a ladder, they must maintain three-points of contact (e.g. two hands and a foot or two feet and a hand).
- Pull ropes should be placed at all access ladders so employees can safely lift tools or equipment to upper levels.

- Stepladders must be opened fully and set level when in use.
- When ladders are used to access upper landings, the side rails must extend at least 3 feet above the landing and secured from displacement at the bottom and top.
- When ladders are used to access upper landings, a guardrail system/corral shall be placed around the opening through which the ladder is protruding.
- All ladders must be used for the purpose for which they were designed.
- The base of an extension and or straight ladder is to be placed 1 foot horizontal from the face of the surface for every 4 feet vertical.

**Job made ladder requirements.**

- Job made wooden ladders must meet ANSI ASC A.14.4-2009 specifications.

**Training.**

- Each worker involved in stair and ladder use must be trained by their company's competent person in the recognition and avoidance of stair and ladder hazards.

## 1.27. Steel Erection

### Introduction

Each contractor/subcontractor working on a Whiting-Turner project will comply with 29 CFR 1926, Construction Industry Regulations, Subpart R – Steel Erection. In addition to the items listed in this section, all contractors are to comply with all federal, state, and local requirements and codes including those in other sections of this Manual, and those imposed by the owner. All contractors shall be required to comply with all parts of these requirements based on their scope of work.

### Procedures

This section set forth requirements to protect tradespersons from hazards associated with steel erection activities involved in construction.

When floors are ready for turn over the steel erection contractor must notify Whiting-Turner. Whiting-Turner will evaluate the installation and condition of the guardrail cable system provided by the steel erector and decide to accept custody of the system or to have the system removed.

The steel erection contractor has a responsibility to inspect and control fall protection in their work areas based on their scope of work.

#### Structure steel design.

- Column anchorage
  - All columns shall be anchored by a minimum of four (4) anchor bolts.
  - When two structural members on opposite sides of a column web, or a beam web over a column, are connected sharing common connection holes, at least one bolt with its wrench-tight nut shall remain connected to the first member unless a shop-attached or field-attached seat or equivalent connection device is supplied with the member to secure the first member and prevent the column from being displaced. If a seat or equivalent device is used, the seat (or device) shall be designed to support the load during the double connection process. It shall be bolted or welded to both a supporting member and the first member before the nuts on the shared bolts are removed to make the double connection.
  - The perimeter columns have holes or other devices in or attached to perimeter columns at 42-45 inches above the finished floor and the midpoint between the finished floor and the top cable to permit installation of perimeter safety cables. Welded nuts are not permitted as part of the perimeter safety fall protection system.

#### General requirements.

- Pre-Steel Construction Meeting
  - A pre-steel construction meeting shall be held prior to beginning steel erections on our projects. This meeting will be held with all parties involved in steel erection activities including but not limited to the following: steel erector, steel

fabricator, owner and/or owner representative and architect and/or structure engineer.

- o This pre-construction meeting will address issues and items relating to all activities to steel erection including but not limited to the following:
  1. Adequate access roads shall be provided into and through the site for the safe delivery and movement of derricks, cranes, trucks, other necessary equipment, and the material to be erected and means and methods for pedestrian and vehicular control.
  2. A firm, properly graded, drained area, readily accessible to the work with adequate space for the safe storage of materials and the safe operation of the erector's equipment shall also be provided.
  3. The Steel Erector must be prepared to notify Whiting-Turner of the compaction requirements necessary to adequately support the crane at 360° capacities.
  4. Written notification that the concrete in footings, piers and walls and the mortar in the masonry piers and walls has attained 75 percent of the intended minimum compressive design strength, based on the appropriate ASTM standard test methods performed by Whiting-Turner's 3<sup>rd</sup> party testing agency. The steel erection contractor shall not erect steel until it has received the written notification.
  5. Pre-planning steel erection activities to ensure hoisting of structure steel avoid hazards associated with overhead operation.
- Site specific erection plans are to be posted and must including the following topics:
  - o Material deliveries, material staging and storage
  - o Coordination with other trades and construction activities.
  - o Path for overhead loads
  - o Critical lifts, including rigging supplies and equipment.
  - o A description of steel erection activities and procedures
  - o Stability considerations requiring temporary bracing and guying
  - o Erection bridging terminus point
  - o Columns and beams connections
  - o Decking installation
  - o Ornamental and miscellaneous iron.
  - o Procedures that will be used to comply with protection from falling objects.
  - o Special procedures required for hazardous non-routine tasks.

#### **Repairs and/or modifications.**

- Prior to the erection of a column, Whiting-Turner shall provide written notification to the steel erector if there has been any repair, replacement, or modification of the anchor bolts of that column.
- Anchor bolts shall not be repaired, replaced or field-modified without the approval of the project structural engineer of record.
- Columns shall be set on level finished floors, pre-grouted leveling plates, leveling nuts, or shim packs which are adequate to transfer the construction loads.



**Fall protection.**

- Fall Protection shall be installed and/or used along all edges of structure that are six (6) feet or more in height and shall remain in the area where the steel erection activity has been completed for Whiting-Turner to decide to accept custody or direct removal.
- All tradespersons, including connectors, engaged in steel erection activities on a walking/working surface with an unprotected side or edge more than six (6) feet above a lower level shall be protected from fall hazards by a conventional fall protection method.
- All hoisting operations in steel erection shall be pre-planned to ensure that the project requirements are met for employee protection.
- Other construction processes below steel erection are prohibited unless overhead protection for the employees below is provided.
- Full body harnesses are required for fall arrest and these harnesses require daily inspections of this equipment.
- Fall protection is required in baskets of aerial lifts.
- Roof penetrations are to be made only when equipment is ready to be installed. Later removal of the decking will require the use of an elevated surface modification permit.
- On multi-story structures, perimeter safety cables shall be installed at the final interior and exterior perimeters of the floors as soon as the metal decking has been installed.
- All materials, equipment, and tools, which are not in use while aloft, shall be secured against accidental displacement.

**Cranes.**

- Each contractor is responsible for complying and providing documentation based on the following requirements and providing a description of the crane selection and placement procedures.
- All operators shall submit to documentation showing that they meet the requirements to operate the crane provided.
- A description of the crane and placement procedures shall be submitted in writing to Whiting-Turner prior to delivery of this equipment.
- Each crane shall have a current annual inspection conducted by a third party and document shall be submitted to the Whiting-Turner project team.
- Cranes are to have the following in cab areas; load charts, manufacture manual, fire extinguisher and hand signal poster.
- Operator shall perform daily inspections on the crane that they will operate.
- The operator shall not operate the crane until the counter weight is properly barricaded as per OSHA standards.
- Each contractor is required to inspect the rigging equipment that will be used before each lift, and prior to placing that equipment in service, such as; grab hooks, spreader bars, extension devices, slings, and wire ropes, etc.

**Structural steel erection.**

- Beams and columns

- o During the final placing of solid web structural members, the load shall not be released from the hoisting line until the members are secured with at least two bolts per connection, of the same size and strength as shown in the erection drawings, drawn up wrench-tight as specified by the project structural engineer of record.
- o A competent person shall determine if more than two bolts are necessary to ensure the stability of cantilevered members; if additional bolts are needed, they shall be installed.
- o Solid web structural members used as diagonal bracing shall be secured by at least one bolt per connection drawn up wrench-tight or the equivalent as specified by the project structural engineer of record.
- Hoisting and rigging
  - o The steel erection contractor shall ensure that all the following provisions are complied with as applicable to hoisting and rigging.
  - o A competent person shall visually inspect cranes being used in steel erection activities prior to each shift; the inspection shall include observation for deficiencies during operation. At a minimum this inspection shall include the following:
    1. All control mechanisms for maladjustments
    2. Control and drive mechanism for excessive wear of components and contamination by lubricants, water, or other foreign matter.
    3. Safety devices, including but not limited to boom angle indicators, boom stops, boom kick out devices, anti-two block devices, and load moment indicators where required.
    4. Air, hydraulic, and other pressurized lines for deterioration or leakage, particularly those that flex in normal operation.
    5. Hooks and latches for deformation, chemical damage, cracks, or wear.
    6. Wire rope reeving for compliance with hoisting equipment manufacturer's specifications.
    7. Electrical apparatus for malfunctioning, signs of excessive deterioration, dirt, or moisture accumulation.
    8. Hydraulic system for proper fluid level
    9. Ground conditions around the hoisting equipment for proper support, including ground settling under and around outriggers, ground water accumulation, or similar conditions.
    10. The hoisting equipment for level position; and the hoisting equipment for level position after each move and setup.
  - o If any deficiency is identified, the competent person shall make an immediate determination as to whether the deficiency constitutes a hazard.
  - o If the deficiency is determined to constitute a hazard, the hoisting equipment shall be removed from service until the deficiency has been corrected.
  - o The operator shall be responsible for those operations under the operator's direct control. Whenever there is any doubt as to safety, the operator shall have the authority to stop and refuse to handle loads until safety has been assured.

- o A qualified rigger (a rigger who is also a qualified person) shall inspect the rigging prior to each lift.
- o The headache ball, hook or load shall not be used to transport personnel except unless all the OSHA standards are being met to hoist employees on a personnel platform and written approval has been granted by executive management (See Cranes).
- o Safety latches on hooks shall not be deactivated or made inoperable.
- Working under loads
  - Routes for suspended loads shall be pre-planned to ensure that no employee is required to work directly below a suspended load except for:
    - o Employees engaged in the initial connection of the steel; or
    - o Employees necessary for the hooking or unhooking of the load.
    - o When working under suspended loads, the following criteria shall be met:
      1. Materials being hoisted shall be rigged to prevent unintentional displacement;
      2. Hooks with self-closing safety latches or their equivalent shall be used to prevent components from slipping out of the hook; and
      3. A qualified rigger shall rig all loads
- Structural steel assembly
  - o Structural stability shall be maintained during the erection process.
  - o The following additional requirements shall apply for multi-story structures:
    1. The permanent floors shall be installed as the erection of structural members progress, and there shall be not more than eight stories between the erection floor and the upper-most permanent floor, except where the structural integrity is maintained because of the design.
    2. At no time shall there be more than four floors or 48 feet, whichever is less, of unfinished bolting or welding above the foundation or uppermost permanently secured floor, except where the structural integrity is maintained because of the design.
    3. A fully planked or decked floor or nets shall be maintained within two stories or 30 feet, whichever is less, directly under any erection work being performed.
- Plumbing-up
  - o The steel erector shall evaluate to determine whether guying or bracing is needed; if guying or bracing is needed and if determined, it shall be installed.
  - o When deemed necessary by a competent person, plumbing-up equipment shall be installed in conjunction with the steel erection process to ensure the stability of the structure.
  - o When used, plumbing-up equipment shall be in place and properly installed before the structure is loaded with construction material such as loads of joists, bundles of decking or bundles of bridging.

- o Plumbing-up equipment shall be removed only with the approval of a competent person.
  - o Hoisting, landing, and placing of metal decking bundles.
  - o Bundle packaging and strapping shall not be used for hoisting unless specifically designed for that purpose.
  - o If loose items such as dunnage, flashing, or other materials are placed on the top of metal decking bundles to be hoisted, such items shall be secured to the bundles.
  - o Bundles of metal decking on joists shall be landed in accordance with OSHA standards.
  - o Metal decking bundles shall be landed on framing members so that enough support is provided to allow removal of banding without dislodging the bundles from the supports.
  - o At the end of the shift or when environmental or jobsite conditions require, metal decking shall be secured against displacement.
- Roof and floor holes and opening
    - o Metal decking at roof and floor holes and openings shall be installed as follows:
      1. Metal deck openings shall have structural members turned down to allow continuous deck installation except where not allowed by structural design constraints or constructability.
      2. Roof and floor holes and openings shall be decked over. Where large size, configuration or other structural design does not allow openings to be decked over (such as elevator shafts, stair wells, etc.) employees shall be protected in accordance with OSHA standards.
      3. Metal decking holes and openings shall not be cut until immediately prior to being permanently filled with the equipment or structure needed or intended to fulfill its specific use and which meets the strength requirements of this section policy or shall be immediately covered.
- Covering roof and floor openings
    - o Covers for roof and floor openings shall be capable of supporting, without failure, twice the weight of the employees, equipment and materials that may be imposed on the cover at any one time.
    - o All covers shall be secured when installed to prevent accidental displacement by the wind, equipment, or employees.
    - o All floor holes greater than 12" x 12" must have a Whiting-Turner floor hole cover sign in place. Smaller holes shall be labeled "hole" in accordance with the OSHA standard.
    - o Particle board, medium density fiber board (MDF) or similar material is prohibited from being used as floor hole covers on Whiting-Turner projects.
    - o Smoke dome or skylight fixtures that have been installed are not considered covers for the purpose of this section unless they meet the strength requirements.

- Decking gaps around columns
  - Wire mesh, exterior plywood, or equivalent, shall be installed around columns where planks or metal decking do not fit tightly.
  - The materials used must be of sufficient strength to provide fall protection for personnel and prevent objects from falling through.
- Installation of metal decking
  - Metal decking shall be laid tightly and immediately secured upon placement to prevent accidental movement or displacement.
  - During initial placement, metal decking panels shall be placed to ensure full support by structural members.
- Erection of steel joists
  - Both sides of the seat of one end of each steel joist that requires bridging under OSHA requirements shall meet those requirements set forth in Tables A and B shall be attached to the support structure before hoisting cables are released.
  - For joists over 60 feet, both ends of the joist shall be attached as specified in the OSHA regulations before the hoisting cables are released.
  - Connections shall be drawn up, wrench tight with 2 bolts minimum before releasing the load.
  - On steel joists that do not require erection bridging under Tables A and B, only one employee shall not be allowed on the joist until all bridging is installed and anchored.
  - Employees shall not be allowed on steel joists where the span of the steel joist is equal to or greater than the span shown in Tables A and B of subpart R.
  - When permanent bridging terminus points cannot be used during erection, additional temporary bridging terminus points are required to provide stability.
  - Bar joists unless specified by the engineer of record shall not be used as fall protection anchorage points.
- Training

The requirements in this section are mandatory and the contractor shall provide certification for each employee who has received training for performing steel erection operations based upon OSHA standards.
- Competent person

Each contractor shall list the qualified and competent persons based on OSHA definition and the steel erector shall have a competent person knowledgeable of current OSHA standards with an OSHA 30-hour certification. This person shall remain on site during the completion of their work activities. If the contractor/subcontractor uses lower tier steel erectors to erect steel onsite the contractor/subcontractor with whom Whiting-Turner holds the contract must provide an onsite competent person to direct their lower tier contractor.
- Fall hazard training

The contractor shall provide a training program for all employees exposed to fall hazards. The program shall include but not limited to the following training and instructions in the following areas:

- o The recognition and identification of fall hazards in the work area;
  - o The use and operation of guardrail systems (including perimeter safety cable systems), personal fall arrest systems, positioning device systems, fall restraint systems, safety net systems, and other protection to be used;
  - o The correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems to be used;
  - o The procedures to be followed to prevent falls to lower levels and through or into holes and openings in walking/working surfaces and walls; and
  - o The fall protection requirements of this subpart.
- Additional training requirements

In addition to the training requirements above in this section, the contractor shall provide special training to employees engaged in the following activities.

    - o Multiple Lift Rigging Procedure - The contractor shall ensure that each employee who performs multiple lift rigging has been provided training in the following areas:
      1. The nature of the hazards associated with multiple lifts; and
      2. The proper procedures and equipment to perform multiple lifts.
      3. Multiple lifts must utilize a multiple lift rigging assembly and meet all other criteria as listed in OSHA standards regarding multiple lifts.
    - o Connector Procedures - The contractor shall ensure that each connector has been provided training in the following areas:
      1. The nature of the hazards associated with connecting; and
      2. The establishment, access, proper connecting techniques and work practices.



## 1.28. Temporary Facilities

### Introduction

Contractor/subcontractor providing temporary construction buildings, facilities, fencing, and access routes and anchoring systems for temporary structures shall be submitted to the Whiting-Turner project team for review.

### Procedures

- The design and construction of temporary structures shall consider the following loadings:
  - Dead and live loads
  - Soil and hydrostatic pressures
  - Wind loads
  - Rain and snow loads
  - Seismic forces
- Trailers and other temporary structures used as field offices, to house personnel, or for storage shall be anchored with rods and cables or by steel straps to ground anchors. The anchor system shall be designed to withstand winds and must meet applicable State or local standards for anchoring mobile trailer homes.
- Fencing and warning signs
  - Temporary project fencing shall be installed per Whiting-Turner's fencing policy particularly on all projects located in areas of active use by members of the public. More careful consideration will also be given to those areas proximate to family housing areas and/or school facilities.
  - Signs warning of the presence of construction hazards and requiring unauthorized persons to keep out of the construction area shall be posted on the fencing. At the minimum, posting shall be on all fenced sides of the project and spaced one sign every 100 feet.

## 1.29. Underground Construction, Caissons, Cofferdams and Compressed Air Policy

### Introduction

Each contractor working on a Whiting-Turner project will comply with 29 CFR 1926, Construction Industry Regulations, Subpart S – Underground Construction, Caissons, Cofferdams and Compressed Air, in addition to the following guidelines.

### Procedures

- The employer must control access to all openings to prevent unauthorized entry underground.
- Unused chutes, manways, or other openings must be tightly covered, bulk headed, or fenced off and must be posted with warning signs stating, “Keep Out”, or similar language.
- The employer must assign and submit the qualifications of the competent person responsible for monitoring the air quality during underground construction.
- The atmosphere in all underground work must be tested as often as necessary to assure that the atmosphere contains at least 19.5% oxygen, but no more than 23.5% oxygen. These tests must be conducted before testing for air contaminants.
- The atmosphere in all underground work must also be tested quantitatively for hazardous materials such as carbon monoxide, nitrogen dioxide, hydrogen sulfide, and other toxic gases, dusts, vapors, mists, and fumes.
- If an IDLH (Immediately Dangerous to Life and Health) atmosphere is present, the caisson then becomes a permit required confined space and exposed/controlling contractor’s Confined Space Entry program is implemented.
- The competent person must keep a daily record of all air quality test results and submit those results to Whiting-Turner, upon request.
- Casing or bracing must support the full depth of the shaft.
- The casing or bracing must extend 42” + or – 3” above ground level. This height may be reduced to 12”, provided a standard railing is installed, the ground surrounding the shaft is sloped away from the shaft and effective barriers are in place to prevent mobile equipment from jumping over the 12” barrier.

### 1.30. Welding and Cutting Policy

#### Introduction

All Whiting-Turner employees and all contractor/subcontractor employees working on a Whiting-Turner project must comply with 29 CFR 1926, Construction Industry Regulations, Subpart J – Welding and Cutting, in addition to the following guidelines.

#### Procedure

- The contractor/subcontractor will assure that adequate precautionary measures have been taken to protect all personnel and property from contact with flash or contact with falling slag and sparks.
- Welders, cutters, and their supervisor shall be trained in the safe operation of their equipment, safe welding/cutting practices, and welding/cutting respiratory and fire protection.
- All contractors performing welding, burning/cutting operations shall submit an AHA to the Superintendent prior to the commencement of work.
- Contractors/subcontractors are required to use welding shields between the welding operation and the public/other trades for protection against arc flash.
- All welding lead connection lugs are required to have non-conductive boot covers installed.
- A Hot Work Permit must be completed daily by each contractor/subcontractor performing all welding, burning/cutting operations.
  - The hot work permit will designate the location of the operation, date of the operation, type of work to be done and the time commenced and completed.
  - A hot work permit is required to be submitted by the contractor/subcontractor prior to beginning the hot work activity.
  - The hot work permit shall be conspicuously located near the area where the activity is taking place.
  - Contractors/subcontractors are responsible for providing a charged, 20lb ABC dry chemical fire extinguisher for each welding and burning activity.
  - Other hot work activities besides welding and burning may require the use of a fire watch, as designated by Whiting-Turner.
  - Whiting-Turner life safety fire extinguishers shall not be used for fire watch duties.
  - A fire watch is to be positioned at each location where sparks/slag and/or molten metal can fall/drop/strike combustible material, potentially resulting in a fire.
  - A fire watch is required to remain in place at all times during the hot work activity and for a minimum of one half (1/2) hour after the welding or burning operation has been completed or longer periods of time as determined by the project-specific rules.

- o The fire watch is to be replaced by another fire watch if the person needs to leave the area for any reason.
  - o Additional permits may be required by the local Fire Department and will be at the contractor's/subcontractor's expense.
  - o Copies of these additional permits are to be submitted to the Whiting-Turner project team upon request.
  - o Upon completion of the work, the completed hot work permit must be returned to Whiting-Turner for file retention.
- Local fire department fire details may be required, and all costs associated with the detail will be the responsibility of the contractor/subcontractor doing the hot work requiring the detail.
  - Contractors/subcontractors may be required to provide adequate engineering controls (ventilation and/or smoke eaters) for welding and burning operations.
  - Contractors/subcontractors performing welding and/or burning operations may be required to provide air monitoring in areas with adequate ventilation.
  - All employees engaged in hot work activities shall wear the appropriate personal protective equipment (PPE); shields shall be compatible with a hardhat.
  - Oxy-fuel gas welding shall have hoses that are readily distinguishable.
  - Welding and cutting systems using cylinder-hose-torch shall have a reverse-flow check valve and a flash arrestor.
  - Oxygen cylinders in storage shall be separated from fuel gas cylinders or combustible material by 20 feet or by a non-combustible barrier at least five (5) feet high having a fire-resistance rating of at least ½ hour.
  - All cylinders shall be considered in storage at the end of each shift; cylinders must have gauges removed and caps in place.
  - All compressed gas cylinders shall be secured against displacement by cinch straps or chains.

## 2. Premobilization Safety Submittals and Ongoing Safety Management

- Each contractor/subcontractor must identify (on the competent person acknowledgement form) and submit the qualifications of a competent person to Whiting-Turner prior to the start of work.
- Contractor/subcontractor shall submit a site-specific safety plan (SSSP) prior to start of work.
  - Activity hazard analyses (AHA) for major phases of work, submitted with company safety program may be accepted in lieu of SSSP—at the discretion of the Whiting-Turner project team.
  - Contractor/subcontractor supervisor is responsible to maintain a copy of these plans at the worksite and review with their employees for each new task or phase.
- Site specific safety data sheets (SDS) and chemical inventories are to be provided to Whiting-Turner prior to start of work.
  - SDS must be submitted for all hazardous chemicals/products to be used on the project.
  - Contractor/subcontractor supervisor is responsible to maintain copies of SDS and chemical inventory at the worksite.
  - Contractor/subcontractor supervisor is responsible for updating Whiting-Turner each time a new chemical is brought on site; the update must be reflected in their SDS binder and chemical inventory list.
- Each contractor/subcontractor is required to designate a site safety representative (SSR). SSR shall be on site at all times and shall have the knowledge and authority of the competent person. SSR shall be able to conduct site walks with Whiting-Turner personnel to ensure the safety of contractor's/subcontractor's workers on the project. Manpower totals below include all tiered contractor/subcontractor employees. Proof of training must be submitted prior to mobilization or at orientation. The qualifications for the SSR are as follows:
  - Minimum requirement proof of OSHA 30 hour submitted
  - Contractors/subcontractors with (30) or more workers on site will be evaluated by the Whiting-Turner's management team along with Whiting-Turner's EH&S Manager regarding the contractor's/subcontractor's site-specific safety performance. If the contractor's/subcontractor's past or current site safety performance indicates improved safe work practices and conditions are needed to help ensure the safety of the contractor/subcontractor crews and others, Whiting-Turner at its discretion, may require the contractor/subcontractor to provide a fulltime Site Safety Representative to be present onsite with no other collateral duties.
- Certification for operators of powered industrial trucks and cranes is required to be submitted to the Whiting-Turner project team prior to the operation of said equipment.

- All on site personnel, (contractor/subcontractors, tiered contractors/subcontractors, and their employees) are required to participate in a mandatory safety orientation session prior to commencing with any work on site. Contractor/subcontractor shall provide a translator for any non-English speaking employees during orientation and any job wide meetings/stand-downs. Employees may be asked to attend orientation again for repeat violations or deficiencies.
- Contractor/subcontractor shall conduct weekly safety meetings for all workers (employed or contracted). Whiting-Turner Superintendent and/or other Whiting-Turner personnel may attend this safety meeting.
  - Provide a legible sign-in sheet and meeting agenda to the Whiting-Turner field office at the conclusion of the meeting.
  - Contractor/subcontractor is also required to submit daily work reports to the Superintendent, on Whiting-Turner's form.
- In coordination with the contractor's/subcontractor's AHA, complete a Pre-task Plan (PTP) at least once per day, per crew/task.
  - PTPs shall be updated as hazards or conditions change. If necessary, a new PTP may be completed and reviews with the crew.
  - Copies of PTP(s) must be submitted to the Whiting-Turner project team upon request.
  - Tasks should be reviewed in the area where work is to be performed, and crew members should be involved in the development of the plan (safety "huddle").
- Documented pre-shift inspections are to be completed for mobile equipment, heavy equipment, and cranes.
  - Equipment is to be taken out of service for deficiencies noted.
  - These inspections are to be maintained in the work area for review.



### 3. Compliance Enforcement and Incentive Guidelines

#### Enforcement Guidelines.

##### Introduction:

In an effort to ensure compliance with this program and all other established OSHA standards, the Whiting-Turner Contracting Company has established this procedure of compliance enforcement for all contractors/subcontractors. This is established to promote safety excellence and eliminate offenders. This program may be used or may be superseded with more severe discipline based on the degree of the infraction(s). In any case, Whiting-Turner has sole authority in what type of discipline is issued relating to the project, up to and including removal from the project. Contractor/subcontractors are required to provide Whiting-Turner with any written disciplinary notices issued to site employees by their management.

To assist in our efforts to provide a safe work place, the following disciplinary plan shall be used on each Whiting-Turner project.

- 1<sup>st</sup> infraction: written warning; coach the employee.
- 2<sup>nd</sup> infraction: written warning and a meeting must be held between the employee, his/her supervisor and the Whiting-Turner Superintendent—or their designee.
  - A copy of the written warning is sent to the employee's company's office.
  - A written warning requires the contractor/subcontractor's supervisor to assure the employee has satisfactorily completed an appropriate training session related to the safety policy violated.
    1. This training must be completed within five (5) working days from issuance of the written warning. Until that training has occurred the employees shall not resume the same work activity.
    2. Proof of training or retraining shall be provided to Whiting-Turner.
- 3<sup>rd</sup> infraction the worker is removed from the project, indefinitely.
- If repeat occurrences with other crewmembers are found the supervisor of said crewmembers shall be subject to removal from the project.
- All warnings, verbal or otherwise, shall be documented in a log to be used as a reference point by the project team to track unsafe trends and to act as a tool to enhance safety.

It is the discretion of the Whiting-Turner project team to issue a monetary fine for safety violations. Violation fines may decrease or increase based on severity.

All fines collected shall be added to the project safety incentive program. Fines will be assessed to the employee's company. In addition to the above, Monthly Payment Applications/Invoices will be reduced for any fines resulting in these violations.

**Fine Schedule**

Failure to wear hard-hat, safety glasses, or another required PPE	\$50 per occurrence
No protective system installed for trenching / excavation operations 5' and deeper	\$1000 per occurrence
Removal of safety barricade, guardrail, or other protection and leaving area unattended	\$1000 per occurrence
Removal of or failure to provide floor opening protection and/or leaving area unattended (includes manholes)	\$1000 per occurrence
Employees not using proper or no fall protection	\$1000 per occurrence
Unprotected energized electrical panel	\$1000 per occurrence
Failure to protect from impalement hazards	\$100 per occurrence
Failure to provide adequate or sufficient employee safety training	\$200 per occurrence
Failure to properly store, secure or cap compressed gas cylinders	\$500 per occurrence
Fire extinguisher and/or watch not provided for welding or cutting operations	\$250 per occurrence
Improper access provided to scaffolding work platform.	\$250 per occurrence
Inadequate housekeeping.	\$250 per occurrence
Unsafe or damaged tools and/or power cords.	\$250/Immediate Removal
All "non-communication music type" radios on the project.	\$250/Immediate Removal
Metal ladders on the project.	\$250/Immediate Removal
Failure to safely or properly use scissor and aerial lifts.	\$500 per occurrence
Failure to properly use and/or set up ladders.	\$250 per occurrence
Failure to provide ground fault circuit interrupters (GFCI)	\$500 per occurrence
Observed littering on the jobsite	\$100 per occurrence
Failure to prevent arc welding flash from the public and other trades.	\$500 per occurrence
Any non-compliance of Whiting-Turner, federal or state OSHA Standards, and applicable NFPA, ANSI, ASME codes.	Up to \$1000 per occurrence

## **Safety Incentive Program Guidelines.**

### **Introduction:**

The implementation of a project safety incentive program is at the discretion the Whiting-Turner project team. The project's safety awards and incentives will be based primarily upon the data collected during safety observations. All superintendents, project managers and safety managers are required to perform inspections.

There are two important aspects of safety award programs that need to be kept in mind:

1. Provide safety awards for safe behavior and for activities related to maintaining a safe work environment.
2. Make safety awards and incentives significant enough to support compliance but not significant enough to generate false reporting of safety data.





# UTILITY LOCATION/ AVOIDANCE POLICY

**Effective Date: 06/01/2019**

All Whiting-Turner Project teams shall ensure that the following protocols for underground utility location are adhered to on all Whiting-Turner Job Sites.

There are no exceptions to this protocol unless by written petition approved and signed by a Whiting-Turner Senior Vice President.

Any petition to gain exception to this protocol shall include a detailed discussion stating why the protocol is being deemed unnecessary and 100% assuredness that every direct buried and encased utility has been located.

## **Whiting-Turner Team Implementation**

Notify and schedule a preconstruction meeting three (3) weeks in advance of excavation work.

Required attendees of this meeting shall be as follows:

- Whiting-Turner Project Manager and Lead Superintendent
- Subcontractor's excavation authorized competent person
- Subcontractor's operator(s)
- Utility locator
- Representatives of owners/design teams, with direct knowledge of existing underground conditions
- Utility company representatives (on public property)



## Protocol

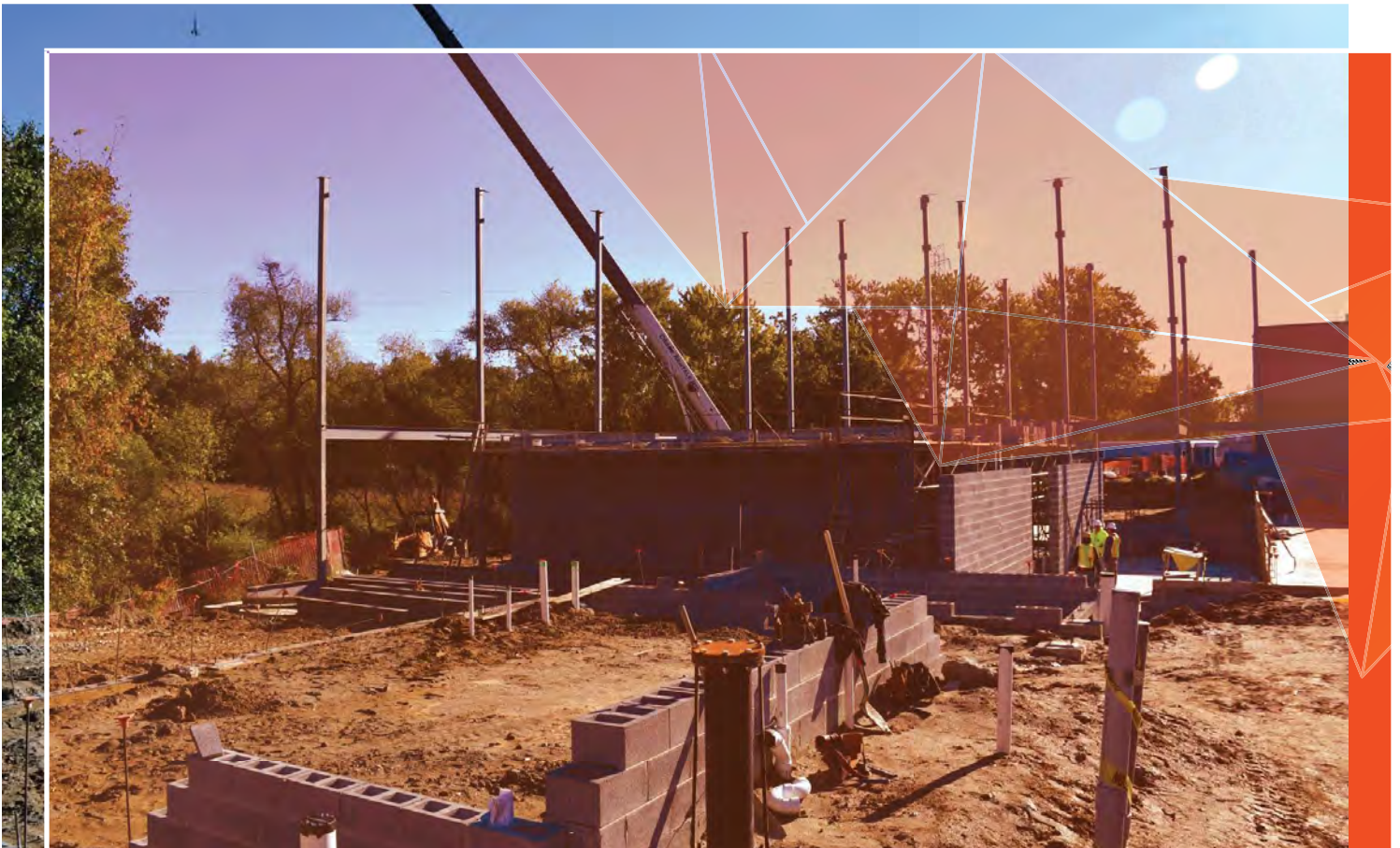
### Whiting-Turner shall:

- Conduct the Excavation/Utilities Subcontractor Preconstruction Review using Whiting-Turner's form as the agenda of the meeting
- Conduct a walk/discussion of the work area with all required parties
- Assure at completion of the meeting, all parties sign the form where applicable

### All contractors whose work involves excavations or trenching shall be required to:

- Attend and participate in Whiting-Turner's Excavation/Utilities Subcontractor Preconstruction review resulting in completion of Whiting-Turner's Excavation/Utilities Subcontractor Preconstruction Review form
- Provide Vacuum Truck potholing services at required intervals prior to disturbing any soil
- Ensure Excavation Equipment Operator(s) attendance for Whiting-Turner's Excavation/Utilities Subcontractor Preconstruction Review, site walk and Excavation Equipment Operator's/Utility Avoidance Orientation
- Notify 811 call centers to have utilities identified and marked by utility provider or private locator.
- Once utilities are identified and marked, locate all utilities by potholing method utilizing a vacuum truck(s). Utilities that will be continuously encountered must be located again at the following frequency:
  - Direct burial utilities must be relocated every 50 feet
  - Utilities encased must be relocated every 100 feet
- Ensure that all their Equipment Operators involved in utility excavation work attend the Whiting-Turner Excavation/Utilities Subcontractor Preconstruction Review, Site Walk and Excavation Equipment Operator's/Utility Avoidance Orientation
- Ensure that all their Operators set up and start the digging process following rules and requirements as listed in the Excavation Equipment Operators/Utility Avoidance Orientation

**If work is suspended for 3 weeks, or if conditions change, the forms and operator orientation must be reviewed by all responsible parties prior to restarting work**







# UTILITY LOCATION/ AVOIDANCE

## SUBCONTRACTOR PRECONSTRUCTION REVIEW

Whiting-Turner lead superintendent and project manager will record and lead the discussion on items below

Job Name: \_\_\_\_\_ Date: \_\_\_\_\_

Activity Start Date: \_\_\_\_\_ Activity End Date: \_\_\_\_\_

Activity Start Time: \_\_\_\_\_ Activity End Time: \_\_\_\_\_

Excavation Subcontractor: \_\_\_\_\_ Sub-tier Contractors: \_\_\_\_\_

Location of Excavation: \_\_\_\_\_

Excavation Purpose: \_\_\_\_\_

1. Place check marks in boxes next to utilities that are known and marked on provided as built drawings.
- Electric       Gas       Tele/Data       Water       Sanitary Sewer
- Cable       Steam Line       Other:

**In addition to the check marks that were placed above, circle any utilities that could potentially be present as unidentified in the work area(s).**

2. Which of the following will be utilized to provide underground utility identification?
- Subcontractor authorized person:
- State Locator (MISS Utility, Call Before You Dig, etc.); Ticket #:
- Private 3<sup>rd</sup> Party Locator:
3. After utilities are marked on this date \_\_\_\_\_ a representative from the Owner, Whiting-Turner, Excavation Subcontractor, Utility Locator and the Equipment Operator(s) will walk the work area to review and discuss where known and potentially unknown utilities may be located prior to commencement of soil disturbing activities.
4. Name of excavation subcontractor authorized competent person responsible for reviewing as-built drawings, interpreting marks left by locators, identifying all services to buildings, consulting maps, field sketches, and surveying the site for additional signs and curb markings.
- Name: \_\_\_\_\_ Title: \_\_\_\_\_
5. Name of excavation subcontractor authorized competent person responsible for ensuring that all persons involved in the work (including equipment operators) are aware of safe work practices and procedures to perform the work?
- Name: \_\_\_\_\_ Title: \_\_\_\_\_ Contact # \_\_\_\_\_
6. Name of Vacuum Truck company the excavation subcontractor will use to perform vacuum potholing.
- Name: \_\_\_\_\_ Contact: \_\_\_\_\_



# UTILITY LOCATION/ AVOIDANCE

**Potholing for reoccurring direct buried utilities is required every 50 feet**  
**Potholing for reoccurring encased utilities is required every 100 feet**

7. If a utility strike or other emergency occurs, name the subcontractor authorized competent person who will be responsible for notifying the appropriate emergency contact personnel listed below:

\_\_\_\_\_

All utility valve and switch whereabouts and shut down procedures must be identified and known. Prior to start of work, list the location of each applicable valve or switch so that access is immediate in case of emergency.

**Electric:** \_\_\_\_\_

Name of Contact: \_\_\_\_\_ Contact #: \_\_\_\_\_

**Water:** \_\_\_\_\_

Name of Contact: \_\_\_\_\_ Contact #: \_\_\_\_\_

**Gas:** \_\_\_\_\_

Name of Contact: \_\_\_\_\_ Contact #: \_\_\_\_\_

**Steam:** \_\_\_\_\_

Name of Contact: \_\_\_\_\_ Contact #: \_\_\_\_\_

**Fire:** \_\_\_\_\_ Contact #: \_\_\_\_\_

Name of Contact: \_\_\_\_\_ Contact #: \_\_\_\_\_

**Whiting-Turner Lead Superintendent:** \_\_\_\_\_ Contact #: \_\_\_\_\_

8. Care must be taken to prevent non-construction personnel from entering work areas. What type of barricades will you as the excavation subcontractor be utilizing to ensure that the work area is isolated from non-construction personnel? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

9. If the work will take place next to adjacent buildings, the subcontractor authorized competent person must ensure that exhaust and dust does not enter building air intakes. What methods will you as the excavation subcontractor be utilizing to control this exposure? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

10. Attach copies of as-built drawings, documentation of interpreting marks left by locators, consulting maps/field sketches, models and any other information utilized to predetermine potential utility locations and services to the building.

11. Prior to backfill of excavation, subcontractor must verify and provide Whiting-Turner Superintendent with utilities GPS locations and depths.

# UTILITY LOCATION/ AVOIDANCE



**Subcontractor Representatives:** Company Name:

Name (Print): \_\_\_\_\_ Date: \_\_\_\_\_  
Signature: \_\_\_\_\_

Name (Print): \_\_\_\_\_ Date: \_\_\_\_\_  
Signature: \_\_\_\_\_

Name (Print): \_\_\_\_\_ Date: \_\_\_\_\_  
Signature: \_\_\_\_\_

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**Subcontractor's Excavation Operator Representatives:** Company Name:

Operator Name (Print): \_\_\_\_\_ Date: \_\_\_\_\_  
Signature: \_\_\_\_\_

Operator Name (Print): \_\_\_\_\_ Date: \_\_\_\_\_  
Signature: \_\_\_\_\_

Operator Name (Print): \_\_\_\_\_ Date: \_\_\_\_\_  
Signature: \_\_\_\_\_

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**Whiting-Turner Representatives**

Whiting-Turner Project Manager (Print): \_\_\_\_\_ Date: \_\_\_\_\_  
Signature: \_\_\_\_\_

Whiting-Turner Superintendent (Print): \_\_\_\_\_ Date: \_\_\_\_\_  
Signature: \_\_\_\_\_

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This review has been conducted for the work, days and times listed above. Any change in operation will require a new review conducted by affected parties prior to start of new work.





# UTILITY LOCATION/ AVOIDANCE OPERATOR ORIENTATION

It is Whiting-Turner's policy that every reasonable effort be taken to eliminate recognized hazards from our operations. In the construction industry, utility-related incidents continue to occur on nearly a daily basis.

In an effort to help avoid these types of occurrences, Whiting-Turner has created an excavation equipment operator/utility avoidance orientation to heighten awareness of potential known hazards associated with these activities.

Every operator involved, plays an instrumental role in performing these tasks safely and avoiding unplanned strikes of buried utilities. To assist operators in accomplishing these tasks in a safe manner, Whiting-Turner has developed guidelines to follow when performing excavation work near existing utilities on Whiting-Turner project sites so that hazards to operators, fellow workers and the public in general can be avoided.

## Operator rules and requirements for avoidance of direct buried utility strikes

It is this Whiting-Turner Project Team's expectation that all excavation equipment operators will make every reasonable effort to avoid strikes of direct buried utilities while working on this project site.

**Whiting-Turner considers this as a condition of working on this project site.**

Name of subcontractors authorized competent equipment operator responsible for working on this Whiting-Turner project site:

- Company: \_\_\_\_\_
- Name: \_\_\_\_\_
- Name: \_\_\_\_\_
- Name: \_\_\_\_\_

### **Prior to disturbing soil, you as the equipment operator shall:**

- Ensure that you have the required skill and experience to operate the equipment that you will be using to perform the work.
- Inspect your equipment to ensure that all aspects of the equipment are functioning properly.
- Ensure that you are familiar with how all equipment responds when operating it.
- Familiarize yourself with site surroundings, landmarks, marks, existing utilities, etc.
- Actively participate in the preconstruction meeting discussions and job walks.



# UTILITY LOCATION/ AVOIDANCE OPERATOR ORIENTATION

## When Digging Commences:

- Ensure that you have good visibility (i.e., clear glass, no obstacles and no glare).
- Pay close attention to the marks the locator has provided. Do not deviate from these marks.
- Make slow, deliberate movements when operating equipment. Do not get in a hurry and/or make quick or jerky movements during operation.
- Do not use machinery to dig within 48 inches of a marked utility line. Once this boundary is reached, stop the equipment, rest the bucket on the ground, take your hands off the control levers and wait to receive direction to proceed from your designated authorized competent person.
- Do not attempt to remove spoils by making sweeping motions with equipment bucket when within the 48-inch boundary of the located utility marks.
- Do not try to break hard ground by using the bucket to repeatedly impact the ground.
- Utilize the bucket that has the least likelihood of striking and damaging a utility line.
- Utilize spotters when necessary. Ensure that spotters are always within your sight and out of danger of being struck by your equipment.
- Dig parallel to lines removing six (6) inches of soil or less per pass.
- Pay close attention to depths of differing utility lines.
- Stay focused. Do not engage in anything distracting while sitting behind the controls of the equipment.
- Do not smoke near or on the equipment.
- Do not leave the seat of running equipment.
- Backfill carefully. Do not drop rocks or clods on exposed utilities.
- Make sound decisions based on well thought out judgments.
- If unsure of how to proceed safely, stop and seek guidance from your supervisor.

By signing below, you acknowledge that Whiting-Turner's Excavation Equipment Operator/Utility Avoidance Orientation has been discussed with you.

**I understand and agree to follow all rules and requirements as discussed.**

Company Name:

Date:

Operator Signature:

Operator Printed Name:

Company Name:

Date:

Operator Signature:

Operator Printed Name:

Company Name:

Date:

Operator Signature:

Operator Printed Name:

# DISCLAIMER

The information contained in this Policy is not intended to serve as a substitute for the exercise of good engineering judgment by the engineers nor as a substitute for determinations made by contractors/subcontractors of appropriate manner and methods of operations and safety aspects of work under their control. This Policy is also not intended to be all inclusive or replace a contractor's or subcontractor's corporate safety plan and/or site-specific safety planning and is not intended to, nor shall it, supersede any more stringent federal, state, local and other applicable laws, codes, rules, regulations, and/or practices. All contractor's and subcontractor's site-specific safety planning must meet or exceed the requirements of the Whiting-Turner's EH&S program and this Policy, the contract documents and all federal, state, local and other applicable laws, codes, rules, regulations, and/or practices. In the event of any conflicts between the material contained therein and any more stringent laws, codes, rules, regulations, and/or practices, the more stringent laws, codes, rules, regulations, and/or practices shall govern.

This Policy and all information contained therein is confidential and intended for the sole use of contractors and subcontractors on Whiting-Turner projects. Contractors/subcontractors are prohibited from distributing this information to any third parties. The Whiting-Turner Contracting Company expressly disclaims warranties for the information contained in this Policy and makes no representation to third parties regarding the reliability, suitability, correctness, or completeness of such information. Whiting-Turner assumes no responsibility or liability and shall not be responsible and/or liable for damages or losses of any kind, including but not limited to direct, indirect, incident, exemplary, special or consequential damages or losses, arising from, attributable to and/or resulting from the use of such information by third parties however caused and on any theory of liability, whether in contract, strict liability or tort.



SECTION 01 36 00 – QUALITY MANAGEMENT PLAN

**PROJECT-SPECIFIC QUALITY MANAGEMENT PLAN**

Effective January 2019, all contractors and subcontractors on Whiting-Turner’s projects are expected to be in full compliance with all applicable requirements of Whiting-Turner’s project-specific Quality Management Plan (QMP). A copy of this project-specific QMP has been provided to this contractor / subcontractor. If a copy of this QMP has not yet been received, this contractor / subcontractor must provide a written request to the lead Whiting-Turner Project Manager to obtain a copy.

The information contained in this QMP is not intended to serve as a substitute for the exercise of good engineering judgment by the engineers nor as a substitute for determinations made by contractors/subcontractors of appropriate manner and methods of operations and aspects of work under their control. This QMP is also not intended to be all inclusive or replace a contractor’s or subcontractor’s corporate or site-specific quality management plan and is not intended to, nor shall it, supersede any federal, state, local and other applicable laws, codes, rules, regulations, and/or practices. All contractor’s and subcontractor’s site-specific quality management plans must meet or exceed the requirements of the Whiting-Turner project-specific Quality Management Plan, the contract documents (including any applicable Owner Quality Management Plans referenced therein), and all federal, state, local and other applicable laws, codes, rules, regulations, and/or practices.

This QMP and all information contained herein is confidential and intended for the sole use of contractors and subcontractors on Whiting-Turner projects. Contractors/subcontractors are prohibited from distributing this information to any third parties. The Whiting-Turner Contracting Company expressly disclaims warranties for the information contained in this QMP and makes no representations to such third parties regarding the reliability, suitability, correctness, or completeness of such information. Whiting-Turner assumes no responsibility or liability and shall not be responsible and/or liable for damages or losses of any kind, including but not limited to direct, indirect, incidental, exemplary, special or consequential damages or losses, arising from, attributable to and/or resulting from the use of such information by third parties however caused and on any theory of liability, whether in contract, strict liability or tort.

END OF SECTION 01 36 00

SECTION 01 50 00 – TEMPORARY FACILITIES AND CONTROLS

Refer to the specific scopes of work for clarification of responsibility of the items specified herein.

PART 1 – GENERAL INFORMATION

1.01 RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 0 and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

This Section specifies requirements for temporary services and facilities, including utilities, construction and support facilities, security and protection, and shall be subject to the Construction Manager's approval. **See Demolition Scope and General Scope for additional details.**

A. **Temporary utilities** required include, but are not limited to:

- Water service and distribution
- Temporary electric power and light
- Telephone service
- Storm and sanitary sewer

B. **Temporary construction and support facilities** required include, but are not limited to:

- Dewatering facilities and drains
- Temporary heating, ventilating, humidification, and air conditioning
- Field offices and storage facilities
- Temporary roads and paving/construction parking/mud/snow and ice clean-up
- Sanitary facilities, including drinking water
- Temporary enclosures
- Hoists and temporary elevator use
- Temporary project identification signs and bulletin boards
- Waste disposal service and progress cleaning
- Construction aids and protection

C. **Security and safety facilities** required include, but are not limited to:

- Temporary fire protection
- Barricades, warning signs, lights
- Enclosure fence and security maintenance
- Environmental protection
- Safety requirements

D. **Controls**

- Workday
- Lunch wagons
- Erosion control
- Excavation material
- Excavation training
- Material inventories
- Deliveries

1.03 **QUALITY ASSURANCE**

A. **Regulations:** Comply with industry standards and applicable laws and regulations of authorities having jurisdiction, including but not limited to:

- Municipal and Labor & Industry Building Code requirements
- Health and safety regulations
- Utility company regulations
- Police, Fire Department and Rescue Squad rules
- Environmental protection regulations

B. **Inspections:** Arrange for authorities, having jurisdiction, to inspect and test each temporary utility before use. Obtain required certifications and permits.

1.04 **PROJECT CONDITIONS**

A. **Conditions of Use:** Keep temporary services and facilities clean and neat in appearance. Operate in a safe and efficient manner. Take necessary fire prevention measures. Do not overload facilities, or permit them to interfere with progress. Do not allow hazardous, dangerous, or unsanitary conditions, or public nuisances to develop or persist on the site. They shall be removed, relocated as required by the progress of the work, or directed by the Construction Manager.

B. **Existing Utilities and Systems:**

1. Existing systems shall be maintained at all times unless approved (48 hrs. notice of shutdown) by Owner. Permanent heating, plumbing and electrical systems shall be activated and maintained during owner occupancy of existing facilities. Facilities shall be maintained at 70°F.
2. Trade Contractors interrupting services due to their construction operations shall provide temporary utility lines, as required, to maintain services.

**PART 2 - PRODUCTS**

2.01 **MATERIALS**

A. **General:** Provide new materials; if acceptable to the Construction Manager, undamaged, previously used materials in serviceable condition may be used. Provide materials suitable for the use intended.

- NOT FOR BID**
- B. **Lumber and Plywood:** Comply with requirements in Division-6 Section "Rough Carpentry."
  - C. **Tarpaulins:** Provide waterproof, fire-resistant, UL-labeled tarpaulins with flame-spread rating of or less. For temporary enclosures, provide translucent, nylon-reinforced, laminated polyethylene or polyvinyl chloride fire retardant tarpaulins.
  - D. **Water:** Provide potable water approved by local health authorities.
  - E. **Open-Mesh Fencing:** Provide 11-gauge, galvanized two inch, chain link fabric fencing, six (6) feet high with galvanized steel pipe posts, 1-1/2" I.D. for line posts and 2-1/2" I.D. for corner posts.

2.02 EQUIPMENT

- A. **General:** Provide new equipment; if acceptable to the Construction Manager, undamaged, previously used equipment in serviceable condition may be used. Provide equipment suitable for use intended.
- B. **Water Hoses:** Provide 3/4" heavy-duty, abrasion-resistant, flexible rubber hoses 100 ft. long, with pressure rating greater than the maximum pressure of the water distribution system; provide adjustable shut-off nozzles at hose discharge.
- C. **Electrical Outlets:** Provide properly configured NEMA polarized outlets to prevent insertion of volt plugs into higher voltage outlets. Provide receptacle outlets equipped with ground-fault circuit interrupters, reset button, and pilot light, for connection of power tools, equipment, and GFI breakers.
- D. **Electrical Power Cords:** Provide grounded extension cords; use "hard-service" cords where exposed to abrasion and traffic. Provide waterproof connectors to connect separate lengths of electric cords if single lengths will not reach areas where construction activities are in progress.
- E. **Electrical Welding Outlets:** These will not be provided. Each Trade Contractor will be responsible for his own welding power.
- F. **Lamps and Light Fixtures:** Provide general service incandescent lamps of wattage required for adequate illumination. Provide guard cages or tempered glass enclosures where exposed to breakage. Provide exterior fixtures where exposed to moisture.
- G. **Heating Units:** Provide temporary heating units that have been tested and labeled by UL, FM or another recognized trade association related to the type of fuel being consumed.
- H. **Temporary Offices:** Provide prefabricated or mobile units or similar job-built construction with lockable entrances, operable windows and serviceable finishes. Provide heated and air-conditioned units on foundations adequate for normal loading.
- I. **Temporary Toilet Units:** Provide self-contained, single-occupant toilet units of the chemical, aerated recirculation, or combustions type, properly vented and fully enclosed with a glass fiber, reinforced polyester shell or similar nonabsorbent material.

- J. **First Aid Supplies:** Comply with governing regulations.
- K. **Fire Extinguishers:** Provide hand-carried, portable UL-rated, class "A" fire extinguishers for temporary offices and similar spaces. In other locations, provide hand-carried, portable, UL-rated, class "ABC" dry chemical extinguishers, or a combination of extinguishers of NFPA recommended classes for the exposures.

Comply with NFPA 10 classification, extinguishing agent and size required by location and class of fire exposure.

### PART 3 - EXECUTION/SCOPE RESPONSIBILITIES

#### 3.01 INSTALLATION (BY APPLICABLE TRADE CONTRACTORS)

- A. Use qualified personnel for installation of temporary facilities. Location facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.
- B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed, or are replaced by authorized use of completed permanent facilities.

#### 3.02 TEMPORARY UTILITY INSTALLATION (BY APPLICABLE TRADE CONTRACTORS)

- A. **General:** Engage the appropriate local utility company to install temporary service or connect to existing service. Where the company provides only part of the service, provide the remainder with matching, compatible materials and equipment; comply with the company's recommendations.
1. Arrange with the company and existing users for a time when service can be interrupted, where necessary, to make connections for temporary services.
  2. Provide adequate capacity at each stage of construction. Prior to temporary utility availability, each Trade Contractor shall provide trucked-in services at their expense as required to complete their work.
  3. Obtain easements to bring temporary utilities to the site, where the Owner's easements cannot be used for that purpose.

#### **Use Charges:**

1. Cost or use charges for temporary facilities are to be paid by the Trade Contractor requiring or providing the temporary facility unless noted otherwise.
  2. Owner will pay utility consumption costs during construction for construction activities only.
- B. **Water Service:** The Plumbing Contractor shall install water service and distribution piping of sizes and pressures adequate for construction. Provide 3/4" hose bib termination at each story of construction work, located so that any area of building construction can be reached with a 100 ft. length of hose. Water service may be run from

a temporary or permanent source.

1. **Sterilization:** Sterilize temporary water piping prior to use.
2. Protect system from freezing.
3. Maintain 30 psig. water pressure with 5 gpm. flow rate.
4. Owner shall pay for cost of water consumed during construction. Trade Contractor shall take the necessary steps not to be wasteful.

C. **Temporary Electricity Power Service:**

1. After start of work at project site, when requested by the Construction Manager, the Electrical Contractor shall provide a temporary electrical power distribution system sufficient to accommodate temporary lighting and construction operations, including the use of power tools, and start-up of specified building equipment which must be tested, started or placed into use prior to completion of its permanent power connections. Provide 480 volts, 3 phase, 3 wires, 60 hertz and an equipment grounding conductor as well as 120 volts, 1 phase, 15 amperes, 60 hertz for lighting. Provide weatherproof, grounded wiring with overload protection; with direct wired connections, where feasible, and for voltages up to 220/208 volts. Locate multiple outlets for 120 volt power, not less than 4 gang, at each story of construction, spaced so that the entire area of construction can be reached by power tools on a single extension cord of 100' maximum length. Maximum 20 Amp circuit breaker, four (4) receptacles per circuit breaker.
2. The Owner will pay for cost of all electric energy used for construction activities.
3. The Electrical Trade Contractor shall provide and pay for maintenance, servicing, operation, and supervision of lines installed.
4. Provide service with ground fault circuit interrupter feature, as per NEC and OSHA requirements. The Electrical Trade Contractor shall have a cord inspection program in place. He shall maintain the inspection records on site.
5. As permanent power distribution system is accepted as substantially complete, either entire system or usable portions thereof, the Electrical Trade Contractor shall make suitable provisions for temporary use thereof, and remove unused portions of temporary system.
6. If required, provide meters for electrical power.
7. When temporary electrical lines are no longer required, they shall be removed by the Electrical Trade Contractor and any part, or parts, of the grounds or buildings disturbed or damaged shall be brought back to their original condition.
8. Electricity from existing lines may be used at no charge to the Trade Contractor. Each trade shall provide extension cords from the existing facilities, as required, for the execution of the Work. Electrical power for welding equipment will not be available.



9. The Electrical Trade Contractor shall maintain and operate permanent electrical supply and distribution system until time of final acceptance and transfer of operation to Owner's personnel.
10. The Electrical Trade Contractor shall install switching controls for all lighting which will enable turning off temporary lighting during off-construction hours.
11. Temporary power supplies to the Construction Manager's Office Conference/Office Complex shall be installed with service connection by the Electrical Trade Contractor.
12. The Electrical Trade Contractor will provide power for oil or gas fired temporary heaters, if required by the Construction Manager. It will be connected so that it can remain "live" when the lighting has been turned off.
13. The Electrical Trade Contractor will provide 24-hour temporary power to any heat tape (installed by others) on temporary water and/or fire lines. All temporary heat work will comply with existing OSHA requirements.
14. Construction circuits shall be separate and independent from temporary lighting.

D. **Temporary Lighting:** Whenever overhead floor of roof deck has been installed, the Electrical Trade Contractor shall provide temporary lighting with local switching.

The Electrical Trade Contractor shall provide sufficient temporary lighting to ensure proper workmanship everywhere; by combined use of daylight and general lighting as stated below:

1. Provide uniformly spaced general lighting utilizing one (1) 150 watt incandescent lamp equivalent to 1.0 watts/sq. ft. of floor areas (minimum one (1) lamp per room), and one (1) 100 watt lamp per 50' of corridor or per flight of stairs.
2. Limit lighting installations to intensities which will accommodate normal access and workmanship requirements, recognizing that each entity performing work requiring higher intensity lighting will provide supplementary plug in temporary lighting and localized areas where such work is in progress.
3. As permanent lighting system is substantially complete for each story or usable portion thereof, the Electrical Trade Contractor shall make suitable provisions for temporary use thereof and remove unused portions of temporary lighting system.
4. The Electrical Trade Contractor shall maintain and operate permanent lighting system until the time of final acceptance and transfer of operation to Owner's personnel, including turning off lighting during off-construction hours.
5. The Electrical Trade Contractor shall replace bulbs that are burned out or substantially dimmed by substantial hours of use.
6. Special lighting required for construction activities shall be provided by contractor requiring it.

7. The Electrical Trade Contractor shall provide safety lighting in the stairways, hallways, and exterior security lighting (as required) on a 24-hour basis.
8. The Electrical Trade Contractor will provide a termination box in the Trade Contractor's office trailer area for hook-up of the Trade Contractor's trailers. Cost for individual Trade Contractor trailer hook-up will be born by the Trade Contractor requiring this service. Use of electric heaters in those trailers and shanties will not be permitted.

E. **Temporary Telephones:**

1. Each Trade Contractor shall be responsible for and provide for his own temporary telephone service.

F. **Storm Sewers and Drainage:**

1. If storm sewers are available, the Sitework Trade Contractor shall provide temporary connections to remove effluent that can be discharged lawfully. If sewers are not available, or cannot be used, Sitework Trade Contractor shall provide drainage ditches, dry wells, stabilization ponds and similar facilities. If neither sewers nor drainage facilities can be lawfully used for discharge of effluent, Sitework Trade Contractor provide containers to remove and dispose of effluent off the site in a lawful manner.
2. Filter out excessive amounts of soil, construction debris, chemicals, oils and similar contaminants that might clog sewers or pollute waterways before discharge.
3. Comply with the soil erosion and sedimentation control plan and local authorities having jurisdiction.

3.03 **TEMPORARY CONSTRUCTION AND SUPPORT FACILITIES INSTALLATION  
(BY APPLICABLE TRADE CONTRACTORS)**

A. **General:**

1. Locate field offices, storage, sanitary facilities and other temporary construction and support facilities for easy access after approval from the Construction Manager.
2. Provide incombustible construction for offices, shops and sheds located within the construction area, or within 30 feet of building lines.

B. **Dewatering Facilities and Drains:**

1. For temporary drainage and dewatering facilities, and operations not directly associated with construction activities included under individual Sections, comply with dewatering requirements of applicable Division-2 Sections. Where feasible, utilize the same facilities.
2. The Sitework Trade Contractor shall be responsible to maintain the site, excavations and construction free of water. Review contract scopes for dewatering requirements

for each Trade Contractor.

3. Plumbing Trade Contractor shall provide temporary storm water drainage from the building and the Sitework Trade Contractor shall control roof drainage from building on site.
4. Sitework Trade Contractor shall be responsible to drain or pump water and remove debris from the site so as not to delay his continuous work or progress. This shall include operating pumps during second shift in order to facilitate next-day continuation of work.
5. Sitework Trade Contractor shall excavate in a manner that prevents all surface water from flowing into the building area. Sitework Trade Contractor shall be responsible to remove any runoff water or debris which enters the building area.
6. Sitework Trade Contractor shall continue to drain site and remove debris until designed grades are obtained.
7. Upon completion of building foundations, each Trade Contractor shall be responsible to remove water and debris required to complete his work.

C. **Temporary Heating, Ventilating & Air Conditioning:**

1. Temporary heating shall be provided and maintained by the Trade Contractor performing the work if the outside temperature falls below 40°F at anytime during the day or night for all exterior work or work performed prior to the building being generally enclosed by walls and roof.
2. Each Trade Contractor shall furnish temporary heat by acceptable means to provide sufficient heat to maintain a temperature of 55°F, 24 hours a day throughout the entire area of the work for which the Trade Contractor is responsible.

Except where use of the permanent system is authorized, provide vented, self-contained LP gas or fuel oil heaters with individual space thermostatic control. Use of gasoline-burning space heaters, open flame, or salamander type heating units is prohibited. Temporary heating may not be provided using electrical heating equipment if using electrical power supplied by the Owner.

3. As soon as the building, or portions thereof, is generally enclosed with walls and roof and temporary heat is required for scheduled work, or required to facilitate proper workmanship, and permanent heating system is not yet operable or authorized for use, the Mechanical Trade Contractor shall provide temporary heat or air conditioning service for every entity authorized to do work at the project site. The Mechanical Trade Contractor shall maintain temperatures as indicated by other Specification Sections for each type of work to be performed. The Construction Manager shall be the sole arbiter of when the building is considered generally enclosed.
4. The Carpentry Trades shall install, maintain, and remove temporary enclosure of windows, doors and roof openings until the permanent materials are in place when such enclosures will result in the building being generally enclosed.

5. After the conditions of construction require continuous 24 hour heat in the building, as determined by the Construction Manager, the Mechanical Trade Contractor shall provide, operate, and maintain temporary radiation or unit heaters to provide required temperatures (minimum 55°F) for the conduct of the work. This service shall be continued until the permanent heating system has been completely installed and is in operation and the buildings of the project completed. The Mechanical Trade Contractor shall furnish and pay for all fuel as required for providing temporary heat and air conditioning after the building is generally enclosed. The Owner shall pay for all fuel costs incurred to operate the permanent HVAC systems for temporary purposes. As permanent heating/cooling system is substantially complete and operational for each story or usable portion thereof, the Mechanical Trade Contractor shall make suitable provisions for use thereof in temporary heating and cooling. The Mechanical Trade Contractor shall maintain and operate permanent system for temporary heating/cooling purposes, including service to occupied areas, if any, until time of final acceptance or transfer of operation to Owner's personnel, for major parts of system if not for entire heating system.
6. All permanent heating and air conditioning equipment used to supply temporary heat and air conditioning shall be completely cleaned and reconditioned by the Mechanical Trade Contractor prior to final acceptance. NOTE: All permanent equipment shall receive required scheduled maintenance while use for temporary service. Radiator traps and valves used in the heating system during the period of its operation to supply temporary heat shall not be reinstalled in the permanent system. Install new disposable filters and clean non-disposable filters prior to final acceptance. Replace significantly worn parts and parts that have been subject to unusual operating conditions.
7. The Mechanical Trade Contractor shall remove all soot, smudges, and other deposits from walls, ceilings, and all exposed surfaces which are the result of the use of any temporary heating equipment including the use of the permanent heating system for temporary heat purposes. Finish work shall not be done until all such surfaces are properly cleaned.
8. **Temporary Ventilation:** A Trade Contractor requiring ventilation for work shall provide fans or other necessary equipment to condition air, provided prior approval has been obtained from the Construction Manager.
9. **Humidification:** Where control of ambient humidity is required for proper performance of the work, or for curing/drying of installed work, or for protection of installed work from deterioration due to variations in ambient conditions, each Trade Contractor shall provide his own temporary humidification or dehumidification equipment to maintain the required conditions. Coordinate the use of the equipment with temporary heating to produce the required conditions with a minimum overall use of energy.

Permanent electrical power needed to operate permanent heating system must be provided by the Electrical Trade Contractor in conjunction with building enclosure, or the Electrical Trade Contractor shall furnish adequate temporary power to operate permanent heating system and bear all cost associated to provide that power.

D. **Field Offices:**

1. Trade Contractors shall provide offices for their own personnel. All type and location of jobsite offices and equipment will be approved by the Construction Manager. Trade Contractor's offices shall be a maximum of 40' in length.
2. **Storage and Fabrication Sheds:** Each Trade Contractor shall provide storage and fabrication sheds, sized, furnished and equipped to accommodate materials and equipment involved, including temporary utility service. Sheds may be open shelters or fully enclosed spaces. All steps and platforms connected to shelters must be per OSHA regulations.
3. All offices and sheds must have the Trade Contractor's identification on them.

E. **Temporary Roads and Paving, Construction Parking:**

1. Sitework Trade Contractor shall construct and maintain temporary roads, to adequately support the indicated loading and to withstand exposure to traffic during the construction period. Locate temporary paving for roads, storage areas and parking where the same permanent facilities will be located.
2. Snow removal will be performed by the Sitework Contractor for access roads and storage areas. Each Trade Contractor shall provide any additional snow removal required to maintain the schedule.

F. **Sanitary Facilities:**

1. The Construction Manager shall provide temporary toilets. Comply with regulations and health codes for the type, number, location, operation and maintenance of fixtures and facilities. Install where facilities will best serve the Project's needs.

Provide toilet tissue for each facility.

2. **Toilets:** Install self-contained toilet units. Shield toilets to ensure privacy. Use of pit type privies will not be permitted. Provide means of locking facilities when construction is not in progress.

Provide separate facilities or male and female personnel when both sexes are working in any capacity on project site.

Provide one unit for use of Owner representative's office/conference meeting complex.

3. **Drinking Water Facilities:** Each Trade Contractor shall provide containerized tap-dispenser bottled-water type drinking water units, including paper supply. Where power is accessible, provide electric water coolers to maintain dispensed water temperature at 45° to 55°F (7° to 13°C).

G. **Temporary Enclosures:**

1. All temporary enclosures required for protection of **exterior** construction in progress and completed from exposure, bad weather, other construction operations, and similar activities and to maintain the progress schedule, shall be provided by each contractor as necessary to protect their work.
2. Prior to the building being enclosed, all temporary enclosures required for protection of **interior** construction in progress and completed from exposure, bad weather, other construction operations, and similar activities and to maintain the progress schedule, shall be provided by each contractor as necessary to protect their work.
3. Where heat is needed and the permanent building enclosure is not complete (windows, doors, and roof openings not complete), the Carpentry Contractor shall provide temporary enclosures where there is no other provision for containment of heat. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions and effects.
4. Install tarpaulins securely with noncombustible wood framing and other materials. Close openings of 25 sq. ft. or less with plywood or similar materials.
5. Each Trade Contractor is required to construct, maintain, and remove dust partitions required to prevent dust from entering adjacent areas.

H. **Temporary Lifts and Hoists:**

1. Each Trade Contractor shall be responsible for their own hoisting.
2. Existing Elevators:
  - A. N/A
3. New Elevators:
  - A. N/A

I. **Project Identification and Temporary Signs**

1. The Construction Manager shall prepare project identification and other signs, as approved by the Owner of the size indicated; install signs where indicated to inform the public and persons seeking entrance to the Project. Support on posts or framing of preservative treated wood or steel.
2. Provide one (1) sign erected on the site where directed, to identify the project. Sign shall include Project name, Owner's name, Architect's name, and Construction Manager's name. Size shall be 4' x 8', color and lettering style shall be as designed by the Architect.
3. Engage an experienced sign painter to apply graphics.
4. **Temporary Signs:** The Construction Manager shall prepare signs to provide directional information to construction personnel and visitors as required by the Construction Manager.



5. The Construction Manager shall erect weathertight bulletin boards adjacent to the office/conference complex. Size of the boards shall be equivalent to 32 sq. ft., visible area.

J. **Waste Disposal Services:**

1. The Construction Manager will provide trash collection containers for construction debris, exclusive of masonry, rock, earth, etc., and pay for all debris disposal costs for them. Each Trade Contractor on the project will be required to clean up, and deposit in the dumpster, all debris generated by his trade contract work on a daily basis. This requirement shall be enforced by the Construction Manager and will result in cost assessment against a Trade Contractor who fails to perform daily clean-up. Each Trade Contractor will be responsible for flattening or crushing all trash as necessary when placed into the dumpster. Hazardous material shall not be placed in the collection container.

K. **Construction Aids, Protection and Facilities**

1. The Carpentry Trades Contractor shall provide temporary ladders, ramps, and walkways required to access upper levels until permanent systems are installed. They shall be installed and maintained throughout the duration of the project and comply with all OSHA requirements. Removal of these shall be by the Carpentry Contractor when requested by the Construction Manager.
2. The Concrete Contractor shall be responsible for providing safety railings around basement area prior to completion of metal deck and slab. Concrete Contractor shall also provide railing around floor opening for floor hatch into basement once concrete has been poured.
3. Each Trade Contractor will be responsible for protecting any floor openings that have been opened for work under his trade.
4. Each Trade Contractor, upon working in any of the area named in the above paragraph, shall remove the safety covering and handrail to perform his work. Upon completion of his work for the day, lunch, or breaks, or any time when the individual Trade Contractor is not working in that opening, the safety covering and handrail must be replaced by the Trade Contractor removing it. At the end of each day, each Trade Contractor will inspect the site and install all safety coverings and handrails. IF coverings and handrails are not being reinstalled by Trade Contractors responsible for replacement, then Construction Manager will replace at Trade Contractor's expense. At the end of the project, or in order to install permanent construction, the Construction Manager shall remove all coverings and handrails.
5. The Carpentry Trades Contractor shall provide safe, temporary stairs, constructed of secure, dimensional lumber, with all railings and closures according to OSHA regulations, until permanent stairs are installed. Temporary stairs must be provided at the point when above grade floors are framed and decked, and require access by trades, in addition to the steel erection crews.
6. The Trade Contractors requiring access to above grade work are responsible for

providing ladders, scaffolding and appropriate methods to access their work. Trade Contractors desiring use of in place above grade work platforms must arrange directly with the party that owns the equipment and make all rental and insurance arrangements directly with that party.

7. All work platforms, scaffolding, etc., on the project shall be available for access by the Owner, Architect, Municipal Authority, Test Agency and/or Construction Manager, and these parties shall be insured and held harmless when using these facilities by the Owner of the facility.
8. Each Trade Contractor shall be responsible for maintaining safe walkway and stair traffic areas, using anti-skid methods, routine sweeping, snow, mud and/or ice removal, and any other reasonable method for safe usage.

3.04 SECURITY AND SAFETY FACILITIES INSTALLATION

A. Temporary Fire Safety

1. Shall be maintained in place until permanent fire protection system is available for use. The Fire Protection Trade Contractor shall provide the permanent sprinkler fire protection system for use at the earliest possible date after building enclosure and 55°F temperatures are maintained to protect the building.
2. Until fire protection needs are supplied by permanent facilities, the Construction Manager shall install and maintain temporary fire protection facilities of the types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 10 “Standard for Portable Fire Extinguishers.”
3. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher on each floor at or near each usable stairwell.
4. Store combustible materials in containers in fire-safe locations.
5. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities, stairways and other access routes for fighting fires. Prohibit smoking in hazardous fire exposure areas. Prohibit smoking within the enclosure building.
6. Provide supervision of welding operations, combustion type temporary heating units, and similar sources of fire ignition.

B. Barricades, Warning Signs and Lights: (Protection of Trade Contractors Work)

1. The responsible Trade Contractor shall comply with standards and code requirements for erection of structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and the public of the hazard being protected against.

C. Building Security Enclosure and Lockup:

1. Each Trade Contractor shall be responsible for assisting the Construction Manager in maintaining a secure building at all times.
2. Each Trade Contractor is responsible for the secure storage of their own material and equipment on and off the site.

D. **Environmental Protection:**

1. To the fullest extent permitted by law, the Trade Contractor shall indemnify and hold harmless the Owner and Construction Manager, their employees and agents, from claims, losses, damage, and expenses including, but not limited to, attorney's fees arising out of performance of the work at it relates to any type of pollution related situations. This would apply to bodily injury, sickness, disease, or death, or to damages or destruction or contamination of tangible property arising out of the acts or omission of the Trade Contractor or the joint negligent acts of the Owner or Construction Manager, or anyone for whose acts the Trade Contractor may be liable.
2. The Construction Manager will designate area available for construction storage.
3. Each Trade Contractor shall provide protection, operate temporary facilities, and conduct construction in ways and methods that comply with all environmental regulations, and minimize the possibility that air, water, and soil become contaminated or polluted as a result of work or storage so supplies and materials, or equipment usage.
4. Each Trade Contractor will designate and train a responsible employee in environmental contamination procedures, including, but not limited to, emergency responses, material and waste inventories, spills and leak precautions and responses, inspections, housekeeping, security, and external factors.
5. Open burning will not be permitted.

E. **Safety Requirements**

1. All work shall be performed in accordance with rules, regulations, procedures and safe practice and/or OSHA and all other Government agencies having jurisdiction over the project.
2. Safety precautions and programs:
  - a. Each contractor shall be responsible for initiating, maintaining and supervising safety precautions and programs in connection with the work. The name of the safety officer for each contractor shall be provided by the Construction Manager.
  - b. All Trade Contractors shall comply with the provisions of the "Specific Safety Requirements of the Construction Safety Act," the "Occupational Safety and Health Act," and Federal, State and local requirements.
  - c. If a contractor fails to maintain the safety precautions required by law or directed by the Construction Manager, the Construction Manager may take such action as necessary and charge the Trade Contractor for all incurred costs.

- NOT FOR BID**
- d. The failure of the Construction Manager to take any such action shall not relieve the Trade Contractor of his obligations.
  - e. The Trade Contractor individually shall be responsible for the safety, efficiency, and adequacy of his plant, appliances, and methods, and for any damage which may result from their failure or their improper construction, maintenance or operation.
  - f. Prior to mobilizing to the job, the Trade Contractor shall submit to the Construction Manager, in writing, a description of his safety program for review and comment. During the conduct of the work, the Trade Contractor shall immediately notify the Construction Manager, in writing, of all accidents and shall submit a written report describing in detail the circumstances of each accident within 24 hours of its occurrence.
  - g. All Trade Contractors shall notify the Construction Manager of any flammable, combustible and/or toxic materials intended for use on the project and shall furnish the Construction Manager with literature pertinent to the use and control of all materials, including, but limited to, MSDS sheets.
  - h. Each Trade Contractor shall delegate one representative who shall be responsible to maintain all safety requirements of the Trade Contractor, and shall attend all project safety meetings scheduled by the Construction Manager.
  - i. Each Trade Contractor shall conduct weekly safety discussions which shall be attended by all employees assigned to this project. A written safety given to the Construction Manager on a weekly basis.
3. Safety of persons and property:
- a. The Trade Contractor shall take all reasonable precautions for the safety or, and shall provide all reasonable protection to prevent damage of loss to:
    - 1. All employees on the work site and all other persons may be affected thereby.
    - 2. All the work and all materials and equipment to be incorporated therein, whether in storage on or off the site, under the care, custody, or control of the Trade Contractor or any of his Subcontractors or Sub-Contractors.
    - 3. Other property at the site or adjacent thereto, including, but not limited to, trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction and underground property.
  - b. The Trade Contractor shall give all notices and comply with all applicable laws, ordinances, rules, regulations and lawful orders of any public authority, including the Owner's department of protective services, bearing on the safety of persons or property or their protection from damage, injury or loss.

- NOT FOR BID
- c. The Trade Contractor shall erect and maintain, as required by existing conditions and progress of the work, all reasonable safeguards for safety and protection, from his work, including danger signs and other warnings against hazards. He shall comply with safety regulations and notify the Construction Manager of possible effects on adjacent facilities. If the Trade Contractor fails to so comply, he shall, at the direction of the Construction Manager, remove forces from the project without cost or loss to the Owner or Construction Manager, until he is in compliance.
  - d. The Trade Contractor shall promptly remedy all damage or loss to any property caused in whole or in part by the Trade Contractor, his subcontractors, his Sub-subcontractors, or anyone directly employed by any of them, or by anyone for whose acts any of them be liable.
  - e. The Trade Contractor shall not load or permit any part of the work to be loaded so as to endanger its integrity and safety.
  - f. The use of audio equipment and headsets will not be permitted on the construction site.

4. Emergencies:

- a. In any emergency affecting the safety of persons or property, the Trade Contractor shall act, at his discretion, to prevent threatened damage, injury or loss and shall immediately notify the Construction Manager of such emergency conditions. Any claims made by the Trade Contractor for additional compensation or extension of time on account of emergency work shall be processed in accordance with the Contract Documents.

5. Indemnification:

- a. The Trade Contractor shall indemnify and hold harmless the Owner, the Construction Manager, the Architect/Engineer, all municipal authorities, and their agents and employees, from and against all claims, damages, losses, and expenses including, but limited to, attorney's fees arising out of or resulting from the performance of the work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury, sickness, disease or death, or to injury to or destruction of tangible property (other work than the work itself) including the loss of use resulting therefrom, and (2) is caused in whole or in part by any negligent act or omission of the Trade Contractor, any Subcontractor, anyone directly or indirectly employed by any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder.
- b. In any and all claim against the Owner, the Construction Manager, the Architect/Engineer, or any of their agents or employees, by any employee of the Trade Contractor, and Sub-Contractor, anyone directly or indirectly employed by any of them may be liable, the indemnification obligation under this paragraph 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 type of damages, compensation or any Subcontractor under Worker's Compensation

Acts, disability benefit acts or other employee benefit acts.

- c. The obligations of the Trade Contractor under this paragraph shall not extend to the liability of the Architect/Engineer or the Construction Manager, his agents or employees arising out of (1) the preparation of approval of maps, drawings, opinions, reports, surveys, design or specifications, or (2) the giving of or failure to give directions or instructions by the Architect/Engineer or the Construction Manager, their agents or employees provided such giving or failure to give is the primary cause of the injury or damage.
- d. No provision of this Subparagraph shall give rise to any duties on the part of the Architect or the Construction Manager not otherwise provided for by contract or by law.
- e. In the event that any party is requested but refuses to honor the indemnity obligations hereunder, then the party refusing to honor such requests shall, in addition to all other obligations, pay the cost of bringing any such action, including attorney's fees to the party requesting indemnity.

### 3.05 CONTROLS

#### A. Workday:

1. **Normal work hours shall be from 8:00 a.m. to 4:30 p.m., Monday to Friday, and 9:00 a.m. to 5:30 pm on Saturday, when applicable.** The progress schedule may require contractors to perform work other than the normal workday and in addition to the normal workday, to meet milestones in the progress schedule for the project, or to make up time previously lost to regain the progress schedule requirements or to prevent interruption of the Owner's ongoing operation.
2. Working times other than the normal workday or in addition to the normal work day, must be arranged in advance with the Construction Manager.
3. Trade Contractors who require additional workday hours to regain work time previously lost to meet the requirements of the project schedule shall be assessed for all costs including Construction Manager supervision and other Trade Contractor cost necessary for the performance of their work.

#### B. Lunch Wagons:

1. Lunch wagons, catered events of other non-construction related functions shall not be permitted on the project site, except by the written permission of the Owner and Construction Manager.
2. No alcoholic beverages or controlled substances shall be allowed on the project at any time.

#### C. Erosion Control:

1. The Sitework Trade Contractor shall employ all methods required to comply with Local, State, and Federal requirements to control erosion from the project site,



including drainage control ditches, sediment basins, straw bale dykes and silt fencing.

D. **Excavation Training:**

1. Any Trade Contractor performing excavation shall have an OSHA trained person on site during all excavation operations. This person shall evaluate soil types and conditions to determine the required shoring and excavation methods.

E. **Material Inventories:**

1. Contractors shall coordinate the delivery and storage on the jobsite of all significant materials
2. Each Trade Contractor shall be responsible for the proper location, secure, and weather resistant storage as required of all materials. This includes placement of materials not to obstruct passage on site or within building structures or in any way which causes impediment or obstruction to other Trade Contractors.
3. All material inventories must be stored by the Trade Contractor to avoid excessive loads on building structure.
4. When directed by the Construction Manager, a Trade Contractor shall remove or relocate material inventories as required for the progress of the project.

F. **Deliveries:**

1. All contractors are required to properly instruct material suppliers and vendors to address deliveries to them specifically by named responsible party at the jobsite and require advance notice.
2. All deliveries addressed to the project in general, the Owner, Architect or Construction Manager, will be refused and returned to shipper.
3. The Owner will not be responsible for receipt, handling, or loss of any materials which are shipped to the Owner in error and received unknowing of relationship to the project.
4. Contractor receiving materials at the jobsite shall be responsible for prevention of any mud or other deposits on public roadways or other areas outside project limit lines, which may result due to methods of material delivery. Trade Contractor shall instruct delivery conveyor to take appropriate measures to prevent depositing mud or other construction deposits outside contract limit lines. Total responsibility of cleanup of mud or other construction deposit outside of contract limit lines will be the responsibility of the Trade Contractor receiving the delivery.

3.06 OPERATION, TERMINATION AND REMOVAL

- A. **Supervision:** Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended use to minimize waste and abuse.

- B. Maintenance:** Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements.
1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation and similar facilities on a 24-hour day basis where required to achieve indicated results and to avoid possibility of damage.
  2. **Protection:** Prevent water filled piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.
- C. Termination and Removal:** Unless the Construction Manager requests that it be maintained longer, remove each temporary facility when the need has ended, or when replaced by authorized use of a permanent facility, or not later than Substantial Completion. Complete or, if necessary restore, permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
1. Materials and facilities that constitute temporary facilities that constitute temporary facilities are property of the Trade Contractor. The Owner reserves the right to take possession of Project identification signs.
  2. The Sitework Trade Contractor shall remove temporary paving that is not intended for or acceptable for integration into permanent paving. Where the area is intended for landscape development, remove soil and aggregate fill that does not comply with requirements for fill or subsoil in the area. Remove materials contaminated with road oil, asphalt, and other petrochemical compounds, and other substance which might impair growth of plant materials or lawns. Repair or replace street paving, curbs and sidewalks at the temporary entrances, as required by the governing authority.

END OF SECTION 01 50 00

## SECTION 01 74 19

### CONSTRUCTION WASTE MANAGEMENT

#### PART 1 – GENERAL

##### 1.1 SUMMARY

- A. Section includes: Administrative and procedural requirements for construction waste management activities.

##### 1.2 DEFINITIONS

- A. Construction, Demolition, and Land clearing (CDL) Waste: Includes all non-hazardous solid wastes resulting from construction, remodeling, alterations, repair, demolition and land clearing. Includes material that is recycled, reused, salvaged or disposed as garbage.
- B. Salvage: Recovery of materials for on-site reuse, sale or donation to a third party.
- C. Reuse: Making use of a material without altering its form. Materials can be reused on-site or reused on other projects off-site. Examples include, but are not limited to the following: Crushing or grinding of concrete for use as sub-base material. Chipping of land clearing debris for use as mulch.
- D. Recycling: The process of sorting, cleaning, treating, and reconstituting materials for the purpose of using the material in the manufacture of a new product.
- E. Source-Separated CDL Recycling: The process of separating recyclable materials in separate containers as they are generated on the job-site. The separated materials are hauled directly to a recycling facility or transfer station.
- F. Co-mingled CDL Recycling: The process of collecting mixed recyclable materials in one container on-site. The container is taken to a material recovery facility where materials are separated for recycling.
- G. Approved Recycling Facility: Any of the following:
  - 1. A facility that can legally accept CDL waste materials for the purpose of processing the materials into an altered form for the manufacture of a new product.
  - 2. Material Recovery Facility: A general term used to describe a waste-sorting facility. Mechanical, hand-separation, or a combination of both procedures, are used to recover recyclable materials.
- H. Universal waste components (UWC) are as follows: electric motors, PCB ballasts, non PCB ballasts, capacitors, contactors, circuit breakers, elemental and liquid mercury containing articles, transformers, lead acid batteries, fluorescent light bulbs, and all HID light bulbs.

##### 1.3 SUBMITTALS

- A. Contractor shall develop a Waste Management Plan: Submit 3 copies of plan within 14 days of date established for the **Notice to Proceed**.

- B. Contractor shall provide Waste Management Report: Concurrent with each Application for Payment, submit **3** copies of report.

1.4 PERFORMANCE REQUIREMENTS

- A. General: Divert a minimum of **75%** CDL waste, by weight, from the landfill by one, or a combination of the following activities:
1. Salvage
  2. Reuse
  3. Source-Separated CDL Recycling
  4. Co-mingled CDL Recycling
- B. CDL waste materials that can be salvaged, reused or recycled include, but are not limited to, the following:
1. Acoustical ceiling tiles
  2. Asphalt
  3. Asphalt shingles
  4. Cardboard packaging
  5. Carpet and carpet pad
  6. Concrete
  7. Drywall
  8. Fluorescent lights and ballasts
  9. Land clearing debris (vegetation, stumpage, dirt)
  10. Metals
  11. Paint (through hazardous waste outlets)
  12. Wood
  13. Plastic film (sheeting, shrink wrap, packaging)
  14. Window glass
  15. Wood
  16. Field office waste, including office paper, aluminum cans, glass, plastic, and office cardboard.

1.5 QUALITY ASSURANCE

- A. Waste Management Coordinator Qualifications: Experienced firm, with a record of successful waste management coordination of projects with similar requirements, that employs a LEED Accredited Professional, certified by the USGBC as waste management coordinator.
- B. Refrigerant Recovery Technician Qualifications: Certified by EPA-approved certification program.
- C. Regulatory Requirements: Conduct construction waste management activities in accordance with hauling and disposal regulations of all authorities having jurisdiction and all other applicable laws and ordinances.
- D. Preconstruction Conference: Schedule and conduct meeting at Project site prior to construction activities.
1. Attendees: Inform the following individuals, whose presence is required, of date and time of meeting.
    - a. Owner

- b. Architect
- c. Contractor's superintendent
- d. Major subcontractors
- e. Waste Management Coordinator
- f. Other concerned parties.

2. Agenda Items: Review methods and procedures related to waste management including, but not limited to, the following:
  - a. Review and discuss waste management plan including responsibilities of Waste Management Coordinator.
  - b. Review requirements for documenting quantities of each type of waste and its disposition.
  - c. Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
  - d. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
  - e. Review waste management requirements for each trade.
3. Minutes: Record discussion. Distribute meeting minutes to all participants.  
Note: If there is a Project Architect, they will perform this role.

1.6 WASTE MANAGEMENT PLAN – Contactor shall develop and document the following:

- A. Develop a plan to meet the requirements listed in this section at a minimum. Plan shall consist of waste identification, waste reduction plan and cost/revenue analysis. Distinguish between demolition and construction waste. Indicate quantities by weight throughout the plan.
- B. Indicate anticipated types and quantities of demolition, site-cleaning and construction waste generated by the project. List all assumptions made for the quantities estimates.
- C. List each type of waste and whether it will be salvaged, recycled, or disposed of in an landfill. The plan should included the following information:
  1. Types and estimated quantities, by weight, of CDL waste expected to be generated during demolition and construction.
  2. Proposed methods for CDL waste salvage, reuse, recycling and disposal during demolition including, but not limited to, one or more of the following:
    - a. Contracting with a deconstruction specialist to salvage materials generated,
    - b. Selective salvage as part of demolition contractor's work,
    - c. Reuse of materials on-site or sale or donation to a third party.
  3. Proposed methods for salvage, reuse, recycling and disposal during construction including, but not limited to, one or more of the following:
    - a. Requiring subcontractors to take their CDL waste to a recycling facility;
    - b. Contracting with a recycling hauler to haul recyclable CDL waste to an approved recycling or material recovery facility;
    - c. Processing and reusing materials on-site;
    - d. Self-hauling to a recycling or material recovery facility.
  4. Name of recycling or material recovery facility receiving the CDL wastes.

**NOT FOR BID**

5. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location on project site where materials separation will be located.
- D. Cost/Revenue Analysis: Indicate total cost of waste disposal as if there was no waste management plan and net additional cost or net savings resulting from implementing waste management plan. Include the following:
  1. Total quantity of waste.
  2. Estimated cost of disposal (cost per unit). Include hauling and tipping fees and cost of collection containers for each type of waste.
  3. Total cost of disposal (with no waste management).
  4. Revenue from salvaged materials.
  5. Revenue from recycled materials.
  6. Savings in hauling and tipping fees by donating materials.
  7. Savings in hauling and tipping fees that are avoided.
  8. Handling and transportation costs. Including cost of collection containers for each type of waste.
  9. Net additional cost or net savings from waste management plan.

PART 2 - PRODUCTS (Not Used)

PART 3 – EXECUTION

3.1 CONSTRUCTION WASTE MANAGEMENT, GENERAL

- A. Provide containers for CDL waste that is to be recycled clearly labeled as such with a list of acceptable and unacceptable materials. The list of acceptable materials must be the same as the materials recycled at the receiving material recovery facility or recycling processor.
- B. The collection containers for recyclable CDL waste must contain no more than 10% non-recyclable material, by volume.
- C. Provide containers for CDL waste that is disposed in a landfill clearly labeled as such.
- D. Use detailed material estimates to reduce risk of unplanned and potentially wasteful cuts.
- E. To the greatest extent possible, include in material purchasing agreements a waste reduction provision requesting that materials and equipment be delivered in packaging made of recyclable material, that they reduce the amount of packaging, that packaging be taken back for reuse or recycling, and to take back all unused product. Insure that subcontractors require the same provisions in their purchase agreements.
- F. Conduct regular visual inspections of dumpsters and recycling bins to remove contaminants.

3.2 SOURCE SEPARATION

- A. General: Contractor shall separate recyclable materials from CDL waste to the maximum extent possible.

Separate recyclable materials by type.

**NOT FOR BID**



- NOT FOR BID**
1. Provide containers, clearly labeled, by type of separated materials or provide other storage method for managing recyclable materials until they are removed from Project site.
  2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water and to minimize pest attraction. Cover to prevent windblown dust.
  3. Stockpile materials away from demolition area. Do not store within drip line of remaining trees.
  4. Store components off the ground and protect from weather.

**3.3 CO-MINGLED RECYCLING**

- A. General: Do not put CDL waste that will be disposed in a landfill into a co-mingled CDL waste recycling container.

**3.4 REMOVAL OF CONSTRUCTION WASTE MATERIALS**

- A. Remove CDL waste materials from project site on a regular basis. Do not allow CDL waste to accumulate on-site.
- B. Transport CDL waste materials off Owner's property and legally dispose of them.
- C. Burning of CDL waste is not permitted.

**3.5 UNIVERSAL WASTE DIVERSION**

- A. Remove all universal waste from fixtures, panels, and related devices for proper diversion and reclamation.
- B. Store all universal waste in containers provided by contact person within facilities operations.
- C. Store all universal waste in a secured location and request periodic removal from assigned contact person.
- D. Exemption: electric motors, circuit breakers, transformers and lighting contactors are exempt from this provision provided the contractor chooses to salvage or reuse the components.
- E. No identified universal waste will be discarded into the waste stream.

**END OF SECTION**

**NOT FOR BID**

**WASTE MANAGEMENT PROGRESS REPORT**

MATERIAL CATEGORY	DISPOSED IN MUNICIPAL SOLID WASTE LANDFILL	DIVERTED FROM LANDFILL BY RECYCLING, SALVAGE OR REUSE		
		Recycled	Salvaged	Reused
1. Acoustical Ceiling Tiles				
2. Asphalt				
3. Asphalt Shingles				
4. Cardboard Packaging				
5. Carpet and Carpet Pad				
6. Concrete				
7. Drywall				
8. Fluorescent Lights and Ballasts				
9. Land Clearing Debris (vegetation, stumpage, dirt)				
10. Metals				
11. Paint (through hazardous waste outlets)				
12. Wood				
13. Plastic Film (sheeting, shrink wrap, packaging)				
14. Window Glass				
15. Field Office Waste (office paper, aluminum cans, glass, plastic, and coffee cardboard)				
16. Other (insert description)				
17. Other (insert description)				
Total (In Weight)		(TOTAL OF ALL ABOVE VALUES – IN WEIGHT)		
		Percentage of Waste Diverted	(TOTAL WASTE DIVIDED BY TOTAL DIVERTED)	

**NOT FOR BID**

**NOT FOR BID**

**NOT FOR BID**

SECTION 01 77 00 – CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
  - 1. Inspection procedures.
  - 2. Warranties.
  - 3. Final cleaning.
- B. See Volume I "Payment Procedures" for requirements for Applications for Payment for Substantial and Final Completion.
- C. See Division 1 Section "Project Record Documents" for submitting Record Drawings, Record Specifications, and Record Product Data.
- D. See Division 1 Section "Operation and Maintenance Data" for operation and maintenance manual requirements.
- E. See Division 1 Section "Demonstration and Training" for requirements for instructing Owner's personnel.
- F. See Divisions 2 through 16 Sections for specific closeout and special cleaning requirements for the Work in those Sections.

1.2 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
  - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
  - 2. Advise Owner of pending insurance changeover requirements.
  - 3. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
  - 4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
  - 5. Prepare and submit Project Record Documents, operation and maintenance manuals, Final Completion construction photographs, damage or settlement surveys, property surveys, and similar final record information.
  - 6. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.
  - 7. Make final changeover of permanent locks. Advise Owner's personnel of changeover in security provisions.
  - 8. Complete startup testing of systems.
  - 9. Submit test/adjust/balance records.

10. Terminate and remove temporary facilities from Project site, along with mockups, construction tools, and similar elements.
11. Advise Owner of changeover in heat and other utilities.
12. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
13. Complete final cleaning requirements, including touchup painting.
14. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

- B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Construction Manager and Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
  2. Results of completed inspection will form the basis of requirements for Final Completion.

### 1.3 FINAL COMPLETION

- A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
1. Submit a final Application for Payment according to Division 1 Section "Payment Procedures."
  2. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
  3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
  4. Submit pest-control final inspection report and warranty.
  5. Instruct Owner's personnel in operation, adjustment, and maintenance of products, equipment, and systems.
- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
1. Re-inspection: Request re-inspection when the Work identified in previous inspections as incomplete is completed or corrected.

### 1.4 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Preparation: Submit three copies of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction. Use CSI Form 14.1A or approved comparable form.

1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor.
2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.

#### 1.5 WARRANTIES

- A. Submittal Time: Submit written warranties on request of Architect for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
- B. Organize warranty documents into an orderly sequence based on the table of contents of the Project Manual.
  1. Bind warranties and bonds in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch paper.
  2. Provide heavy paper dividers with plastic-covered tabs for each separate warranty. Mark tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product and the name, address, and telephone number of Installer.
  3. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project name, and name of Contractor.
- C. Provide additional copies of each warranty to include in operation and maintenance manuals.

### PART 2 - PRODUCTS

#### 2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

### PART 3 - EXECUTION

#### 3.1 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
  1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:



- NOT FOR BID**
- a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
  - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
  - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
  - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
  - e. Remove snow and ice to provide safe access to building.
  - f. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
  - g. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.
  - h. Sweep concrete floors broom clean in unoccupied spaces.
  - i. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.
  - j. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials. Polish mirrors and glass, taking care not to scratch surfaces.
  - k. Remove labels that are not permanent.
  - l. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
    - 1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
  - m. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
  - n. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
  - o. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
  - p. Clean light fixtures, lamps, globes, and reflectors to function with full efficiency. Replace burned-out bulbs, and those noticeably dimmed by hours of use, and defective and noisy starters in fluorescent and mercury vapor fixtures to comply with requirements for new fixtures.
  - q. Leave Project clean and ready for occupancy.
- C. Pest Control: Engage an experienced, licensed exterminator to make a final inspection and rid Project of rodents, insects, and other pests. Prepare a report.
- D. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 01 77 00

SECTION 01 77 50 – CLOSEOUT REQUIREMENTS

1. The following documents are included in this section:
  - A. Trade Contractors Partial Release of Lien (to be submitted with each invoice)
  - B. Partial Release of Lien – 2<sup>nd</sup> tier subcontractors and suppliers (to be submitted by every subcontractor and supplier when the contract is 50% billed)
  - C. Trade Contractors Final Release of Lien (to be submitted with final invoice)
  - D. Final Release of Lien – 2<sup>nd</sup> tier subcontractors and suppliers (to be submitted by every subcontractor and supplier prior to or with final invoice)
  - E. Affidavit Taxes have been paid. (to be submitted prior to or with final invoice)
  - F. Guarantee and Warranty (to be submitted prior to or with final invoice)
  - G. AIA Document G706, Contractors Affidavit of Payment of Debts and Claims (to be submitted prior to or with final invoice)
  - H. AIA Document G706A, Contractors Affidavit of Release of Liens (to be submitted prior to or with final invoice)
  - I. AIA Document G707, Consent of Surety to Final Payment (to be submitted prior to or with final invoice) THIS FORM IS PROVIDED BY YOUR BONDING Co.

END OF SECTION 01 77 50  
(ATTACHMENTS FOLLOW)

**TRADE CONTRACTOR'S PARTIAL RELEASE,  
WAIVER OF LIEN AND AFFIDAVIT**

**NOT FOR BID**

**TO:** Christina School District  
\_\_\_\_\_  
\_\_\_\_\_

**RE:** Christina School District Contract No.:  
**CM:** Whiting-Turner Contracting Company  
**PROJECT:** Bancroft School  
**CURRENT INVOICE NO.:** \_\_\_\_\_  
**FOR THE PERIOD ENDING:** \_\_\_\_\_

The undersigned Contractor, in consideration of the payments previously made and payment for the period covered by the current invoice set forth above, hereby waives and releases all mechanic's, materialman's or other liens and, to the fullest extent permitted by law, all rights to file any such liens in the future, and all claims and demands against Owner, Construction Manager, and the real property on which the project is located, in any manner arising out of work, labor, services, equipment or materials, performed or furnished by Contractor, its subcontractors and suppliers, in connection with the Project and trade contract, through the period covered by the current invoice and all previous invoices. The release does not apply to retention, nor to extra work which Contractor has been authorized to proceed with by the Construction Manager, but for which payment has not yet been approved.

Except as noted below, Contractor acknowledges and represents that for the period and work covered by all previous invoices for which Contractor has received payment:

1. Contractor has paid in full all amounts for subcontracts, labor, materials and rented equipment.
2. Contractor has properly applied previous payments to pay all outstanding invoices related to the Project.
3. Contractor is aware of no claims nor any circumstances that could give rise to any future claims against Owner, Construction Manager, Architect or other Trade Contractor on the Project.
4. All payroll, withholding, sales and other taxes, union benefits, insurance premiums and any other amount required by law, regulation or agreement to be paid in connection with labor, materials, and equipment for the Project have been paid in full.

List exceptions, if any:

Contractor represents that the amounts set forth below are correct and that the amount of the current payment due will be applied promptly to full payment of all outstanding amounts due from Contractor to others in connection with the Project.

Contract Sum to Date	\$ _____
Total Completed and Stored to Date	\$ _____
Total Retention to Date	\$ _____
Total Earned Less Retention	\$ _____
Less Previous Payments	\$ _____
Current Payment Due	\$ _____

**BY:** \_\_\_\_\_  
*(Name of Subcontractor)*  
**BY:** \_\_\_\_\_  
*(Signature, Printed Name and Title), Duly Authorized Agent of Subcontractor*

STATE OF \_\_\_\_\_ )  
(CITY)(COUNTY)OF \_\_\_\_\_ ) to wit:

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, appeared before me \_\_\_\_\_ and he/she made oath in due form of law that the facts, information and representations set forth in the foregoing Trade Contractor's Partial Release, Waiver of lien and Affidavit, are true and accurate to the best of his/her knowledge, information and belief.

\_\_\_\_\_  
*Notary Public* My commission expires: \_\_\_\_\_

**PARTIAL WAIVER AND RELEASE  
FOR SECOND TIER SUBCONTRACTORS AND SUPPLIERS**

TO: Christina School District (Owner)

DATE: \_\_\_\_\_

CONSTRUCTION MANAGER: The Whiting-Turner Contracting Co.

PROJECT: Bancroft School

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

The undersigned Company, a subcontractor or supplier to the Trade Contractor named above, and hereinafter referred to as the "Company", in consideration of payments previously received and in consideration of payment for work performed through the current date set forth below, hereby waives and releases all mechanics', materialman's, or other liens and, to the fullest extent permitted by law, all rights to file any such liens in the future, and all claims and demands against the Owner, the Construction Manager and the real property on which the Project is located, and any claims arising out of work, labor, services, equipment or materials, performed or furnished by the Company, its subcontractors and suppliers, in connection with the Project, through the period covered by the current invoice.

Except as noted below, the Company further acknowledges and represents that all persons and entities which have provided labor or material, or rented equipment, for or through the Company in connection with the project have been paid in full, for the periods covered by previous payments, that previous payments to the Company have been properly applied to pay all outstanding invoices relating to the Project, that the Company is not aware of any claims, or circumstances which could give rise to future claims, against the Owner, the Construction Manager or the Project, and that all payroll, withholding and other taxes, union benefits, insurance premiums or other amounts required by law, regulation or agreement to be paid in connection with labor for the project have been paid in full through the last date of work covered by the current invoice.

List exceptions, if any:

Last date of work period covered by current Invoice: \_\_\_\_\_

\_\_\_\_\_  
*(Name of Company)*

BY: \_\_\_\_\_  
*Signature, Duly Authorized Agent of Company*

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

\_\_\_\_\_  
*Printed Name and Title*

STATE OF \_\_\_\_\_ )  
(CITY)(COUNTY)OF \_\_\_\_\_ )

to wit:

On this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, appeared before me \_\_\_\_\_ and he/she made oath in due form of law that the facts, information and representations set forth in the foregoing Company's Partial Waiver and Release, are true and accurate to the best of his/her knowledge, information and belief.

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

My commission expires: \_\_\_\_\_

**TRADE CONTRACTOR'S FINAL RELEASE AND AFFIDAVIT**

**NOT FOR BID**

**TO:** Christina School District (OWNER)  
\_\_\_\_\_  
\_\_\_\_\_

**DATE:** \_\_\_\_\_

**FROM:** \_\_\_\_\_ (Trade Contractor)

**RE:** \_\_\_\_\_ **DATED:** \_\_\_\_\_

**CONSTRUCTION MANAGER:** The Whiting-Turner Contracting Company

**PROJECT:** Bancroft School

The undersigned Trade Contractor, in consideration of final payment as set forth herein, hereby waives all mechanic's liens and rights to file mechanic's liens and generally releases, and agrees to indemnify and save harmless, the above Owner, the construction manager, their successors and assigns, from all causes of action, suits, debts, contracts, damages, judgments, decrees, claims, demands, liens, rights to assert liens, awards and expenses, including attorneys' fees, in law, equity or otherwise, which Trade Contractor, its subcontractors and suppliers, their successors and assigns and any persons claiming through them or based upon their acts or omissions ever had, now have or hereafter may have against the above Owner, the construction manager, and any real property or improvements of Owner, from the beginning of the world to the date of this Release, in any manner relating to or arising in connection with the above referenced contract or project.

Trade Contractor represents that the amounts set forth below are correct and that the amount of the current payment due will promptly be applied to full payment of all outstanding amounts due from Trade Contractor to others in connection with the Project.

Final Contract Amount	\$ _____
Less Previous Payments	\$ _____
Final Payment Due	\$ _____

I hereby certify, under penalties of perjury, that the information and representations set forth above are true and accurate to the best of my knowledge, information and belief.

\_\_\_\_\_  
*Trade Contractor*

**BY:** \_\_\_\_\_ **Address:** \_\_\_\_\_

*Signature, Duly Authorized Agent of Trade Contractor*

\_\_\_\_\_  
*Printed Name and Title*

STATE OF \_\_\_\_\_ )  
(CITY)(COUNTY)OF \_\_\_\_\_ ) to wit:

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ appeared before me \_\_\_\_\_ and he/she made oath in due form of law that the facts, information and representations set forth in the foregoing Trade Contractor's Final Release and Affidavit, are true and accurate to the best of his/her knowledge, information and belief.

\_\_\_\_\_  
*(Notary Public)*

My commission expires: \_\_\_\_\_

**NOT FOR BID**

**FINAL WAIVER AND RELEASE**  
**FOR SECOND TIER SUBCONTRACTORS AND SUPPLIERS**

**NOT FOR BID**

OWNER: Christina School District

DATE: \_\_\_\_\_

CONSTRUCTION MANAGER: The Whiting-Turner Contracting Co.

PROJECT: Bancroft School

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

The undersigned Company, a subcontractor or supplier to the contractor named above, and hereinafter referred to as the "Company", in consideration of payments previously received and in consideration of final payment set forth below, hereby waives and releases all mechanics', materialman's, or other liens and, to the fullest extent permitted by law, all rights to file any such liens in the future, and all claims and demands against the Owner, the Construction Manager and the real property on which the Project is located, and any claims arising out of work, labor, services, equipment or materials, performed or furnished by the Company, its subcontractors and suppliers, in connection with the Project, from the beginning of the world to the date of this Waiver and Release.

Except as noted below, the Company further acknowledges and represents that all persons and entities which have provided labor or material, or rented equipment, for or through the Company in connection with the project have been paid in full, that previous payments to the Company have been properly applied to pay all outstanding invoices relating to the project, that the Company is not aware of any claims, or circumstances which could give rise to future claims, against the Owner, the Construction Manager or the Project, and that all payroll, withholding and other taxes, union benefits, insurance premiums or other amounts required by law, regulation or agreement to be paid in connection with labor for the project have been paid in full.

Final Payment Due: \$ \_\_\_\_\_

\_\_\_\_\_  
*(Name of Company)*

BY: \_\_\_\_\_  
*Signature, Duly Authorized Agent of Company*

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

\_\_\_\_\_  
*Printed Name and Title*

STATE OF \_\_\_\_\_ )  
(CITY)(COUNTY)OF \_\_\_\_\_ )

)to wit:

On this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ appeared before me \_\_\_\_\_ and he/she made oath in due form of law that the facts, information and representations set forth in the foregoing Company's Final Waiver and Release, are true and accurate to the best of his/her knowledge, information and belief.

\_\_\_\_\_  
*(Notary Public)*

My commission expires: \_\_\_\_\_

**NOT FOR BID**



AFFIDAVIT THAT ALL TAXES HAVE BEEN PAID

RE: Bancroft School

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

TO: CHRISTINA SCHOOL DISTRICT

The undersigned certifies that all federal, state and local taxes (including sales, consumer, use and excise taxes) applicable to the work and services performed and materials and equipment incorporated into the work, in each case pursuant to the contract referred to above, have been paid in full.

SUPPLIER/CONTRACTOR: \_\_\_\_\_

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

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

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

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

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

On this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, before me personally came \_\_\_\_\_  
\_\_\_\_\_, to me known who, being by me duly sworn, did depose and say that  
he resides at \_\_\_\_\_ that  
he is \_\_\_\_\_ of \_\_\_\_\_  
the corporation that executed the foregoing instrument and that he signed his name thereto by order of the Board of  
Directors of said corporation.

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

My Commission Expires: \_\_\_\_\_

**NOT FOR BID**

**GUARANTEE AND WARRANTY**

WHEREAS, \_\_\_\_\_, hereinafter called the "Guarantor," entered into a contract dated \_\_\_\_\_, hereinafter called the "Contract," with the Christina School District, hereinafter called the Owner, for the construction of the Bancroft School (hereinafter referred to as the "Work"), located at \_\_\_\_\_.

WHEREAS, the Owner has performed, kept, observed and fulfilled each and every one of the obligations, promises, stipulated, terms and conditions on its part, and

WHEREAS, by the terms of the Contract, one of the conditions precedent to the making of final payment is the execution and delivery by the Grantor of this guarantee and warranty; and

WHEREAS, the Guarantor is now desirous of obtaining payment pursuant to the terms of said Contract and as a condition precedent to such payment, furnishes this separate guarantee and warranty for all work and material included in said Contract,

NOW THEREFORE, in consideration of the premises and of the payments made to the Guarantor under said Contract and in further consideration of final payment, the Guarantor does hereby for itself and its successors, heirs and assigns, guarantee and warrant to the Owner, its successors and assigns, that the Guarantor has performed all the work required by said Contract in accordance with the terms thereof including but not limited to satisfactory operation of all equipment by means or acceptance tests, correction of items on punchlists prepared by the Architect, and that all portions of the work completed under the Contract are perfect as to materials and workmanship and will so remain from \_\_\_\_\_ for a period of two (2) years; and

The Guarantor does hereby further guarantee and warrant that the Guarantor will make good and replace at its own cost and expense all defects in material and workmanship appearing during the period aforesaid and the Guarantor will be responsible for all damage caused to the Owner by such defects or by the work required to remedy such defects. All corrections to material and workmanship shall be made at the convenience of the Owner and shall be performed in a good workmanlike manner.

The Guarantor does hereby warrant and represent that it has obtained warranties and guarantees from its material and equipment suppliers and from its subcontractors to the fullest extent possible and as customary in the various trades and has delivered all assignable warranties and guarantees to the Owner.

It is understood that this guarantee shall in no way be construed to limit in any manner any of the provisions of the Contract or to modify or limit any of the obligations, liabilities and duties of the Guarantor thereunder.

It is further understood that his guarantee shall remain binding and irrevocable during the above stated period and that the Guarantor shall not contest the validity of, or in any way attempt to revoke or withdraw from, this guarantee for any cause whatsoever, whatever arising before or after the execution of the Contract or this guarantee.

IN WITNESS WHEREOF, the Guarantor has caused this instrument to be signed and executed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
(GUARANTOR)

WITNESS:

BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

STATE OF \_\_\_\_\_ )  
COUNTY OF \_\_\_\_\_ )

On this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, before me personally came \_\_\_\_\_, to me known who, being by me duly sworn, did depose and say that he resides at \_\_\_\_\_, that he is \_\_\_\_\_ of \_\_\_\_\_, the corporation that executed the foregoing instrument and that he signed his name thereto by order of the Board of Directors of said corporation.

\_\_\_\_\_  
NOTARY PUBLIC

My Commission Expires: \_\_\_\_\_

**NOT FOR BID**

**NOT FOR BID**

DRAFT

# AIA® Document G706™ - 1994

## Contractor's Affidavit of Payment of Debts and Claims

NOT FOR BID

**PROJECT:** *(Name and address)*

Bancroft School Demolition  
700 North Lombard St.  
Wilmington, DE 19801

**TO OWNER:** *(Name and address)*

Christina School District

**ARCHITECT'S PROJECT NUMBER:**

**CONTRACT FOR:** 02C Building  
Demolition

**CONTRACT DATED:**

OWNER:

ARCHITECT:

CONTRACTOR:

SURETY:

OTHER:

**STATE OF:**

**COUNTY OF:**

The undersigned hereby certifies that, except as listed below, payment has been made in full and all obligations have otherwise been satisfied for all materials and equipment furnished, for all work, labor, and services performed, and for all known indebtedness and claims against the Contractor for damages arising in any manner in connection with the performance of the Contract referenced above for which the Owner or Owner's property might in any way be held responsible or encumbered.

**EXCEPTIONS:**

SUPPORTING DOCUMENTS ATTACHED HERETO:

- Consent of Surety to Final Payment. Whenever Surety is involved, Consent of Surety is required. AIA Document G707, Consent of Surety, may be used for this purpose

Indicate Attachment  Yes  No

*The following supporting documents should be attached hereto if required by the Owner:*

- Contractor's Release or Waiver of Liens, conditional upon receipt of final payment.
- Separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers, to the extent required by the Owner, accompanied by a list thereof.
- Contractor's Affidavit of Release of Liens (AIA Document G706A).

**CONTRACTOR:** *(Name and address)*

BY: \_\_\_\_\_

*(Signature of authorized representative)*

\_\_\_\_\_  
*(Printed name and title)*

Subscribed and sworn to before me on this date:

Notary Public.

My Commission Expires:

NOT FOR BID

DRAFT

# AIA® Document G706A™ - 1994

## Contractor's Affidavit of Release of Liens

**NOT FOR BID**

**PROJECT:** *(Name and address)*

Bancroft School  
700 North Lombard St.  
Wilmington, DE 19801

**TO OWNER:** *(Name and address)*

Christina School District

**ARCHITECT'S PROJECT NUMBER:**

**CONTRACT FOR:** 02C Building  
Demolition

**CONTRACT DATED:**

OWNER:

ARCHITECT:

CONTRACTOR:

SURETY:

OTHER:

**STATE OF:**

**COUNTY OF:**

The undersigned hereby certifies that to the best of the undersigned's knowledge, information and belief, except as listed below, the Releases or Waivers of Lien attached hereto include the Contractor, all Subcontractors, all suppliers of materials and equipment, and all performers of Work, labor or services who have or may have liens or encumbrances or the right to assert liens or encumbrances against any property of the Owner arising in any manner out of the performance of the Contract referenced above.

**EXCEPTIONS:**

**SUPPORTING DOCUMENTS ATTACHED HERETO:**

1. Contractor's Release or Waiver of Liens, conditional upon receipt of final payment.
2. Separate Releases or Waivers of Liens from Subcontractors and material and equipment suppliers, to the extent required by the Owner, accompanied by a list thereof.

**CONTRACTOR:** *(Name and address)*

**BY:**

\_\_\_\_\_  
*(Signature of authorized representative)*

\_\_\_\_\_  
*(Printed name and title)*

Subscribed and sworn to before me on this date:

Notary Public:

My Commission Expires:

**NOT FOR BID**

DRAFT

# AIA® Document G707™ - 1994

NOT FOR BID

## Consent Of Surety to Final Payment

**PROJECT:** *(Name and address)*

Brancroft School  
700 North Lombard St.  
Wilmington, DE 19801

**ARCHITECT'S PROJECT NUMBER:**

**CONTRACT FOR:** 02C Building Demolition

**OWNER:**

**ARCHITECT:**

**CONTRACTOR:**

**SURETY:**

**OTHER:**

**TO OWNER:** *(Name and address)*

Christina School District

**CONTRACT DATED:**

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above, the  
*(Insert name and address of Surety)*

on bond of  
*(Insert name and address of Contractor)*

hereby approves of the final payment to the Contractor, and agrees that final payment to the Contractor shall not relieve the  
Surety of any of its obligations to  
*(Insert name and address of Owner)*

as set forth in said Surety's bond.

IN WITNESS WHEREOF, the Surety has hereunto set its hand on this date:  
*(Insert in writing the month followed by the numeric date and year.)*

\_\_\_\_\_  
*(Surety)*

\_\_\_\_\_  
*(Signature of authorized representative)*

Attest:

*(Seal):*

\_\_\_\_\_  
*(Printed name and title)*

NOT FOR BID



SECTION 02 41 16 - STRUCTURE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Demolition and removal of buildings and site improvements.
2. Removal of below-grade construction.
3. Disconnecting, capping or sealing, and removing site utilities.

B. Related Sections:

1. Section 31 10 00, Site Clearing, for site clearing and removal of above-grade and below-grade site improvements not part of building demolition.
2. Section 31 20 00, Earthmoving, for backfilling and compaction of below-grade voids.

1.3 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged.

1.4 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. The following items remain the property of the Owner. Carefully salvage in a manner to prevent damage and promptly return to Owner.
  1. Cornerstones and date stones.
  2. Commemorative plaques.
  3. Other historic items, relics, antiques, and similar objects including, but not limited to, s and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified refrigerant recovery technician.

B. Schedule of Building Demolition Activities: Indicate the following:

1. Detailed sequence of demolition work, with starting and ending dates for each activity.
2. Shutoff and capping of utility services.

C. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

D. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.

1.6 QUALITY ASSURANCE

A. Refrigerant Recovery Technician Qualifications: Certified by EPA-approved certification program.

B. Regulatory Requirements: Comply with governing EPA notification regulations before starting demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

C. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

D. Pre-demolition Conference: Conduct conference at Project Site.

1. Review structural load limitations of existing structures.
2. Review and finalize building demolition schedule and verify availability of demolition personnel, equipment, and facilities needed to make progress and avoid delays.
3. Review procedures for noise control and dust control.

1.7 PROJECT CONDITIONS

A. Buildings to be demolished will be vacated and their use discontinued before start of the Work.

B. Owner assumes no responsibility for buildings and structures to be demolished.

1. Conditions existing at time of inspection for bidding purposes will be maintained by Owner as far as practical.

C. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.

1. Hazardous materials will be removed by Owner before start of the Work.
2. If materials suspected of containing hazardous materials are encountered, do not disturb. Immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.

D. On-site storage or sale of removed items or materials is not permitted.

PART 2 - PRODUCTS (NOT USED)

2.1 SOIL MATERIALS

- A. Satisfactory Soils: Comply with requirements in Section 31 20 00, Earthmoving.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting demolition operations.
- B. Review Project Record Documents of existing construction provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.
- C. Perform an engineering survey of condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during building demolition operations.

3.2 PREPARATION

- A. Refrigerant: Remove refrigerant from mechanical equipment according to 40 CFR 82 and regulations of authorities having jurisdiction before starting demolition.
- B. Existing Utilities: Locate, identify, disconnect, and seal or cap off indicated utilities serving buildings and structures to be demolished.
1. Arrange to shut off indicated utilities with utility companies.
  2. If removal, relocation, or abandonment of utility services will affect adjacent occupied buildings, then provide temporary utilities that bypass buildings and structures to be demolished and that maintain continuity of service to other buildings and structures.
  3. Cut off pipe or conduit a minimum of 24 inches below grade. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing according to requirements of authorities having jurisdiction.
- C. Temporary Shoring: Provide and maintain interior and exterior shoring, bracing, or structural support to preserve stability and prevent unexpected movement or collapse of construction being demolished.
1. Strengthen or add new supports when required during progress of demolition.
- D. Salvaged Items: Comply with the following.
1. Clean salvaged items of dirt and demolition debris.
  2. Pack or crate items after cleaning. Identify contents of containers.
  3. Store items in a secure area until delivery to Owner.
  4. Transport items to storage area designated by Owner.

5. Protect items from damage during transport and storage.

3.3 PROTECTION

- A. Existing Facilities: Protect adjacent walkways, loading docks, building entries, and other building facilities during demolition operations. Maintain exits from existing buildings.
- B. Existing Utilities: Maintain utility services to remain and protect from damage during demolition operations.
1. Do not interrupt existing utilities serving adjacent occupied or operating facilities unless authorized in writing by Owner and authorities having jurisdiction.
  2. Provide temporary services during interruptions to existing utilities, as acceptable to Owner and authorities having jurisdiction.
    - a. Provide at least 72 hours' notice to occupants of affected buildings if shutdown of service is required during changeover.
- C. Temporary Protection: Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction and as indicated.
1. Erect a plainly visible fence around drip line of individual trees or around perimeter drip line of groups of trees to remain.
  2. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
  3. Provide protection to ensure safe passage of people around building demolition area and to and from occupied portions of adjacent buildings and structures.
  4. Erect and maintain dustproof partitions and temporary enclosures to limit dust, noise, and dirt migration to occupied portions of adjacent buildings.
- D. Remove temporary barriers and protections where hazards no longer exist. Where open excavations or other hazardous conditions remain, leave temporary barriers and protections in place.

3.4 DEMOLITION, GENERAL

- A. General: Demolish indicated buildings completely. Use methods required to complete the Work within limitations of governing regulations and as follows:
1. Do not use cutting torches until work area is cleared of flammable materials. Maintain portable fire-suppression devices during flame-cutting operations.
  2. Maintain fire watch during and for at least two hours after flame cutting operations.
  3. Maintain adequate ventilation when using cutting torches.
  4. Locate building demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.

- NOT FOR BID**
- B. Site Access and Temporary Controls: Conduct building demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
    - 1. Do not close or obstruct streets, walks, walkways, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.
    - 2. Use water mist and other suitable methods to limit spread of dust and dirt. Comply with governing environmental-protection regulations. Do not use water when it may damage adjacent construction or create hazardous or objectionable conditions, such as ice, flooding, and pollution.
  - C. Explosives: Use of explosives is not permitted.

### 3.5 DEMOLITION BY MECHANICAL MEANS

- A. Proceed with demolition of structural framing members systematically, from higher to lower level. Complete building demolition operations above each floor or tier before disturbing supporting members on the next lower level.
- B. Remove debris from elevated portions of the building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
  - 1. Remove structural framing members and lower to ground by method suitable to minimize ground impact and dust generation.
- C. Salvage: Items to be removed and salvaged are indicated below.
  - 1. Commemorative plaque(s).
  - 2. Cornerstones and date stones.
- D. Below-Grade Construction: Demolish foundation walls and other below-grade construction.
  - 1. Remove below-grade construction, including basements, foundation walls, and footings, completely.
- E. Existing Utilities: Demolish and remove existing utilities and below-grade utility structures.

### 3.6 SITE RESTORATION

- A. Below-Grade Areas: Completely fill below-grade areas and voids resulting from building demolition operations with satisfactory soil materials according to backfill requirements in Section 31 20 00, Earthmoving.
- B. Site Grading: Uniformly rough grade area of demolished construction to a smooth surface, free from irregular surface changes. Provide a smooth transition between adjacent existing grades and new grades.

3.7 REPAIRS

- A. Promptly repair damage to adjacent buildings caused by demolition operations.

3.8 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove demolition waste materials from Project site and legally dispose of them in an EPA-approved landfill acceptable to authorities having jurisdiction.
  - 1. Do not allow demolished materials to accumulate on-site.
  - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Do not burn demolished materials.

3.9 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by building demolition operations. Return adjacent areas to condition existing before building demolition operations began.
  - 1. Clean roadways of debris caused by debris transport.

END OF SECTION 02 41 16



SECTION 02 82 00 – Asbestos Abatement.

A copy of the Batta Environmental Associates Asbestos Abatement Report is bound into this Project Manual following this page.

END OF SECTION 02 82 00

**NOT FOR BID**

**NOT FOR BID**

NOT FOR BID

**ASBESTOS ABATEMENT / DECONTAMINATION**  
**FOR DEMOLITION AT BANCROFT SCHOOL**  
**CHRISTINA SCHOOL DISTRICT**  
**NEWARK, DELAWARE**

**PREPARED FOR:** MR. GEORGE WICKS, IV  
CHRISTINA SCHOOL DISTRICT  
925 BEAR-CORBITT ROAD  
BEAR, DE 19701

**PREPARED BY:** TODD K. ZEISLOFT – PROJECT DESIGNER ACC-0423-10-002



**BATTA ENVIRONMENTAL ASSOCIATES, INC.**  
**DELAWARE INDUSTRIAL PARK**  
**6 GARFIELD WAY**  
**NEWARK, DELAWARE 19713-3540**

**REVIEWED BY:** NEERAJ BATTA – PROFESSIONAL ENGINEER  
VICE PRESIDENT



**BATTA ENVIRONMENTAL ASSOCIATES, INC.**  
**DELAWARE INDUSTRIAL PARK**  
**6 GARFIELD WAY**  
**NEWARK, DELAWARE 19713-3540**



**DATE:** August 25, 2023

**PROJECT NO:** BEA # 1063022

Approved  
Facilities Management  
 9/5/23  
Robert L. Purnell III Date

NOT FOR BID



NOT FOR BID



# STATE OF DELAWARE

THIS CERTIFIES THAT

BATA ENVIRONMENTAL ASSOCIATES, INC.

Has satisfactorily completed the requirements prescribed by the Office of Management & Budget as a Asbestos Abatement Professional Service Firm this

Second	Day of	December	Two Thousand	Twenty-Two
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This certification is valid for one (1) year to perform asbestos services within the State of Delaware.

This certification shall be proof that the above-named Contractor has met the minimum requirements established by the State of Delaware for temporary certification. It is not intended as an overall endorsement of the Contractor's ability to provide services of varying size and shape. It does not endorse the methods and types of respiratory protection used by the Contractor.

Contractor's address: 6 Garfield Way  
 Newark, DE 19713  
 Expiration Date: December 2, 2023  
 Certification Number: PS-001



Director  
 Division of Facilities Management

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STATE OF DELAWARE  
Department of Finance  
Division of Revenue

ACTIVE BUSINESS LICENSE  
1989025660



2023

EFFECTIVE  
01/01/2023 - 12/31/2023

ISSUED TO  
BATA ENVIRONMENTAL ASSOC INC  
6 GARFIELD WAY  
NEWARK DE 19713-5817

LOCATION  
BATA ENVIRONMENTAL ASSOC INC  
6 GARFIELD WAY  
NEWARK, DE 19713-5817

TRADE, BUSINESS, OR  
PROFESSIONAL ACTIVITY  
GENERAL SERVICES

Is hereby licensed to practice, conduct, or engage in the  
occupation or business activity indicated above in  
accordance with the license application duly filed  
pursuant to Title 30, Delaware Code.

ISSUED: 12/08/2022  
FEE PAID: \$75.00

POST CONSPICUOUSLY - NOT TRANSFERABLE







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# Certificate of Completion

awarded to  
**Todd Zeisloft**  
for successfully completing the prescribed course of study in

**Pennsylvania Asbestos  
Project Designer Refresher Course**  
under TSCA Title II, Virtual Teleconference

presented by  
**ACCESS TRAINING SERVICES, INC**  
7921 River Road, Pennsauken NJ 08110

4/14/23  
*Course Date*

N/A  
*Exam Date*

4/14/24  
*Expiration Date*

N/A  
*Social Security Number*

ACC-0423-10-002  
*Certificate Number*

*Mark K. Schlager*  
Mark K. Schlager  
Training Director

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STATE OF DELAWARE  
DEPARTMENT OF LABOR  
DIVISION OF INDUSTRIAL AFFAIRS  
OFFICE OF CONSTRUCTION ENFORCEMENT  
CHAPMAN BLDG., STE. 210  
252 CHAPMAN RD.  
NEWARK, DE. 19702

**Via Electronic and Regular Mail**

August 10, 2023

Mr. Dom Muzzi  
The Whiting-Turner Contracting Company  
131 Continental Drive, Suite 404  
Newark, DE 19713

Re: CHR23009ENBANDEMO Bancroft School Demolition, New Castle County, DE

Dear Mr. Muzzi:

I am responding to your request for a category determination for the CHR23009ENBANDEMO Bancroft School Demolition, which is a state funded construction project located in New Castle County, DE. The work consists of demolition/raze entire Bancroft School Building Asbestos abatement, demolish building structure, façade and all finishes, and remove all debris off site. You estimate the total cost of construction for this project to be \$2,800,000.00.

Based upon the information you provided the Department of Labor has determined that this project is a Heavy Construction project.

Delaware's Prevailing Wage Regulations provide that the rates applicable to a project are the rates in effect on the date of publication of the specifications for that project. I have enclosed a certified copy of the March 15, 2023, prevailing wage rates for Heavy Construction to be included in your bid specification. However, please be advised that, in the event that a contract for a project is not executed within one hundred and twenty (120) days from the earliest date the specifications were published, the rates in effect at the time of the execution of the contract shall be the applicable rates for the project.

This determination is directed solely to the parties identified herein. It is based on the unique facts relevant to this matter. It does not constitute precedent and should not be cited as such by future parties.

Pursuant to 19 Del. Chapter 36, All contractors must obtain their Contractor Registration Certificate prior to performing construction services or maintenance work throughout Delaware. Contractors can submit an application by visiting the Delaware One Stop [https://onestop.delaware.gov/Operate\\_Contractors](https://onestop.delaware.gov/Operate_Contractors).



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Lastly, please see the enclosed debarment list. Entities/individuals listed shall not be permitted to bid on, be awarded or work on Delaware State funded construction projects, in the timeframe specified, as provided for under 29 Del.C.6960 or other applicable State statutes.

If you have any questions or I can provide any additional assistance, please do not hesitate to contact me at 302-318-2769.

Sincerely,

A handwritten signature in black ink that reads "Salina Crossland".

Salina Crossland  
Construction Industry Enforcement Supervisor  
salina.crossland@delaware.gov

Enclosures

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STATE OF DELAWARE  
DEPARTMENT OF LABOR  
DIVISION OF INDUSTRIAL AFFAIRS  
OFFICE OF LABOR LAW ENFORCEMENT  
PHONE: (302) 318-2769

Mailing Address:  
252 Chapman Road  
  
Newark, DE 19702

Located at:  
252 Chapman Road  
  
Newark, DE 19702

PREVAILING WAGES FOR HEAVY CONSTRUCTION EFFECTIVE MARCH 15, 2023

CLASSIFICATION	NEW CASTLE	KENT	SUSSEX
ASBESTOS WORKERS	26.95	23.70	51.54
BOILERMAKERS	86.57	39.16	71.83
BRICKLAYERS	84.08	72.20	30.37
CARPENTERS	59.56	59.56	47.80
CEMENT FINISHERS	53.16	29.69	22.12
DIVER	95.30	Contact DDOL -	Contact DDOL -
DIVER TENDER	108.79	Contact DDOL -	Contact DDOL -
ELECTRICAL LINE WORKERS	88.36	88.36	88.36
ELECTRICIANS	79.17	79.17	79.17
GLAZIERS	24.89	21.62	14.65
INSULATORS	65.34	65.34	65.34
IRON WORKERS	73.31	74.33	73.31
LABORERS	53.65	53.65	53.65
MILLWRIGHTS	82.08	82.08	65.93
PAINTERS	91.91	91.91	91.91
PILEDRIVERS	85.37	47.99	37.34
PLASTERERS	23.44	20.38	13.76
PLUMBERS/PIPEFITTERS/STEAMFITTERS	96.38	94.91	23.76
POWER EQUIPMENT OPERATORS	79.29	83.90	79.29
SHEET METAL WORKERS	37.47	23.25	21.84
SPRINKLER FITTERS	40.39	15.29	12.67
TRUCK DRIVERS	41.73	25.08	27.15

CERTIFIED: 8/11/2023

BY: Selina O'Connell / for Francis Chudrik  
ADMINISTRATOR, OFFICE OF LABOR LAW ENFORCEMENT

**NOTE:** THESE RATES ARE PROMULGATED AND ENFORCED PURSUANT TO THE PREVAILING WAGE REGULATIONS ADOPTED BY THE DEPARTMENT OF LABOR ON APRIL 3, 1992.

CLASSIFICATIONS OF WORKERS ARE DETERMINED BY THE DEPARTMENT OF LABOR. FOR ASSISTANCE IN CLASSIFYING WORKERS, OR FOR A COPY OF THE REGULATIONS OR CLASSIFICATIONS, PHONE (302) 318-2769.

NON-REGISTERED APPRENTICES MUST BE PAID THE MECHANIC'S RATE.

**PROJECT:** CHR23009ENBANDEMO Bancroft School Demolition, New Castle County

Ph: 302.737.3376  
Fx: 302.737.5764

BATA Environmental Associates, Inc  
6 Garfield Way  
Newark, DE. 19713

info@battaenv.com  
Battaenv.com



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The attached document has been prepared to the best of my knowledge from physical observations, with design and engineering discipline, and from data supplied by the Owner.

It is the responsibility of the Contractor to inspect all existing conditions prior to the commencement of the work and also to comply with all the current State, Local, and Federal codes, and Environmental Regulations during the execution of the work to be performed.

Contractor will comply with the requirements in the “Master Specification for Asbestos Abatement / Decontamination – Christina School District, Newark, Delaware” (BEA #69812)



Neeraj K. Batta, P.E.  
Delaware P.E. # 14572

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ASBESTOS ABATEMENT / DECONTAMINATION  
FOR DEMOLITION AT BANCROFT SCHOOL  
BEA# 1063022



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*This is to certify that the State of Delaware, Facilities Management, has reviewed this Scope of Work, and approves its use for the projects listed in the attached document.*

**Christina School District  
ASBESTOS ABATEMENT / DECONTAMINATION  
FOR DEMOLITION AT BANCROFT SCHOOL  
BEA# 1063022**

**Under MASTER SPECIFICATION FOR CHRISTINA SCHOOL DISTRICT – #691812**

*In accordance with Delaware Code, Title 16, Chapter 78, Paragraph 7805 (1)*

Signature \_\_\_\_\_ 

Printed Name \_\_\_\_\_ Robert Purnell III

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**SECTION 01013 - SUMMARY OF THE WORK - ASBESTOS ABATEMENT****PART 1 - GENERAL****1.1 RELATED DOCUMENTS**

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

**B. Notices and Permits****Job Site Notices & Permits**

State of Delaware DNREC 10 Day Notification  
 Emergency Planning Procedures  
 Material Safety Data Sheets for Encapsulant, Glues, Etc.  
 Prevailing Wage Determination  
 Subcontractors List  
 Equal Employment Opportunity

**1.2 WORK COVERED BY CONTRACT DOCUMENTS**

**A. The Project** name is Asbestos Abatement / Decontamination FOR Demolition at BANCROFT BEA# 1063022 which is a part of the Christina School District – Master Specification – BEA # 691812.

1. Project Location: Bancroft School  
700 N. Lombard St.  
Wilmington, DE 19801
2. Owner: Christina School District,  
925 Bear-Corbitt Road  
Bear, DE 19701

**B. Contract Documents**, dated August 25, 2023, were prepared for the Project by Batta Environmental Associates, Inc., Delaware Industrial Park, 6 Garfield Way, Newark, Delaware 19713. Conditions that are indicated on the Contract Documents include, but are not necessarily limited to the following:

1. Christina School District Master Specification – BEA #691812
2. Asbestos Abatement / Decontamination For Demolition at Bancroft School - BEA# 1063022
3. Any addenda to the Specification.

BATA ENVIRONMENTAL ASSOCIATES, INC.

**C. Work to be Performed Prior to Work Under this Contract:**

- The building owner will remove all removable property from the designated work areas prior to use by the Contractor.
- Heating, cooling, and ventilating air systems into or out of the work areas shall be shut down to prevent contamination and dispersal of asbestos fibers to other areas of the building.
- Electrical power shall be shut down, tagged, and locked out to all work areas, except those work areas where it is necessary that electrical equipment remain in service.

**D. Work to be Performed Subsequent to Work Under This Contract:** Upon completion of asbestos removal and subsequent decontamination of the affected areas, asbestos contractor will ensure the areas are clear of any project equipment.

**E. The Work consists of:**

- Removal of approximately 6,100 square feet of asbestos containing Floor Tile & Mastic from various rooms and hallways as shown on drawings. (Pink on drawing 1)
- Removal of approximately 21,700 square feet of asbestos containing Floor Tile (Mastic is non-asbestos) from various rooms and hallways as shown on drawings. (Red on drawings 1 & 2)
- Removal of approximately 3,400 square feet of non-asbestos Floor Tile over asbestos containing Mastic from various rooms and entry hallway as shown on drawings. (Orange on drawing 1)
- Removal of approximately 65,000 square feet of non-asbestos Drywall with asbestos containing Joint Compound from various rooms and hallways as shown on drawings. (Green on drawings 3 & 4)
- Removal of approximately 1,050 square feet of asbestos containing Roof Flashing Tar at copper roof flashing from perimeter of roofs 1, 4, & 6 as shown on drawings. (Red on drawing 8)
- Removal of 2 each (approximately 10 square feet) of asbestos containing Drying racks (from 2 rooms as shown on drawings. (Lavender on drawing 5)
- Removal of 1 Sink with asbestos containing undercoating on it from 1 room as shown on drawings. (Peach on drawing 5)
- Removal of approximately 20 linear feet of asbestos containing Pipe Insulation / Fitting Insulation from the Boiler Room area as shown on drawings. (Orange on drawing 8)
- Removal of additional asbestos containing Pipe Insulation / Fitting Insulation from areas yet to be identified following extensive demo within the building and from under concrete slab and soils as uncovered during investigative demolition.
- Removal of an estimated 10,600 square feet of POSSIBLY asbestos containing Board Mastics as shown on drawings following access and testing for asbestos. (Blue on drawing 6)
- Removal of an estimated 300 square feet of POSSIBLY asbestos containing Mirror Mastics following access and testing for asbestos. (Green on drawing 6)
- Removal of an estimated 80 each of POSSIBLY asbestos containing Fire Doors as shown on drawings following access and testing for asbestos. (Red on drawing 7)

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- F. **The Work** will be constructed under a single prime contract (note: re-insulation or re-installation are not part of this contract).

**NOTE:**

**Asbestos Abatement related work will not begin until a certified Project Monitor is on site. The Project monitor must be on site at all times during asbestos abatement related activities. The contractor may not begin or continue work without a representative from a certified professional services firm present.**

**Under no circumstances will removal begin or continue until the waste removal means (Dumpster or Delaware Solid Waste approved vehicle) is on site.**

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**G. REMOVAL PROCEDURES****1.0 REMOVAL OF ASBESTOS CONTAINING FLOOR TILE (& mastic where asbestos containing)**

- a) Install a three-stage decon, equipped with shower attached to each work area. The decon will be erected in such a manner as to allow for separate equipment room/bag-out off to the side or the bag-out chamber can be placed at a separate location other than the decon unit. All connections to water sources will be protected by back-flow protection devices. All shower water filters will be disposed of as contaminated waste. In no instance will the personnel decon be used as a bag-out/equipment passage. Reference section 01563 for specific requirements of decontamination units.
- b) Set up HEPA filtered air filtration devices in the work area(s) and have them running during pre-clean and prep stages. All exhaust from HEPA machines must be vented outside the building. Plywood barriers (3/4" minimum) will be used to secure vents / openings where flex duct from HEPA machines is exhausted and will remain overnight.
- c) Pre-clean the work area(s) prior to installing criticals in position. Install two (2) distinct layers of 6 mil polyethylene criticals, on all exterior doorways, operable windows, HVAC registers, and any other openings that lead outside the interior work area(s).
- d) Since the building will not be occupied after abatement / before demolition, no containment other than the required criticals is required. Single layer 6-mil polyethylene sheeting walls and/or ceilings may be used to enclose the abatement work area(s) whenever walls or ceilings are not present in order to establish negative pressure differential. Install Plexiglas viewing windows at least 18" by 18" and approximately 5' from the ground at locations where the work area(s) can be viewed from outside the enclosure / containment whenever feasible. Work area(s) are to be regulated with Barrier tape and Danger Asbestos warning signs to restrict access to the work area(s).
- e) After the enclosure(s) / containment(s) are completed, establish proper negative pressure using High Efficiency Particulate Air (HEPA) filtered local exhaust systems units. Establish and maintain a pressure differential of at least -0.02 inches of water measured on a strip chart recorder or other approved method. The Contractor shall supply a differential pressure manometer that is capable of monitoring and recording on a strip chart. The manometer shall be equipped with an automatically activated alarm system, which will sound a warning if the differential pressure drops below the preset value. All strip charts will be turned in to the owner's representative at the completion of the project. Work will not begin or continue unless an adequate differential pressure is achieved and maintained. Refer to Specification section 01513.
- f) Pre-wet the carpet in any areas where it is installed on top of the ACM floor tiles being removed to minimize general dust generation and remove the carpet from the floor tile from all areas where this removal does not impact on the integrity of the floor tile. Any areas where the carpet is secured to the floor tile in a way that would impact the floor tile if the carpet were to be removed must be left to remain in place until the floor tile is being removed. All carpet removed PRIOR TO any floor tile removal and does not have any residual ACM floor tile adhered to it may be disposed of as general demolition debris.

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- g) Once negative pressure is sufficient (-0.02" or better), and the interior enclosure(s) / containment(s) have been inspected and approved by the owner's representative, then asbestos abatement may begin.
  - h) For all asbestos removal activities, the minimum PPE required shall be Disposable full body coveralls such as Tyvek material suits and Full-Face Powered Air Purifying Respirators (PAPR's) when working in the regulated abatement area(s), as well as in or around the waste dumpster.
  - i) The contractor shall follow proper removal procedures at all times in accordance with Specification section 02081. All asbestos containing materials shall be continually wetted with amended water during removal procedures. Dry removal of asbestos will not be permitted. Asbestos waste material must be adequately wet and the bags shall be goose necked and sealed with duct tape prior to being removed from the work area.
  - j) All asbestos containing or contaminated materials are to be removed from the work area(s) packaged as asbestos waste in two (2) layers of 6 mil polyethylene bags or wrapped in 2 independent layers of 6-mil polyethylene sheeting and properly labelled with Danger Asbestos warning labels and generator labels. Additional packaging may be employed to minimize cutting or tearing of the 2 required 6-mil layers of packaging. As a minimum, CLEAR waste bags are to be used on the second outer bag, unless the waste is being drummed. Packaging is to be decontaminated by wet wiping as it exits the regulated work area(s).
  - k) After complete removal and final cleaning of all asbestos containing materials throughout the work area(s), the owner's representative and contractor's supervisor will inspect the work area(s). Once the work area(s) pass a visual inspection and contain no visible asbestos debris, then encapsulation of the work area(s) shall occur prior to running final air tests.
  - l) Aggressive final air tests will be performed by the owner's representative using aggressive PCM clearance sampling protocol since the building is being demolished. While not required, several PCM finals will be run to ensure any workers entering the work area(s) following deregulation of the work area(s) will not be exposed to asbestos above the PEL. NO AHERA TEM finals will be run since the building is being demolished. PCMs will be collected at flow rates between 5 and 15 liters per minute, and volumes will be at least 800 liters for each sample. Samples will be analyzed in the lab and results reported within 1 business day. Tear down of containment(s) will not proceed until final air tests have passed and been documented by the owner's representative.
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**2.3 REMOVAL OF PIPE INSULATION (from within the building)**

20 LF of ACM Pipe Insulation is exposed in the Boiler Room and Boiler Room Custodial Storage Room. While it is suspected that there is additional ACM Pipe Insulation hidden within the walls, investigation done while the building was still in use was unable to identify any likely locations. Once vacated, destructive targeted wall and ceiling demolition can be performed in an effort to locate and trace any ACM Pipe Insulation. This investigation can be performed without containment in areas without ACM Joint Compound or ACM Plaster. For areas with ACM Joint Compound or ACM Plaster (none yet identified within the building), the investigation must be performed within an enclosure due to the asbestos content of the walls and or ceilings.

- a) Where Pipe Insulation is to be removed in rooms with floor tile or other ACM removal, the containment for the other removal work will be sufficient and once the containment is approved for removal, the Pipe Insulation may be removed along with the other materials.
- b) Where Pipe Insulation is to be removed in rooms without other ACM removal install a three-stage decon, equipped with shower attached to each work area. The decon will be erected in such a manner as to allow for separate equipment room/bag-out off to the side or the bag-out chamber can be placed at a separate location other than the decon unit. All connections to water sources will be protected by back-flow protection devices. All shower water filters will be disposed of as contaminated waste. In no instance will the personnel decon be used as a bag-out/equipment passage. Reference section 01563 for specific requirements of decontamination units.
- c) Set up HEPA filtered air filtration devices in the work area(s) and have them running during pre-clean and prep stages. All exhaust from HEPA machines must be vented outside the building. Plywood barriers (3/4" minimum) will be used to secure vents / openings where flex duct from HEPA machines is exhausted and will remain overnight.
- d) Pre-clean the work area(s) prior to installing criticals in position. Install two (2) distinct layers of 6 mil polyethylene criticals, on all exterior doorways, operable windows, HVAC registers, and any other openings that lead outside the interior work area(s). Since the building will not be occupied after abatement / before demolition, no containment other than the required criticals is required. Single layer 6-mil polyethylene sheeting walls and/or ceilings may be used to enclose the abatement work area(s) whenever walls or ceilings are not present. Install Plexiglas viewing windows at least 18" by 18" and approximately 5' from the ground at locations where the work areas can be viewed from outside the enclosure / containment whenever feasible. Work areas are to be regulated with Barrier tape and Danger Asbestos warning signs to restrict access to the work area(s).

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- e) After the enclosure(s) / containment(s) are completed, establish proper negative pressure using High Efficiency Particulate Air (HEPA) filtered local exhaust systems units. Establish and maintain a pressure differential of at least -0.02 inches of water measured on a strip chart recorder or other approved method. The Contractor shall supply a differential pressure manometer that is capable of monitoring and recording on a strip chart. The manometer shall be equipped with an automatically activated alarm system, which will sound a warning if the differential pressure drops below the preset value. All strip charts will be turned in to the owner's representative at the completion of the project. Work will not begin or continue unless an adequate differential pressure is achieved and maintained. Refer to Specification section 01513.
  - f) Once negative pressure is sufficient (-0.02" or better), and the enclosure(s) / containment(s) have been inspected and approved by the owner's representative, Glove Bags are to be installed on the Pipe Insulation materials to be removed, either in totality, or at locations where the pipe is to be cut to perform wrap and cut removal. Once the glove bags are installed and approved by the owner's representative, then asbestos abatement may begin.
  - g) When Wrap and Cut removal techniques will be utilized, following the glove bag removal of the Pipe Insulation from the pipe cut locations, the Pipe Insulation sections are to be wrapped with 2 layers of 6-mil or thicker polyethylene sheeting, the seams are to be sealed with spray adhesive and duct tape, and the ends of the poly sheeting are to be tightly sealed to the exposed pipe section with spray adhesive and duct tape. Once the Pipe Insulation is sealed, the pipe may be cut at the locations where the Pipe Insulation was previously removed.
  - h) For all asbestos removal activities, the minimum PPE required shall be Disposable full body coveralls such as Tyvek material suits and Powered Air Purifying Respirators (PAPR's) when working in the regulated abatement areas, as well as in or around the waste dumpster.
  - i) The contractor shall follow proper removal procedures at all times in accordance with Specification section 02081. The materials are to be removed with minimal breakage. All asbestos containing materials shall be continually wetted with amended water during removal procedures. Dry removal of asbestos will not be permitted. Asbestos waste material must be adequately wet and the bags shall be goose necked and sealed with duct tape prior to being removed from the work area(s).
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- j) All asbestos containing or contaminated materials are to be removed from the work area(s) packaged as asbestos waste in two (2) layers of 6-mil or thicker polyethylene bags or wrapped in 2 independent layers of 6-mil or thicker polyethylene sheeting and properly labelled with Danger Asbestos warning labels and generator labels. Additional packaging may be employed to minimize cutting or tearing of the 2 required 6-mil layers of packaging. As a minimum, CLEAR waste bags are to be used on the second outer bag, unless the waste is being drummed. Packaging is to be decontaminated by wet wiping as it exits the regulated work area(s).
  - k) After complete removal and final cleaning of all asbestos containing materials throughout the work area(s), the owner's representative and contractor's supervisor will inspect the work area(s). Once the work area(s) pass a visual inspection and contain no visible asbestos debris, then encapsulation of the work area(s) shall occur prior to running final air tests.
  - l) Aggressive final air tests will be performed by the owner's representative using aggressive PCM clearance sampling protocol since the building is being demolished. While not required, several PCM finals will be run to ensure any workers entering the work area(s) following deregulation of the work area(s) will not be exposed to asbestos above the PEL. NO AHERA TEM finals will be run since the building is being demolished. PCMs will be collected at flow rates between 5 and 15 liters per minute, and volumes will be at least 800 liters for each sample. Samples will be analyzed in the lab and results reported within 1 business day.

### **3.0 REMOVAL OF BOARD & MIRROR MASTICS OR DRYING RACKS**

While it is suspected that there is ACM Board & Mirror Mastics within the building, no investigation was able to be done while the building was still in use. Once vacated, boards and mirrors can be pulled and the mastics tested for asbestos. This investigation can be performed without containment in areas without ACM Joint Compound or ACM Plaster. For areas with ACM Joint Compound or ACM Plaster (none yet identified within the building), the investigation must be performed within an enclosure due to the asbestos content of the walls. Boards with identified ACM on them should be left in the area they were fastened to and abated along with any mastics remaining on the walls. Any mastics identified as ACM must be removed using the following methodology.

- a) Where ACM Board & Mirror Mastics or Drying Racks are to be removed in rooms with floor tile or other ACM removal, the containment for the other removal work will be sufficient and once the containment is approved for removal, the Board & Mirror Mastics or Drying Racks may be removed along with the other materials.

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- b) Where ACM Board & Mirror Mastics or Drying Racks are to be removed in rooms without other ACM removal install a three-stage decon, equipped with shower attached to each work area. The decon will be erected in such a manner as to allow for separate equipment room/bag-out off to the side or the bag-out chamber can be placed at a separate location other than the decon unit. All connections to water sources will be protected by back-flow protection devices. All shower water filters will be disposed of as contaminated waste. In no instance will the personnel decon be used as a bag-out/equipment passage. Reference section 01563 for specific requirements of decontamination units.
  - c) Set up HEPA filtered air filtration devices in the work area(s) and have them running during pre-clean and prep stages. All exhaust from HEPA machines must be vented outside the building. Plywood barriers (3/4" minimum) will be used to secure vents / openings where flex duct from HEPA machines is exhausted and will remain overnight.
  - d) Pre-clean the work area(s) prior to installing criticals in position. Install two (2) distinct layers of 6 mil polyethylene criticals, on all exterior doorways, operable windows, HVAC registers, and any other openings that lead outside the interior work area(s). Since the building will not be occupied after abatement / before demolition, no containment other than the required criticals is required. Single layer 6-mil polyethylene sheeting walls and/or ceilings may be used to enclose the abatement work area(s) whenever walls or ceilings are not present. Install Plexiglas viewing windows at least 18" by 18" and approximately 5' from the ground at locations where the work area(s) can be viewed from outside the enclosure / containment whenever feasible. Work areas are to be regulated with Barrier tape and Danger Asbestos warning signs to restrict access to the work area(s).
  - e) After the enclosures / containments are completed, establish proper negative pressure using High Efficiency Particulate Air (HEPA) filtered local exhaust systems units. Establish and maintain a pressure differential of at least -0.02 inches of water measured on a strip chart recorder or other approved method. The Contractor shall supply a differential pressure manometer that is capable of monitoring and recording on a strip chart. The manometer shall be equipped with an automatically activated alarm system, which will sound a warning if the differential pressure drops below the preset value. All strip charts will be turned in to the owner's representative at the completion of the project. Work will not begin or continue unless an adequate differential pressure is achieved and maintained. Refer to Specification section 01513.
  - f) Once negative pressure is sufficient (-0.02" or better), and the enclosure(s) / containment(s) have been inspected and approved by the owner's representative, then asbestos abatement may begin.



BATA ENVIRONMENTAL ASSOCIATES, INC.

- g) For all asbestos removal activities, the minimum PPE required shall be Disposable full body coveralls such as Tyvek material suits and Full-Face Powered Air Purifying Respirators (PAPR's) when working in the regulated abatement area(s), as well as in or around the waste dumpster.
- h) The contractor shall follow proper removal procedures at all times in accordance with Specification section 02081. All asbestos containing materials shall be continually wetted with amended water during removal procedures. Dry removal of asbestos will not be permitted. Asbestos waste material must be adequately wet and the bags shall be goose necked and sealed with duct tape prior to being removed from the work area(s). Boards or mirrors with ACM Mastic adhered to them may either have the mastics removed from them or the entire board or mirror may be wrapped as asbestos waste and disposed of with the mastic intact. ACM Drying Racks may be wrapped or bagged if small enough.
- i) All asbestos containing or contaminated materials are to be removed from the work area(s) packaged as asbestos waste in two (2) layers of 6-mil or thicker polyethylene bags or wrapped in 2 independent layers of 6-mil or thicker polyethylene sheeting and properly labelled with Danger Asbestos warning labels and generator labels. Additional packaging may be employed to minimize cutting or tearing of the 2 required 6-mil layers of packaging. As a minimum, CLEAR waste bags are to be used on the second outer bag, unless the waste is being drummed. Packaging is to be decontaminated by wet wiping as it exits the regulated work area(s).
- j) After complete removal and final cleaning of all asbestos containing materials throughout the work area(s), the owner's representative and contractor's supervisor will inspect the work area(s). Once the work area(s) pass a visual inspection and contain no visible asbestos debris, then encapsulation of the work area(s) shall occur prior to running final air tests.
- k) Aggressive final air tests will be performed by the owner's representative using aggressive PCM clearance sampling protocol since the building is being demolished. While not required, several PCM finals will be run to ensure any workers entering the work area(s) following deregulation of the work area(s) will not be exposed to asbestos above the PEL. NO AHERA TEM finals will be run since the building is being demolished. PCMs will be collected at flow rates between 5 and 15 liters per minute, and volumes will be at least 800 liters for each sample. Samples will be analyzed in the lab and results reported within 1 business day.

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**4.0 REMOVAL OF ACM JOINT COMPOUNDS (and plasters if encountered – none currently known)**

- a) Where ACM Joint Compounds or Plasters are to be removed in rooms with floor tile or other ACM removal, the containment for the other removal work will be sufficient and once the containment is approved for removal, the ACM Joint Compounds or Plasters may be removed along with the other materials. All other ACMs should be removed prior to the removal of the ACM Joint Compounds or Plasters in case the removal of the ACM Joint Compounds or Plasters results in diminished negative air pressure differential.
- b) Where ACM Joint Compounds or Plasters are to be removed in rooms without other ACM removal install a three-stage decon, equipped with shower attached to each work area. The decon will be erected in such a manner as to allow for separate equipment room/bag-out off to the side or the bag-out chamber can be placed at a separate location other than the decon unit. All connections to water sources will be protected by back-flow protection devices. All shower water filters will be disposed of as contaminated waste. In no instance will the personnel decon be used as a bag-out/equipment passage. Reference section 01563 for specific requirements of decontamination units.
- c) Set up HEPA filtered air filtration devices in the work area(s) and have them running during pre-clean and prep stages. All exhaust from HEPA machines must be vented outside the building. Plywood barriers (3/4" minimum) will be used to secure vents / openings where flex duct from HEPA machines is exhausted and will remain overnight.
- d) Pre-clean the work area(s) prior to installing criticals in position. Install two (2) distinct layers of 6 mil polyethylene criticals, on all exterior doorways, operable windows, HVAC registers, and any other openings that lead outside the interior work area(s). Since the building will not be occupied after abatement / before demolition, no containment other than the required criticals is required. Single layer 6-mil polyethylene sheeting walls and/or ceilings may be used to enclose the abatement work area(s) whenever walls or ceilings are not present. Install Plexiglas viewing windows at least 18" by 18" and approximately 5' from the ground at locations where the work area(s) can be viewed from outside the enclosure / containment whenever feasible. Work areas are to be regulated with Barrier tape and Danger Asbestos warning signs to restrict access to the work area(s).
- e) After the enclosure(s) / containment(s) are completed, establish proper negative pressure using High Efficiency Particulate Air (HEPA) filtered local exhaust systems units. Establish and maintain a pressure differential of at least -0.02 inches of water measured on a strip chart recorder or other approved method. The Contractor shall supply a differential pressure manometer that is capable of monitoring and recording on a strip chart. The manometer shall be equipped with an automatically activated alarm system, which will sound a warning if the differential pressure drops below the preset value. All strip charts will be turned in to the owner's representative at the completion of the project. Work will not begin or continue unless an adequate differential pressure is achieved and maintained. Refer to Specification section 01513.

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- f) Once negative pressure is sufficient (-0.02" or better), and the enclosure(s) / containment(s) have been inspected and approved by the owner's representative, then asbestos abatement may begin.
  - g) For all asbestos removal activities, the minimum PPE required shall be Disposable full body coveralls such as Tyvek material suits and Full-Face Powered Air Purifying Respirators (PAPR's) when working in the regulated abatement area(s), as well as in or around the waste dumpster.
  - h) The contractor shall follow proper removal procedures at all times in accordance with Specification section 02081. All asbestos containing materials shall be continually wetted with amended water during removal procedures. Dry removal of asbestos will not be permitted. Asbestos waste material must be adequately wet and the bags shall be goose necked and sealed with duct tape prior to being removed from the work area(s).
  - i) All asbestos containing or contaminated materials are to be removed from the work area(s) packaged as asbestos waste in two (2) layers of 6-mil or thicker polyethylene bags or wrapped in 2 independent layers of 6-mil or thicker polyethylene sheeting and properly labelled with Danger Asbestos warning labels and generator labels. Additional packaging may be employed to minimize cutting or tearing of the 2 required 6-mil layers of packaging. As a minimum, CLEAR waste bags are to be used on the second outer bag, unless the waste is being drummed. Packaging is to be decontaminated by wet wiping as it exits the regulated work area(s).
  - j) After complete removal and final cleaning of all asbestos containing materials throughout the work area(s), the owner's representative and contractor's supervisor will inspect the work area(s). Once the work area(s) pass a visual inspection and contain no visible asbestos debris, then encapsulation of the work area(s) shall occur prior to running final air tests.
  - k) Aggressive final air tests will be performed by the owner's representative using aggressive PCM clearance sampling protocol since the building is being demolished. While not required, several PCM finals will be run to ensure any workers entering the work areas following deregulation of the work areas will not be exposed to asbestos above the PEL. NO AHERA TEM finals will be run since the building is being demolished. PCMs will be collected at flow rates between 5 and 15 liters per minute, and volumes will be at least 800 liters for each sample. Samples will be analyzed in the lab and results reported within 1 business day.
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**5.0 REMOVAL OF FIRE DOORS**

While it is suspected that there may be ACM Fire Doors within the building, no investigation was able to be done while the building was still in use. Once vacated, Fire Doors may be sampled and if found to be non-asbestos containing, disposed of as construction debris. If testing finds the doors to be asbestos containing (or if no testing is done and they are presumed to be asbestos containing) the doors may be packaged as asbestos waste in two (2) layers of 6-mil or thicker polyethylene bags or wrapped in 2 independent layers of 6-mil or thicker polyethylene sheeting and properly labelled with Danger Asbestos warning labels and generator labels. Packaging is to be decontaminated by wet wiping before leaving the wrapping area. No specialized containment is required for wrapping of fire doors.

**6.0 REMOVAL OF ROOFING MATERIALS**

- a) Install a remote three-stage decon, equipped with shower, in an area convenient to the work area(s). An existing 3-stage decon elsewhere on site may be utilized if it is convenient to the roof work area(s). Remote entry to an existing decon must be clearly identified and the decon work area should not be in active removal at the time of use as a remote decon for the roofing work. All connections to water sources will be protected by Back-flow protection devices. The decon will be erected in such a manner as to be secure (and lockable if erected outside the school structure). Access is to be restricted to authorized personnel only. Entrance and Exit are to be clearly marked. A cleanroom / changing area of sufficient size to allow changing and storage of workers street clothes is to be a part of design of the location and construction of the decon. If outside the school structure, the decon is to be constructed out of wood or metal studs and protected by ½ inch minimum plywood walls and doors on all sides to discourage after-hours access or damage by non-authorized individuals. If outside the school structure the decon unit is also to be SECURED / ANCHORED to the ground (or roof). All shower water filters will be disposed of as contaminated waste. Please reference section 01563 for specific requirements of decontamination units.
- b) The perimeter of the building in the area of the active abatement that is accessible to pedestrians walking by will be secured and barricaded off at least ten (10) feet out from the building at all times during abatement activity, except for the entrances, by the use of standard "Danger – Asbestos Hazard" barrier / warning tape and warning signs. Signs shall be placed every 15 feet along the barrier tape. In areas where materials will be possibly falling off the roof onto the ground or other roof levels, a minimum of one layer of 6 mil polyethylene sheeting drop cloths are to be installed at the beginning of every shift to catch the debris, and removed and disposed of at the end of every shift.

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- c) The work area for each day shall be demarcated by the use of “Danger – Asbestos Hazard” barrier / warning tape and warning signs fully restricting access to the work area.
  - d) Respiratory protection will be Half-Face, HEPA filtered, Negative Pressure Air Purifying Respirators due to the inherent danger of working at heights, as well as the non-friable nature of the roofing tar being removed. While ascending or descending to or from the work areas, the respirators will be removed from the face for safety.
  - e) Disposable protective clothing such as Tyvek material suits and respirators (PAPR’s) are required when working in the regulated abatement area(s), as well as in or around the waste dumpster. If the decon is located on the roof, single layer protective clothing / suits may be utilized. If the decon is located within the school structure or otherwise away from the roof work area(s), two layers of protective clothing / suits **MUST** be utilized while within the regulated area(s), and the outer layer must be removed and disposed of upon exiting the regulated area(s). The inner layer will then be worn to travel to the remote decon unit, where it will be removed upon entry to the remote decon unit.
  - f) After the general area is secured and the specific work area demarcated, the owner’s representative will conduct a pre-abatement visual inspection of the demarcated work area(s). Once a satisfactory inspection has been completed, removal work may begin. ALL materials will be wetted and maintained in a wet state by the abatement contractor by the use of amended water applied as a fine mist from a sprayer or similar device. (Use of a garden hose directly onto the work area is NOT permitted.) The contractor shall follow proper removal procedures at all times. All asbestos containing materials shall be continually wetted with amended water during removal procedures. **Dry removal of asbestos will not be permitted.** The asbestos containing roofing materials are to be removed completely to the substrate surface (deck, insulation layer, parapet wall, etc.) and completely from the structural component the roofing materials are adhered to. The area(s) is/are to be HEPA vacuumed and no debris is to remain in the removal area(s). ALL asbestos containing roofing materials are to be removed by the abatement contractor from the roof area(s).
  - g) Waste materials are to be regularly, promptly and properly packaged. Packaging is to be sufficient so as to not be punctured or damaged by handling. NESHAP labels are to be affixed PRIOR to the waste leaving the roof. If bags are used, they shall be double bagged and sealed in a goose neck fashion before being taken out of the work area(s). As a minimum, **CLEAR** waste bags are to be used on the second outer bag, unless the waste is being drummed. (If the material is to be disposed of as non-friable waste BOTH bags must be clear.) Packaging is to be decontaminated by wet wiping while still on the roof and lowered to the ground by a hoist, enclosed chute, hand carried, or other means, NOT dropped or thrown from the roof. No waste is to be accumulated or stored on the roof. Any waste materials that have fallen from the roof onto polyethylene drop cloths below must also be promptly and properly packaged in accordance with this section.

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- n) After complete removal and final cleaning of all asbestos containing material throughout each work area, the owner's representative and contractor's supervisor will inspect each work area. When the complete removal work area(s) pass(es) a visual inspection and contain no visible asbestos debris, the area(s) will be deregulated and the abatement crew will remove all abatement equipment and supplies from the work area(s). No unauthorized personnel will be allowed in the demarcated roof area under abatement until ALL contaminated waste has been removed and all asbestos abatement workers have left the demarcated roof work area(s).
  - i) NO Final air tests will be performed as this is not required. Clearance will be by visual inspection only. Deregulation of the regulated area(s) will not proceed until final visual inspections have passed and been documented by the owner's representative.

**NOTE:** The abatement Contractor will follow all current OSHA regulations **when working near the roof's edge**. During the performance of roofing work on flat or low-pitched roofs with a ground to eave height greater than 16 feet, workers engaged in such work shall be protected from falling from all unprotected sides and edges of the roof as follows:

#### ROOF EDGE MATERIALS HANDLING AREAS AND MATERIALS STORAGE.

Workers working in a roof edge materials handling or storage area located on a low-pitched roof with a ground to eave height greater than 16 feet shall be protected from falling by the use of a Motion-stopping-safety (MSS) system along all unprotected roof sides and edges of the area.

- (i) When guardrails are used at hoisting areas, a minimum of four feet of guardrail shall be erected on each side of the access point through which materials are hoisted.
  - (ii) A chain or gate shall be placed across the opening between the guardrail sections when hoisting operation are not taking place.
  - (iii) When guardrails are used at bitumen pipe outlets, a minimum of four feet of guardrail shall be erected on each side of the pipe.
  - (iv) When safety belt systems are used, they shall not be attached to the hoist.
  - (v) When safety belt systems are used they shall be rigged to allow the movement of workers only as far as the roof edge.
  - (vi) Materials may not be stored within six feet of the roof edge unless guardrails are erected at the roof edge.
  - (vii) Materials which are piled, grouped, or stacked shall be stable and self-supporting.
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TRAINING

- (i) The employer shall provide a training program for all employees engaged in roofing work so that they are able to recognize and deal with the hazards of falling associated with working near a roof perimeter. The employees shall also be trained in the safety procedures to be followed in order to prevent such falls.
- (ii) The employer shall assure that employees engaged in roofing work have been trained and instructed in the following areas:
  - (a)The nature of fall hazards in the work area near a roof edge;
  - (b)The function, use, and operation of the MSS system, and the safety monitoring systems to be used;
  - (c)The correct procedures for erecting, maintaining and disassembling the systems to be used;
  - (d)The role of each employee in the safety monitoring system when this system is used;
  - (e)The limitations on the use of mechanical equipment; and
  - (f)The correct procedures for the handling and storage of equipment and materials.
- (iii) Training shall be provided for each newly hired employee, and for all other employees maintain proficiency in the areas listed above.

FALL PROTECTION PLAN

It will the responsibility of the abatement contractor to have a written Fall Protection plan in accordance with OSHA 29 CFR 1926, in place prior to any roof work beginning. The written Fall Protection plan must be brought to and kept on site. It will be the responsibility of the abatement supervisor to have read and fully understood all parts of the Fall Protection plan, inform all workers about the plan, and ensure all part of the plan are being continually implemented while roof and/or elevated work is ongoing.

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**7.0 REMOVAL OF PIPE INSULATION FROM UNDER SOIL OR SLAB (open air, not within building)**

- a) Install a remote three-stage decon, equipped with shower, in a secure area convenient to the work area(s) (may be within the abatement contractor's cube truck). An existing 3-stage decon elsewhere on site may be utilized if it is convenient to the work area(s). Remote entry to an existing decon must be clearly identified and the decon work area should not be in active removal at the time of use as a remote decon for the outdoor pipe insulation work. All connections to water sources will be protected by Back-flow protection devices. The decon will be erected in such a manner as to be secure (and lockable if erected outside the school structure). Access is to be restricted to authorized personnel only. Entrance and Exit are to be clearly marked. A cleanroom / changing area of sufficient size to allow changing and storage of workers street clothes is to be a part of design of the location and construction of the decon. If outside the school structure, the decon is to be constructed out of wood or metal studs and protected by ½ inch minimum plywood walls and doors on all sides to discourage after-hours access or damage by non-authorized individuals. If outside the school structure the decon unit is also to be SECURED / ANCHORED to the ground. All shower water filters will be disposed of as contaminated waste. Please reference section 01563 for specific requirements of decontamination units.
- b) The general contractor, demo contractor, or sub-contractor will demo the building down to the slab and then pull the concrete slab back exposing limited access crawlspace / tunnel areas or soil with buried piping.
- c) Regulate and restrict access to the exposed crawlspace / trench / soil work area(s) utilizing Asbestos Barrier Tape and Danger Asbestos Signs.
- d) Respiratory protection will be Full-Face, HEPA filtered, Powered Air Purifying Respirators (PAPR). Body coverings will be double layer Tyvek or equivalent disposable coveralls with hoods and feet. The outer layer body coverings will be removed at the perimeter of the regulated area(s) and the workers will proceed to the remote decon wearing the inner layer body covering. PPE is required when working in the regulated abatement area(s).
- e) Install 6-mil polyethylene sheeting drop cloths wherever feasible under all areas of the asbestos pipe insulation being removed, as well as on the ground in the immediate vicinity of the asbestos being removed.
- f) After the regulated area(s) and drop cloth placement is complete, glove-bags shall be installed and properly sealed over the pipe insulation where cuts in the pipe are to be made for wrap and cut removal. If the materials are to be removed in their entirety then the entire length of material is to be glove-bagged. Once the glove-bags and the regulated area(s) have been inspected and approved by the owner's representative, and an Asbestos Waste Dumpster or Delaware Solid Waste approved waste vehicle is on site, then abatement may begin.

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- g) The contractor shall properly remove the asbestos utilizing the glove-bag method at the cut areas (or the entire length of the material if wrap and cut is not being utilized) and clean the removal substrate before taking down the glove bag.
  - h) For wrap and cut, once the pipe insulation has been removed from the pipe cut areas and the substrate is clean, the remaining pipe insulation and pipe is to be wrapped with two layers of 6-mil polyethylene sheeting and sealed. Once wrapped the pipe may be cut at the clean pipe areas where glove-bag removal has been performed, and the wrapped sections removed from the regulated area(s) after being wiped down and properly labeled.
  - i) The contractor shall follow proper removal procedures at all times. All asbestos containing materials shall be continually wetted with amended water during removal procedures. **Dry removal of asbestos will not be permitted.**
  - j) All asbestos waste and debris shall be regularly cleaned up and stored in industry standard waste bags, drums, or other appropriate containers with NESHAP labels affixed to them. All asbestos waste shall be double bagged and sealed in a goose neck fashion before being taken out of the work area. Packaging is to be decontaminated by wet wiping as it exits the regulated work area(s). As a minimum, **CLEAR** waste bags are to be used on the second outer bag, unless the waste is being drummed or wrapped. The use of clear waste bags is required for the outer / second bag to facilitate the visual confirmation that the waste is double bagged.
  - k) All ACM waste will be bagged out at the end of each workday and stored in a lockable waste storage container.
  - l) After removal is complete the drop cloths are to be removed and bagged as contaminated waste. The crawlspace / trench / soil will then be decontaminated of any pre-existing debris and contamination and then HEPA vacuumed and fine cleaned of all asbestos containing materials throughout the work area(s), the owner's representative and contractor's supervisor will inspect the work area(s). Once the work area(s) pass(es) a visual inspection and contains no visible asbestos debris, then encapsulation of the work area(s) shall occur.
  - m) NO Final air tests will be performed by the owner's representative since the removal is being performed open air and not within an enclosure.
  - n) All workers are to decontaminate in the three stage remote decon prior to leaving site each day.
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**• SELECTED HIGHLIGHTED STANDARD REQUIREMENTS AND SAFETY ITEMS**

(This list includes items from throughout the specification which are particularly important and are being emphasized to ensure awareness of and compliance with them during the project.)

- **DOCUMENTS AND INFORMATION REQUIRED ON SITE** – The following information **MUST** be on site in order for any prep or abatement activities occur: DNREC 10 Day Notification, Supervisor and Worker Badges, Current Medical Clearance and Fit Test Records, Safety Procedures, Evacuation Plan, Emergency Phone Numbers, MSDS information, Worker Acknowledgement Certificates, and Equipment Certification.
- **BADGE REQUIREMENTS** - All workers must have a current State of Delaware Asbestos Supervisor or Worker Badge on site in order to work on this project – **no exceptions**.
- **MINIMUM WORK FORCE** – A minimum of three (3) personnel, including one (1) supervisor and two (2) workers or supervisors will be on site at ALL times when abatement related work under this specification is occurring, unless waived in writing by Facilities Management. Examples of exceptions to this are during mobilization and de-mobilization.
- **PPE FOR ALL REMOVAL ACTIVITIES** – Tyvek or equivalent coveralls/suits with pull over hoods & feet. For roof work **abatement activities only** the minimum **respiratory PPE** will be **Half-Face Negative Pressure Air Purifying Respirators**. For All Other abatement activities **Full-Face Powered Air Purifying Respirators (PAPR)** will be the minimum respiratory PPE.
- **BACK-FLOW PROTECTION DEVICES** - Back-Flow Protection Devices are **required to be used each time** the contractor makes **temporary water connections or taps into a public water system** (owner’s water supply) to supply his work area, or decon shower (hot & cold) per section 01503 of specification.
- **GROUND FAULT PROTECTION** - Contractor shall use **GFCI protection** on all **electrical connections** for this Project. The contractor may use a **temporary distribution panel** with GFCI breakers or outlets, or use **3-wire extension cord** with **GFCI** to connect to existing electrical outlets in facility.
- **TOOLS & EQUIPMENT** - All tools & equipment must meet **OSHA standards** or must be removed from site.
- **ELECTRICAL LIGHTS, TOOLS & EQUIPMENT** - Electrical lights, and electrical tools and equipment in the work area shall be **water resistant** with **3-wires (or a double insulated piece of equipment with a manufacturer’s OEM two prong cord if approved for use in damp locations)** and equipment in the work area shall be **grounded** and **utilize a GFCI**.
- **FIRE EXTINGUISHERS** - Contractor shall provide a minimum of one **fire extinguisher** for every **2,500 SF** of containment and one fire extinguisher outside the containment near the decon.

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- **FIRST AID KIT** – Contractor shall provide a stocked **first aid kit** in accordance with **29 CFR 1926**.
- **DECONTAMINATION UNITS** - units will be constructed in accordance with **section 01563** of this specification.
- **DANGER SIGNS** -Proper **OSHA Danger signs** will be posted at all the **entrances** to the **regulated areas**.
- **DECONTAMINATION UNIT WASTE WATER** - will be disposed of in accordance with **section 01563** of this specification.
- **WASTE BAGS** - All **ACM waste bags** must be **double-bagged, goose necked, sealed with duct tape**, and affixed with **NESHAP labels** prior to placing in waste container. For materials to be disposed of as **Non-Friable** waste, **BOTH bags** must be **clear**. For all **other asbestos waste**, the **first** (interior) **bag** must be black, yellow, or other **solid color**, with the **second** (exterior) **bag** being **clear**. This will enable **verification** of the use of **two bags** without requiring opening of packaged waste.
- **STOP WORK ORDER** - If at any time the Contractor is found to not be in compliance with the guidelines of this specification then a **STOP WORK ORDER** will be issued. **Work will cease** until **corrective measures** are taken to **bring the work practices** back in **compliance** and work may not continue until **approval** is granted by the **Owner's Representative**.
- **FINAL AIR TEST RESULTS** – **PCM** clearance analysis results will be achieved within **twenty-four (24) hours** from the time the samples are collected. **Aggressive air sampling** protocol will be employed. The **abatement contractor** will **supply leaf blowers & fans** for aggressive sampling.
- **IF CLEARANCE TESTING FAILS** - then the **Contractor** may be **charged** for the cost of **additional air testing**.
- **LAND FILL & CHAIN OF CUSTODY** - The building owner **directs** the contractor to utilize an **EPA approved landfill** to **dispose** of the **asbestos waste**. The contractor is to provide the owner's representative with the **completed waste manifest / chain of custody** as well as the **landfill receipts**. **Transportation** and **disposal** of **asbestos waste** shall occur within **forty-five (45) days** of removal.
- **VEHICLES OR TRANSPORTATION CONTAINERS** – All **vehicles** or **transportation containers** used for transportation of **asbestos waste** (i.e. dumpsters) will be **lined** on the inside **sides** and the **floor** of the **waste area** with one **(1) layer of 6-mil plastic sheeting** to be **removed** and properly **disposed** of with the **load of asbestos waste**.

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**1.3 ASBESTOS-CONTAINING MATERIALS:**

The Work of this contract involves activities that will disturb asbestos-containing materials (ACM). The location and type of ACM known to be present at the worksite is set forth in the Schedule of Asbestos-Containing Materials at the end of this section. If any other ACM or PACM is found, notify the Owner, or Owner's Representative about the location and quantity of the ACM or PACM within 24 hours of the discovery.

**1.4 ASBESTOS HEALTH RISK:**

Where in the performance of the work, workers, supervisory personnel, subcontractors, or consultants may encounter, disturb, or otherwise function in the immediate vicinity of any identified ACM, take appropriate continuous measures as necessary to protect all building occupants from the risk of exposure to airborne asbestos. Such measures shall include the procedures and methods described herein, and compliance with regulations of applicable federal, state and local agencies.

**1.5 CONTRACTOR USE OF PREMISES**

- A. Use of the Site:** Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the work is indicated.
- 1. Owner Occupancy:** Allow for Owner occupancy and use by contractors.
  - 2. Driveways and Entrances:** Keep driveways and entrances serving the premises clear and available to the Owner, the Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- B. Use of the Existing Building:** Maintain the existing building in a weather tight condition throughout the construction period. Repair damage caused by construction operations. Take all precautions necessary to protect the building and its occupants during the construction period.
- 1. Smoking:** Smoking or open fires will not be permitted within the building enclosure or on the premises.
  - 2. Toilet Rooms:** Except for toilet rooms designated for use by the Contractor's personnel, use of existing toilets within the building by the Contractor's personnel will not be permitted.



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**1.6 OCCUPANCY REQUIREMENTS**

- A. Partial Owner Occupancy:** The Owner reserves the right to occupy and to place and install equipment in completed areas of the building prior to Substantial Completion, provided such occupancy does not interfere with completion of the Work. Such placing of equipment and partial occupancy shall not constitute acceptance of the total Work.
1. The Owner's Representative will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied prior to Owner occupancy.

**1.7 AIR MONITORING BY THE OWNER:**

- A. The Owner has contracted for air monitoring.** Air monitoring may be conducted both outside and inside of the work areas during the work, and for clearance sampling at the end of the project.
1. **Outside of the Work Area:** The Owner's air monitoring firm may sample air outside of the work area to detect faults in the work area isolation such as:
    - a. Contamination of the building outside of the work area with airborne asbestos fibers,
    - b. Failure of filtration or rupture in the differential pressure system,
    - c. Contamination of air outside the building envelop with airborne asbestos fibers.
  2. **Inside the Work Area:** The Owner's air monitoring firm may monitor airborne fiber counts in the Work Area. The purpose of this air monitoring is to detect airborne asbestos concentrations that may challenge the ability of the Work Area isolation procedures to protect the balance of the building or outside of the building from contamination by airborne fibers.
- B. Work area clearance:** Clearance air sampling by the Owner's air monitor at the completion of asbestos abatement work is described in Section 01711 Project Decontamination.
- C. Air monitoring** required by OSHA is the responsibility of the Contractor and is not covered in this section.

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**1.8 SCHEDULE OF AIR SAMPLES BY OWNER:**

**A. Sample cassettes:** Samples will be collected on 25 mm. cassettes as follows:

1. **PCM:** 0.8 micrometer mixed cellulose ester.
2. **TEM:** 0.45 micrometer mixed cellulose ester or 0.40 micrometer polycarbonate, with 5.0 micron mixed cellulose ester backing filter.

**B. Number and Volume of Samples:** The number and volume of air samples given in the schedules is approximate. The exact number and volume of samples collected by the Owner's Representative may vary depending upon job conditions and the analytical method used.

**C. Sample Volume and Sensitivity:**

1. **PCM:** The sample volumes collected by the Owner's air monitor will be determined by the following formula:

$$\frac{(\# \text{ fibers in sample} - \# \text{ fibers in blank}) 385\text{mm}^2}{(\text{Vol Liters})(1000)(0.00785\text{mm}^2)(\# \text{ fields})} = \text{fibers/cc}$$

Where: Number of fibers = Actual # of fibers observed/100 fields, with a minimum of 5.5 fibers/100 fields, based on a limit of detection (LOD) of 7 fibers/mm<sup>2</sup> on the filter.

Area of 100 fields = 0.785mm<sup>2</sup>

Total Filter Area = 385mm<sup>2</sup>

Limit Value = as specified in the schedules of samples below

- a. For purposes of this specification, the sample volume calculated above will be considered to be of sufficient size so that there is a 95% level of confidence that the value measured by each individual sample at the limit of detection (LOD) is less than or equal to the limit values specified below.
  - b. For purposes of this specification, the Limit of Detection (LOD) is defined as 7 fibers/mm<sup>2</sup> on the filter or 5.5 fibers/100 fields.
  - c. For purposes of this specification overloaded samples will be considered as exceeding the applicable limit value.
2. **TEM:** Analytical Sensitivity of 0.05 structures/cc as set forth in the AHERA regulation.

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**Base Line (pre-samples):**

1. **Before Start of Work:** The Owner will secure air samples to establish a base line.

2. **PCM Samples**

Location Sampled	Number of Samples	Limit Value (Fibers/cc)	Approx. Volume (Liters)	Rate (Liters/Minute)
Each Work Area	1	0.01	1,000	1-10
Outside Each Work Area	1	0.01	1,000	1-10

3. **TEM Samples:**

Location Sampled	Number of Samples	Analytical Sensitivity (Struct./cc.)	Approx. Volume (Liters)	Rate (Liters/Minute)
Each Work Area	1	0.005	1,300	1-10
Outside Each Work Area	1	0.005	1,300	1-10

4. **Base Line:** a level expressed in fibers per cubic centimeter which is twenty-five percent greater than the largest of the following:

- a. Average of the PCM samples collected outside each Work Area
- b. Average of the PCM samples collected outside the building
- c. 0.01 fibers per cubic centimeter

5. **Samples collected for TEM analysis** will be held without analysis. These samples will be analyzed under the conditions and terms set forth in "Fibers Counted" and "Effect On Contract Sum".

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**F. Daily:**

1. **From start of work** of Section 01526 Temporary Enclosures through the work of Section 01711 Project Decontamination, the Owner may take samples.
2. **Sample volume and sensitivity:** inside the work area may vary depending upon conditions in the work area. If samples are overloaded at the sample volume required for a limit value equal to the Stop Action Levels or Immediate Stop Action Levels given later in this section, the level is considered to have been exceeded.

**3. PCM Samples:**

Location Sampled	Number of Samples	Limit Value (Fibers/cc)	Approx. Volume (Liters)	Rate (LPM)
Each Work Area	2	0.01	1,000	1-10
Outside Each Work Area at Critical Barrier	2	0.01	1,000	1-10
Clean Room	1	0.01	1,000	1-10
Equipment Decon	1	0.01	1,000	1-10
Outside Building	1	0.01	1,000	1-10
Output of Pressure Differential System	1	0.01	1,000	1-10

- F. Additional samples** may be taken at Owner's or Owner's Representative discretion. If airborne fiber counts exceed allowed limits additional samples may be taken as necessary to monitor fiber levels.

**1.9 ANALYTICAL METHODS USED BY THE OWNER:**

- A. The following methods will be used by The Owner in analyzing filters used to collect air samples. Sampling rates may be varied from printed standards to allow for high volume sampling.
1. Phase Contrast Microscopy (PCM) will be performed using the NIOSH 7400 method.
  2. Transmission Electron Microscopy (TEM) may be performed using the analysis method set forth in the AHERA regulation 40 CFR Part 763 Appendix A.

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**1.10 LABORATORY TESTING BY OWNER:**

- A. **The services of a testing laboratory** may be employed by the Owner to perform laboratory analyses of the air samples. A technician will be at the job site, and samples will be sent daily by carrier for next day delivery so that verbal reports on air samples can be obtained within 24 hours.
- A. **A complete record** of all air monitoring and results will be furnished to the Owner's Representative, the Owner, and if requested, the Contractor.
- B. **The Contractor will have access** to all air monitoring tests and results upon request.
- D. **Written Reports:** of all air monitoring tests will be posted at the job site on a daily basis.

**1.11 FIBERS AND STRUCTURES**

- A. **Fibers Counted:** The following procedure will be used to resolve any disputes regarding fiber types when a project has been stopped due to excessive airborne fiber counts.
  - 1. **Large Fibers:** "Airborne Fibers" referred to above include all fibers regardless of composition as counted by phase contrast microscopy (PCM), unless additional analysis by transmission or scanning electron microscopy demonstrates to the satisfaction of the Designer that non-asbestos fibers are being counted. "Airborne Fibers" counted in samples analyzed by transmission electron microscopy shall be asbestos fibers, greater than 5 microns in length. For purposes of stop action levels, subsequent to analysis by electron microscopy, the number of "Airborne Fibers" shall be determined by multiplying the number of fibers, regardless of composition, counted by PCM by the proportion of fibers that are asbestos as determined by TEM (a number equal to, asbestos fibers counted, divided by all fibers counted in the electron microscopy analysis).
  - 2. **Small Structures:** "Airborne Fibers" referred to above include asbestos structures (fibers, bundles, clusters or matrices) of any diameter and any length greater than 0.5 microns.

**1.12 ADDITIONAL TESTING:**

- A. **The Contractor may conduct** air monitoring and laboratory testing. If he elects to do this, the cost of such air monitoring and laboratory testing shall be at no additional cost to the Owner.

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### 1.13 PERSONAL MONITORING:

- A. **Owner will not perform** air monitoring for the Contractor to meet Contractor's OSHA requirements for personal sampling or any other purpose.

### 1.14 MISCELLANEOUS PROVISIONS

A project checklist has been provided in Appendix C of the Facilities Management Environmental Emergency specification package. This checklist is not intended to take the place of any regulations, specifications or directions, but is supplied to assist the Contractor.

**The following inspections must be performed during the project phases indicated.**

- 1- Pre-cleaning : A visual inspection of all pre-cleaned surface areas must be **performed by the Contractor's supervisor and the Owner's representative simultaneously.** This inspection will occur prior to the installation of polyethylene covering of walls, floors, and other surfaces.
- 2- Post removal : A visual inspection of each work area must be performed following successful clearance air sampling and prior to commencing tear-down. **This inspection is to be performed by the Contractor's supervisor and the Owner's representative simultaneously.**
- 3- Substantial completion: After each project is complete, including any applicable demolition, re-insulation, or cleaning, a final inspection will be **performed by the Contractor's supervisor and the Owner's representative simultaneously** before turning the work area over to the Owner.

Ten-day notifications are now only required to the State of Delaware Department of Natural Resources and Environmental Control (DNREC). If due to the immediacy of an emergency it becomes necessary to perform work within the notification period, the Owner's Representative will contact the proper authorities to request a waiver of the ten-day period. All Contractors, workers, and supervisors must be State of Delaware Certified. (See Section 01098).

All electric power shall be shut down, locked and tagged out in the work areas that is possible. The Owner may supply temporary electrical source or the contractor may have to supply generators. Contractor is responsible for making proper electrical connections. Protect each circuit with a Ground Fault Circuit Interrupter (GFCI) of proper size located in the temporary panel. Outlet type GFCI devices may be used when approved by the Owner's Representative.

Temporary water service - Contractor must provide their own water supply and ensure proper back-flow protection. Hot water heater will be supplied by the Contractor (See Section 01503)

Contractor must ensure the integrity of the enclosure and decontamination facility. Inspection windows are required for each enclosure where feasible. (See Section 01526).

All workers must have their current State of Delaware Asbestos Worker Badge as well as a copy of their current medical in order to work at the project site (this includes set-up and tear down, no exceptions).



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Contractor will provide extra, new respirators, disposable overalls, head covers, and footwear covers for use by authorized visitors. All decontamination procedures are to be strictly adhered with. A signed copy of the Certificate of Workers Acknowledgment must be obtained from each worker (See Section 01560).

Three stage personnel decontamination units are required for each contained work area. An equipment decontamination unit consisting of the following arrangement of rooms, Clean Room, Holding Room, Wash Room for the removal of equipment and material from the Work Area, is required. Personnel are not to enter or exit the Work Area through the Equipment Decontamination Unit (See Section 01563).

The Contractor is to provide a list of products he intends to use during this project (See Section 01601).

Substitutions for specified products will be considered if received within 3 weeks prior to beginning work affected by the substitution. Requests received less than 3 weeks before commencement of affected work may be considered or rejected at the discretion of the Owner's representative (See Section 01632).

**Final Cleaning** - before requesting inspection for Certification of Substantial Completion, the work area as well as any affected areas must be cleaned and in a condition suitable to the Building Owner or Owner's Representative (See Section 01712).

**Areas designated as contaminated** - after complete removal of asbestos-containing material, all affected surfaces shall be decontaminated using a combination of HEPA vacuum and wet cleaning techniques. All non-visible asbestos residue shall be encapsulated with a coating of American Coatings Corp. 22-P Penetrating Encapsulant or equivalent product applied in strict accordance with the manufacturer's directions. Before spraying encapsulant, check with Owner's Representative, do not indiscriminately spray all surfaces. (See Section 01712).

**Work area clearance** – Clearance air sampling will incorporate aggressive PCM clearance sampling protocol since the building will be demolished and not occupied following abatement. The Contractor will encapsulate prior to running final clearance samples. PCM analytical results will be available within 24 hours of sample collection, or sooner if needed. In the event that any final clearance samples fail, the abatement contractor may be responsible for the cost associated with re-running and analysis of those samples (Section 01711).

All asbestos-containing material shall be wetted with amended water during abatement. **DRY REMOVAL OF ASBESTOS WILL NOT BE TOLERATED.** (Section 02081)

\* All Asbestos waste must be disposed of at an EPA approved landfill, site to be approved by the building owner. The Contractor is to provide the Owner's Representative with the completed chain of custody as well as the landfill receipts (See Section 02084).

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The work includes the removal of asbestos-containing materials according to the requirements of the following specification section sections in the sequence indicated:

**General and Administrative Requirements** are set forth in the following specification sections:

- 01013 Summary of the Work - Asbestos Abatement
- 01043 Project Coordination - Asbestos Abatement
- 01097 Reference Standards and Definitions - Asbestos Abatement
- 01601 Materials and Equipment - Asbestos Abatement
- 01632 Product Substitutions
- 01701 Project Closeout - Asbestos Abatement

**Abatement Work** requirements are set forth in the following specification sections, listed here according to the sequence of the work:

01098 Codes, Regulations and Standards - Asbestos Abatement: sets forth governmental regulations and industry standards which are included and incorporated herein by reference and made a part of the specification. This section also sets forth those notices and permits which are known to the Owner and which either must be applied for and received, or which must be given to governmental agencies before start of work.

01503 Temporary Facilities - Asbestos Abatement: sets forth the support facilities needed such as electrical and plumbing connections for the decontamination unit.

01560 Worker Protection - Asbestos Abatement: describes the equipment and procedures for protecting workers against asbestos contamination and other workplace hazards except for respiratory protection.

01562 Respiratory Protection: sets forth the procedures and equipment required for adequate protection against inhalation of airborne asbestos fibers.

01563 Decontamination Units: explains the setup and operation of the personnel and material decontamination units.

**Asbestos Removal Work Procedures** are described in the following specification sections:

- 02063 Removal of Asbestos Contaminated Materials
- 02081 Removal of Asbestos-Containing Materials
- 02084 Disposal of Asbestos Containing Waste Material
- 02085 Resilient Flooring Removal – Mfg recommended Work Practices
- 02087 Resilient Flooring Removal – Aggressive Asbestos Abatement

**Decontamination of the Work Area** after completion of abatement work is described in the following sections:

- 01701 Project Closeout: details the closeout procedures to end the project once abatement work is complete including final paperwork requirements.
- 01711 Project Decontamination: describes the sequence of cleaning and decontamination procedure to be followed during removal of the sheet plastic barriers isolating a work area.
- 01712 Cleaning and Decontamination Procedures: sets forth procedures to be used on contaminated objects and rooms which are not part of an abatement work area.

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**PLAN OF ACTION:**

Submit a detailed plan of the procedures proposed for use in complying with the requirements of this specification. Include in the plan the location and layout of decontamination areas, the sequencing of asbestos work, the interface of trades involved in the performance of work, methods to be used to assure the safety of building occupants and visitors to the site, disposal plan including location of approved disposal site, and a detailed description of the methods to be employed to control pollution. Expand upon the use of portable HEPA ventilation system, closing out of the building's HVAC system, method of removal to prohibit visible emissions in work area, and packaging of removed asbestos debris. The plan must be submitted at the Pre-Work Meeting and approved by the Owner's Representative prior to commencement of work.

**INSPECTION:**

**Prior to commencement of work**, inspect areas in which work will be performed. Prepare a listing of damage to structure, surfaces, and equipment or of surrounding properties that could be misconstrued as damage resulting from the work. Photograph or videotape existing conditions as necessary to document conditions. Submit to Owner's Representative prior to starting work.

**PART 2 - PRODUCTS (Not Applicable)****PART 3 - EXECUTION****3.1 STOP ACTION LEVELS:**

- A. Inside Work Area:** Maintain an average airborne count in the work area of less than the Stop Action Level given below for the type of respiratory protection in use. If the fiber counts rise above this figure for any sample taken, revise work procedures to lower fiber counts. If the Time Weighted Average (TWA) fiber count for any work shift or 8 hour period exceeds the Stop Action Level, stop all work except corrective action, leave pressure differential and air circulation system in operation and notify the Owner's Representative. After correcting cause of high fiber levels, do not recommence work for 24 hours unless otherwise authorized, in writing, by the Owner's Representative.

STOP ACTION LEVEL (f/cc)	IMMEDIATE STOP LEVEL (f/cc)	MINIMUM RESPIRATOR REQUIRED	PROTECTION FACTOR
0.5	2.5	PAPR	100
1.0	5.0	Supplied Air	1000

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1. If airborne fiber counts exceed Immediate Stop Level given above for type of respiratory protection in use for any period of time cease all work except corrective action. Notify Owner's Representative. Do not recommence work until fiber counts fall below Stop Action Level given above for the type of respiratory protection in use. After correcting cause of high fiber levels, do not recommence work for 24 hours unless otherwise authorized in writing by Owner's Representative.

**B. Outside Work Area:** If any air sample taken outside of the Work Area exceeds the base line established in Part 1 of this section, immediately and automatically stop all work except corrective action. The Owner's Representative will determine the source of the high reading and so notify the Contractor in writing.

1. If the high reading was the result of a failure of Work Area isolation measures initiate the following actions:
  - a. Immediately erect new critical barriers as set forth in Section 01526 Temporary Enclosures to isolate the affected area from the balance of the building. Erect Critical Barriers at the next existing structural isolation of the involved space (e.g. wall, ceiling, floor).
  - b. Decontaminate the affected area in accordance with Section 01712 Cleaning & Decontamination Procedures.
  - c. Require that respiratory protection as set forth in Section 01562 Respiratory Protection be worn in affected area until area is cleared for re-occupancy in accordance with Section 01711 Project Decontamination.
  - d. Leave Critical Barriers in place until completion of work and insure that the operation of the pressure differential system in the Work Area results in a flow of air from the balance of the building into the affected area.
  - e. If the exit from the clean room of the personnel decontamination unit enters the affected area, establish a decontamination facility consisting of a Shower Room and Changing Room as set forth in Section 01563 Decontamination Units at entry point to affected area.
  - f. After Certification of Visual Inspection in the Work Area remove critical barriers separating the work area from the affected area. Final air samples will be taken within the entire area as set forth in Section 01711 Project Decontamination.

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2. If the high reading was the result of other causes initiate corrective action as determined by the Owner's Representative.
    - a. Due to construction activities occurring outside the regulated work area there is likely to be high air sample counts outside the work area due to this work activity. Baseline samples should be used to establish a basis to determine what the background counts are during construction activity prior to the start of this project.

### 3.2 STOP WORK:

- A. If the Owner or Owner's Representative** presents a written stop work order, immediately and automatically conform to that stop work order, while maintaining temporary enclosures and pressure differential. After being presented with a stop work order, immediately initiate the following actions:
1. Cease all asbestos removal activities, or any other activities that disturbs ACM.
  2. Repair any fallen, ripped or otherwise failed work area isolation measures.
  3. Maintain in operation all work area isolation measures including those required by Sections 01526 Temporary Enclosures, 01513 Temporary Pressure Differential & Air Circulation System, 01563 Decontamination Units.
  4. Maintain all worker protections including those required by Sections 01560 Worker Protection - Asbestos Abatement, and 01562 Respiratory Protection.
  5. Fog the air in the work area with a mist of amended water to reduce airborne fiber levels.

**Do not recommence work** until authorized in writing by the Owner's Representative.

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## SCHEDULE OF ASBESTOS CONTAINING MATERIALS

The following asbestos containing materials are known to be present at the worksite:

CSD- BANCROFT SCHOOL BEA# 1063022

<u>Material</u>	<u>Locations</u>	<u>Quantity</u>	<u>Content</u>
9"x 9" Floor Tile	1.21, 1.25, 1.36, 1.38, 1.41, 1.42, 1.43, 1.44, 1.46, 1.47, 1.59, 2.26, 2.38, 2.44, 3.20	21,700	2 to 3% Chrysotile
9"x 9" F.T. Mastic	1.21, 1.25, 1.36, 1.38, 1.41, 1.42, 1.43, 1.44, 1.46, 1.47, 1.59, 2.26, 2.38, 2.44, 3.20	21,700	NAD
9"x 9" Floor Tile	1.62, 1.63, 1.67, 1.68	4,500	2% Chrysotile
9"x 9" F.T. Mastic	1.62, 1.63, 1.67, 1.68	4,500	5% Chrysotile
12"x 12" Floor Tile	1.01, 1.02, 1.11, 1.12, 1.13, 1.14, 1.15	3,400	NAD
12"x 12" F.T. Mastic	1.01, 1.02, 1.11, 1.12, 1.13, 1.14, 1.15	3,400	3% Chrysotile
12"x 12" Floor Tile	1.52	1,600	3% Chrysotile
12"x 12" F.T. Mastic	1.52	1,600	4% Chrysotile
Drying Racks	3.07, 3.15	10 SF	35% Chrysotile
Sink Undercoating	2.20	1 EA	8% Chrysotile
Pipe Insulation	0.01– Boiler Room, 0.02- Boiler Room Custodial Storage Room	20 LF known 500 LF or more may be in walls and under slab	8% Chrysotile
Board Mastics	1.16, 1.22, 1.23, 1.35, 1.37, 1.39, 1.46, 1.47, 1.59, 1.60, 1.64, 1.66, 2.01, 2.02, 2.03, 2.04, 2.05, 2.06, 2.08, 2.09, 2.10, 2.11, 2.12, 2.14, 2.23, 2.25, 2.26, 2.27, 2.28, 2.30, 2.32, 2.34, 2.36, 3.01, 3.02, 3.03, 3.04, 3.05, 3.06, 3.10, 3.11, 3.12, 3.14	10,600 SF	untested
Mirror Mastics	1.27, 1.28, 1.40, 1.50, 1.53, 2.15, 2.17, 2.18, 2.21, 2.22, 2.41, 2.42, 3.16, 3.17	300 SF	untested
Joint Compound (on Drywall)	1.05, 1.07, 1.10, 1.11, 1.12, 1.13, 1.14, 1.15, 1.16, 1.17, 1.18, 1.23, 1.24, 1.27, 1.29, 1.33, 1.39, 1.40, 1.41, 1.42, 1.43, 1.44, 1.51, 1.52, 1.54, 1.59, 1.60, 1.62, 1.63, 1.64, 1.66, 2.13, 2.14, 2.19, 2.20, 2.23, 2.24, 2.25, 2.27, 2.28, 2.30, 2.31, 2.32, 2.34, 2.35, 2.36, 2.37, 2.38, 2.39, 2.40, 2.43, 2.44, 3.06, 3.07, 3.08, 3.09, 3.15	65,000 SF (of DW)	2-4% Chrysotile
Fire Doors	1.01, 1.11, 1.12, 1.16, 1.19, 1.20, 1.21, 1.24, 1.34, 1.35, 1.36, 1.37, 1.38, 1.39, 1.44, 2.04, 2.05, 2.06, 2.09, 2.11, 2.12, 2.14, 2.15, 2.17, 2.20, 3.04, 3.05, 3.07, 3.09, 3.10, 3.11, 3.13, 3.15, 3.18, 3.19	80 EA	untested
Roof Flashing Tar	At copper flashings Roofs 1, 4, & 6	1,050 SF	8% Chrysotile



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SOME Floor Tile Mastics are non-asbestos and may remain. See Drawings for areas where Mastics are non-asbestos and may remain in place (Areas 1.21, 1.25, 1.36, 1.38, 1.41, 1.42, 1.43, 1.44, 1.46, 1.47, 1.59, 2.26, 2.38, 2.44, 3.20 had no asbestos detected).

All measurements and quantities depicted on the drawings and above are estimates. The Contractor will verify all measurements and quantities.

If any other materials are discovered, which are suspected to be asbestos **containing, the Owner's Representative must be notified immediately.**

**END OF SECTION 01013**

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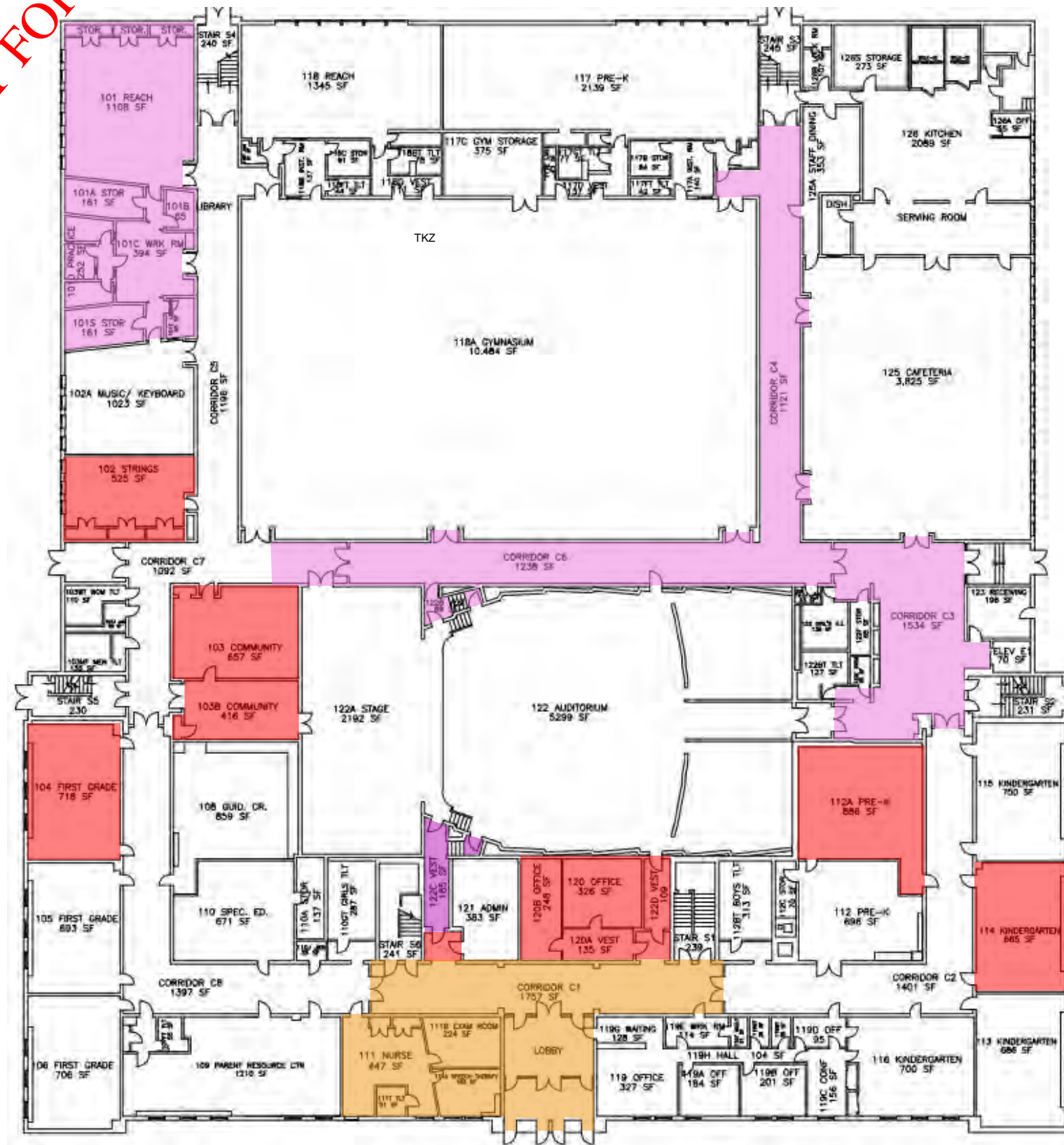
APPENDIX A

PROJECT DRAWINGS

**NOT FOR BID**



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ACM Floor Tile / Non-Asbestos Mastic - approx. 4,900 SF  
 ACM Floor Tile & ACM Mastic - approx. 6,100 SF  
 Non-Asbestos Floor Tile / ACM Mastic – approx. 3,400 SF

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← N. Lombard St. →

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- Industrial Hygiene
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Phone: 410-356-8849

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PROJECT TITLE

**Asbestos Abatement  
Decontamination at  
Bancroft School**

**First Floor  
Floor Tile  
Demolition Abatement  
Summer 2024**

**BEA#1063022  
700 N. Lombard St.  
Wilmington, DE 19801**

**Dwg 1 of 8**

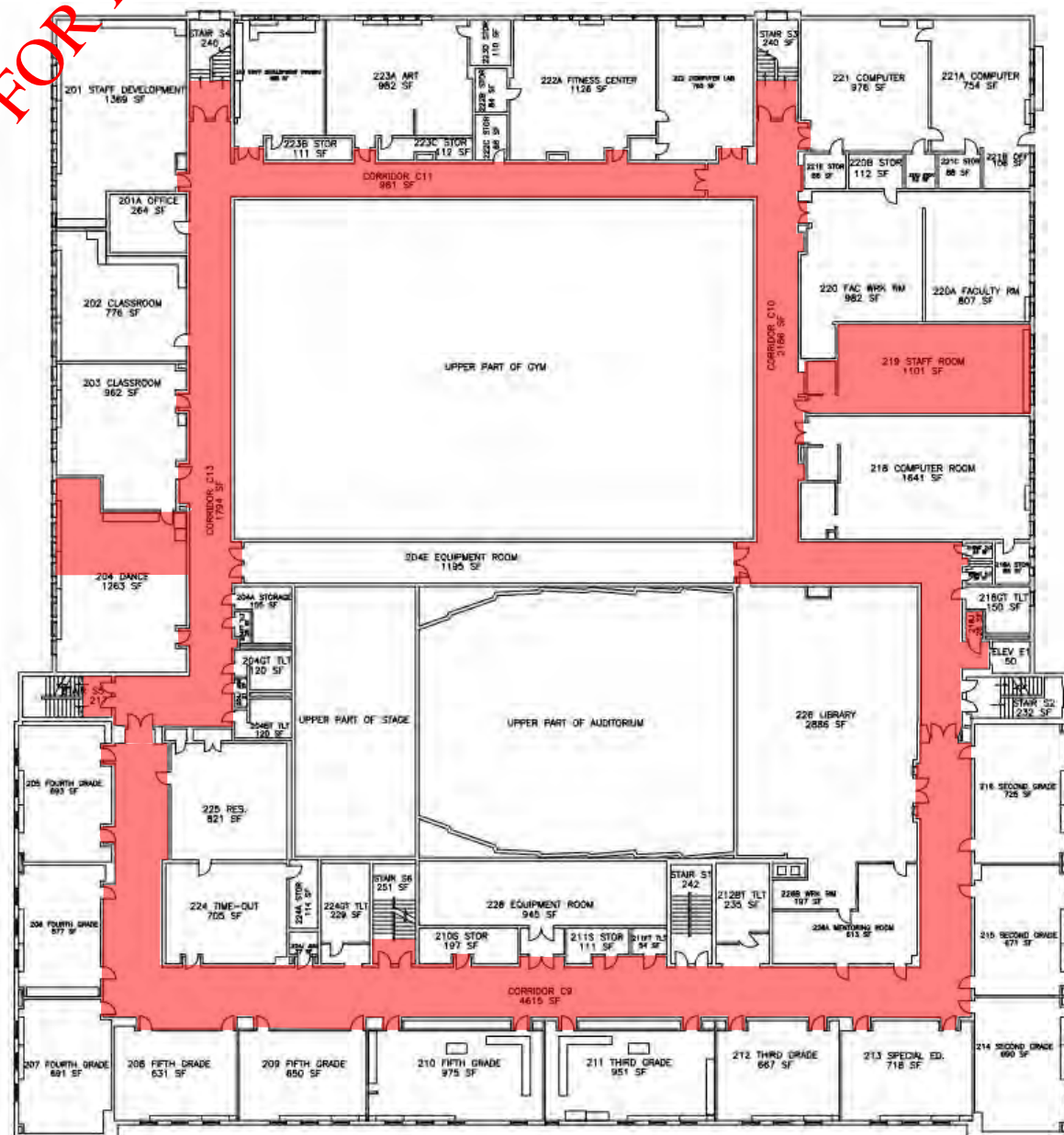
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DATE:	8/25/2023
PROJECT NO.:	1063022
CAD DWG FILE:	1063022-1013
DRAWN BY:	TKZ
CHECKED BY:	NKB
DWG NO.:	1063022-1013-1
REVISION:	
SCALE:	NTS





NOT FOR BID



Second Floor

ACM Floor Tile / Non-Asbestos Mastic - approx. 16,800 SF



Third Floor

← N. Lombard St. →

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**Owings Mills, MD**  
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 Suite 400  
 Owings Mills, Maryland 21117  
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PROJECT TITLE

**Asbestos Abatement  
 Decontamination at  
 Bancroft School**

**Second & Third Floor  
 Floor Tile  
 Demolition Abatement  
 Summer 2024**

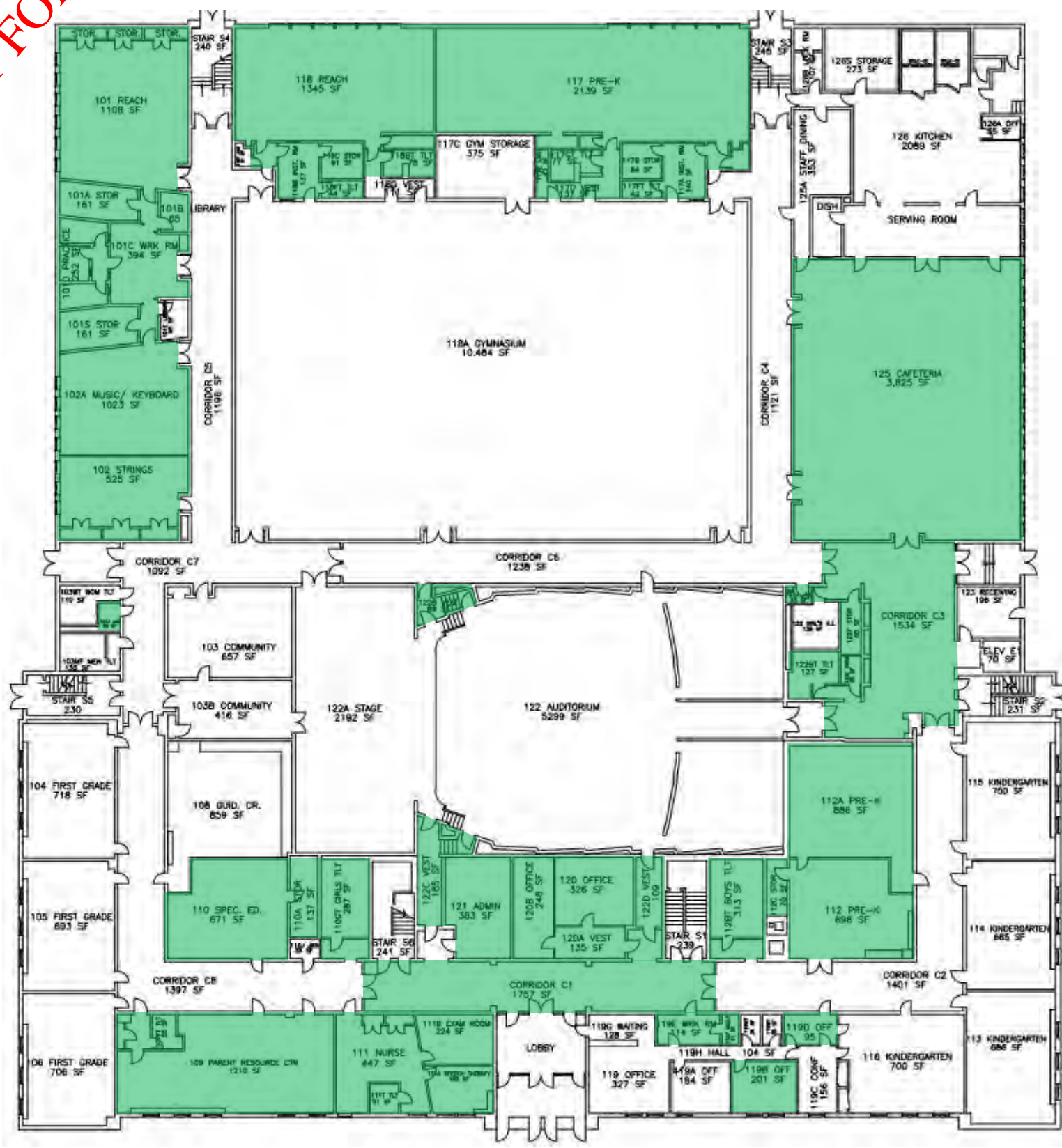
**BEA#1063022  
 700 N. Lombard St.  
 Wilmington, DE 19801**

**Dwg 2 of 8**

DATE	8/25/2023
PROJECT NO.	1063022
CAD DWG FILE	1063022-1013
DRAWN BY:	TKZ
CHECKED BY:	NKB
DWG NO.	1063022-1013-2
REVISION:	
SCALE:	NTS



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ACM Joint Compound on Drywall - Approx. 26,000 SF

← N. Lombard St. →

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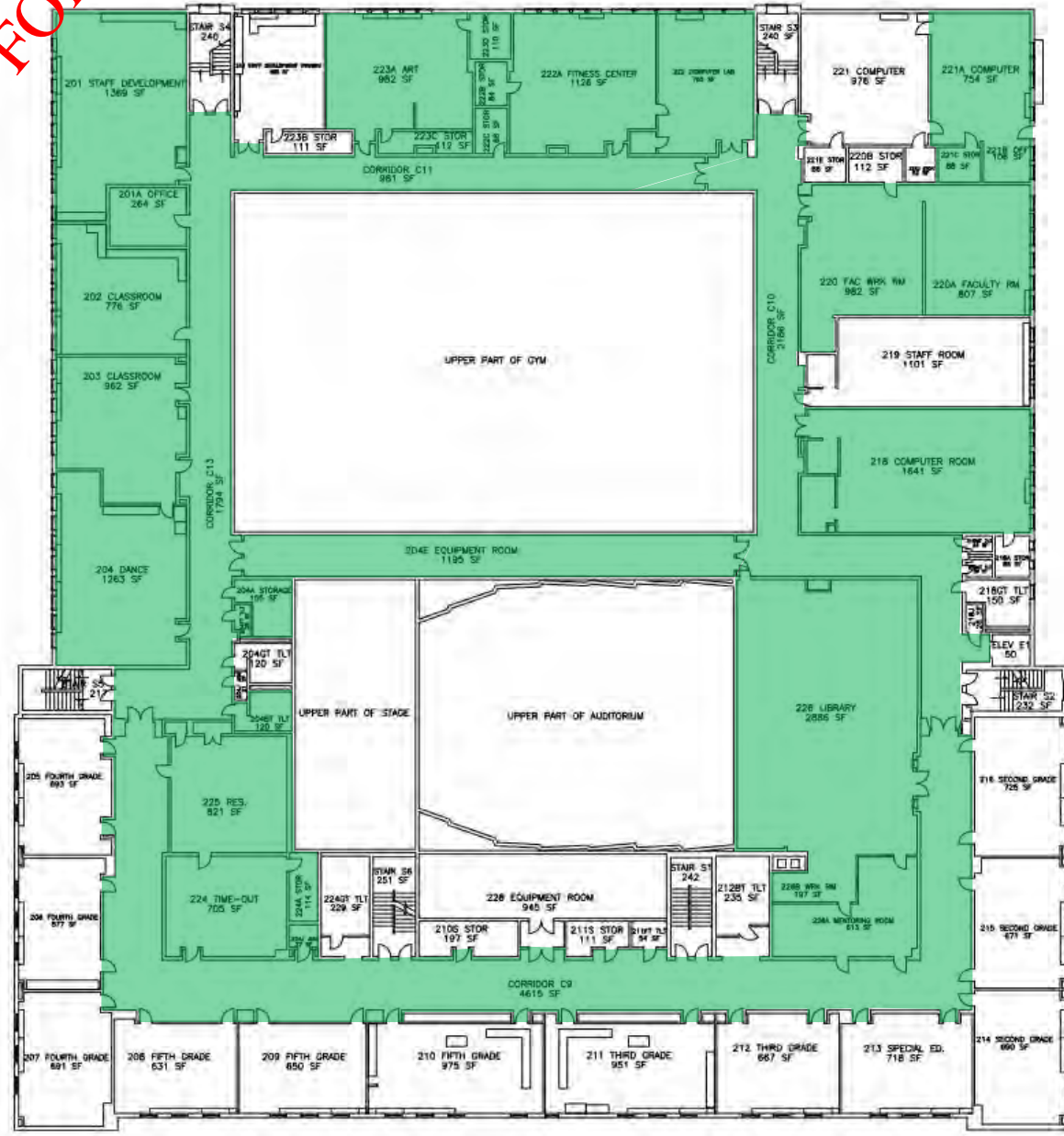
PROJECT TITLE  
**Asbestos Abatement  
 Decontamination at  
 Bancroft School**  
 First Floor  
 Joint Compound  
 Demolition Abatement  
 Summer 2024  
 BEA#1063022  
 700 N. Lombard St.  
 Wilmington, DE 19801  
**Dwg 3 of 8**

DATE:	8/25/2023
PROJECT NO.:	1063022
CAD DWG FILE:	1063022-1013
DRAWN BY:	TKZ
CHECKED BY:	NKB
DWG NO.:	1063022-1013-3
REVISION:	
SCALE:	NTS





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Second Floor

ACM Joint Compound on Drywall - Approx. 39,000 SF



Third Floor

← N. Lombard St. →

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 Fax: 215-569-0216

**Owings Mills, MD**  
 10451 Mill Run Circle,  
 Suite 400  
 Owings Mills, Maryland 21117  
 Phone: 410-356-8849

PROJECT TITLE

**Asbestos Abatement  
 Decontamination at  
 Bancroft School**

**Second & Third Floor  
 Joint Compound  
 Demolition Abatement  
 Summer 2024**

**BEA#1063022  
 700 N. Lombard St.  
 Wilmington, DE 19801**

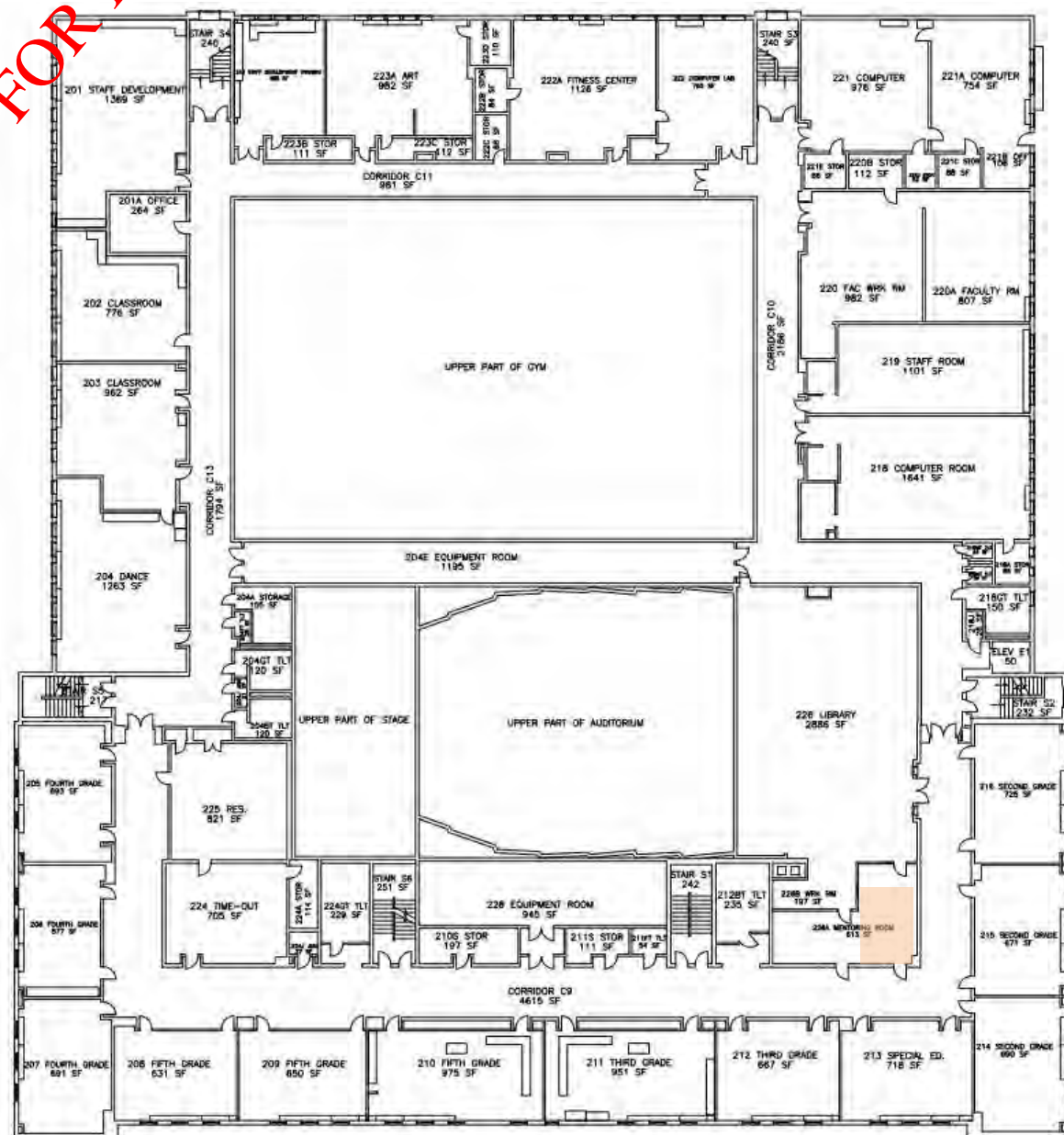
**Dwg 4 of 8**

DATE:	8/25/2023
PROJECT NO.:	1063022
CAD DWG FILE:	1063022-1013
DRAWN BY:	TKZ
CHECKED BY:	NKB
DWG NO.:	1063022-1013-4
REVISION:	
SCALE:	NTS



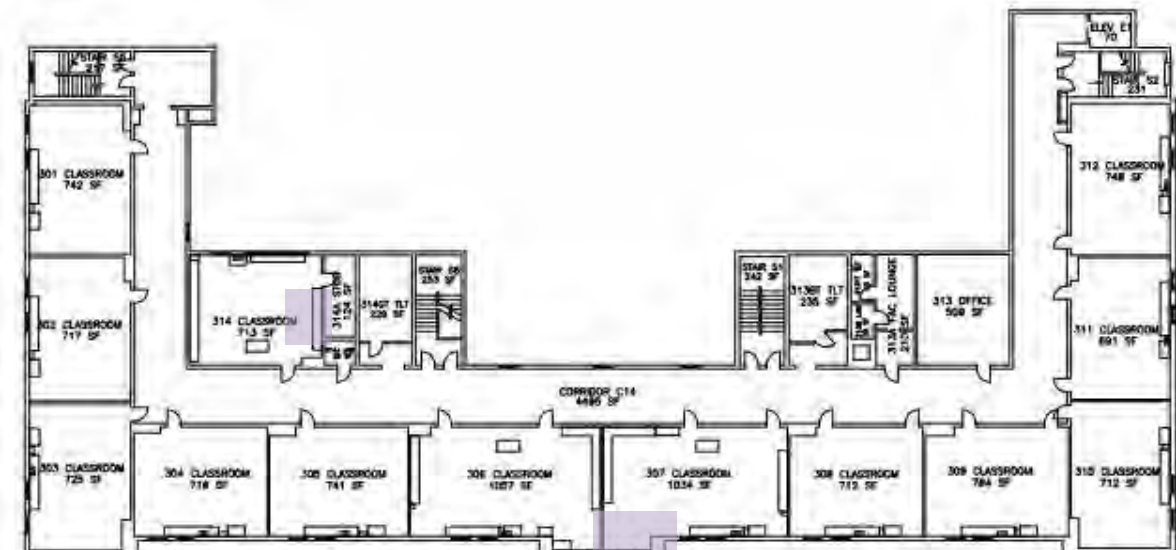


NOT FOR BID



Second Floor

- ACM Drying Racks – 2 each - approx. 10 SF
- ACM Sink Undercoating – 1 each



Third Floor

← N. Lombard St. →

NOT FOR BID



- Geo-Environmental
- Indoor Air Quality
- Industrial Hygiene
- Env. Engineering

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**Owings Mills, MD**  
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 Suite 400  
 Owings Mills, Maryland 21117  
 Phone: 410-356-8849

PROJECT TITLE

**Asbestos Abatement  
 Decontamination at  
 Bancroft School**



**Second & Third Floor  
 Drying Racks & Sink  
 Demolition Abatement  
 Summer 2024**

**BEA#1063022  
 700 N. Lombard St.  
 Wilmington, DE 19801**

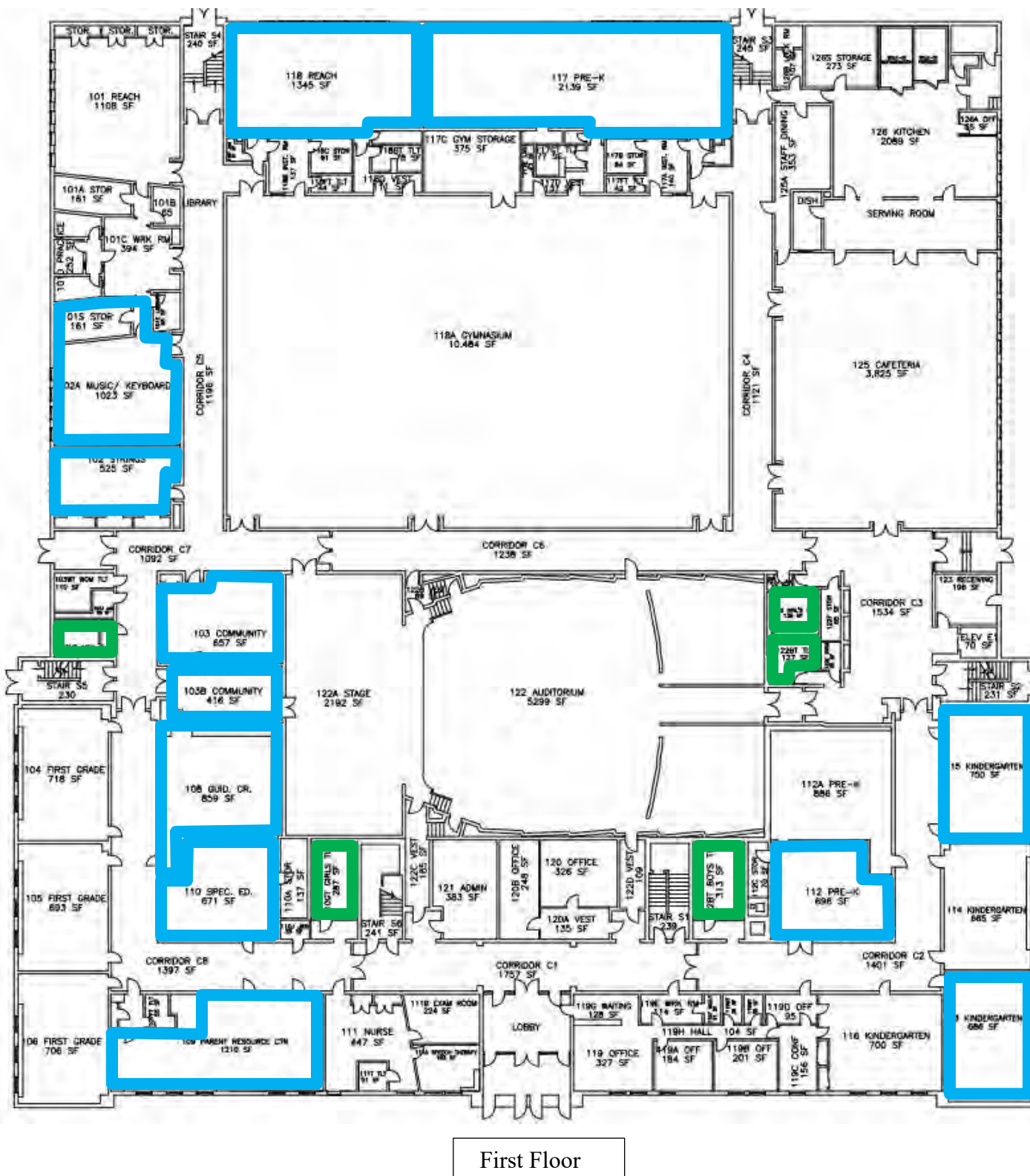
**Dwg 5 of 8**

DATE	8/25/2023
PROJECT NO.	1063022
CAD DWG FILE	1063022-1013
DRAWN BY:	TKZ
CHECKED BY:	NKB
DWG NO.	1063022-1013-5
REVISION	
SCALE	NTS

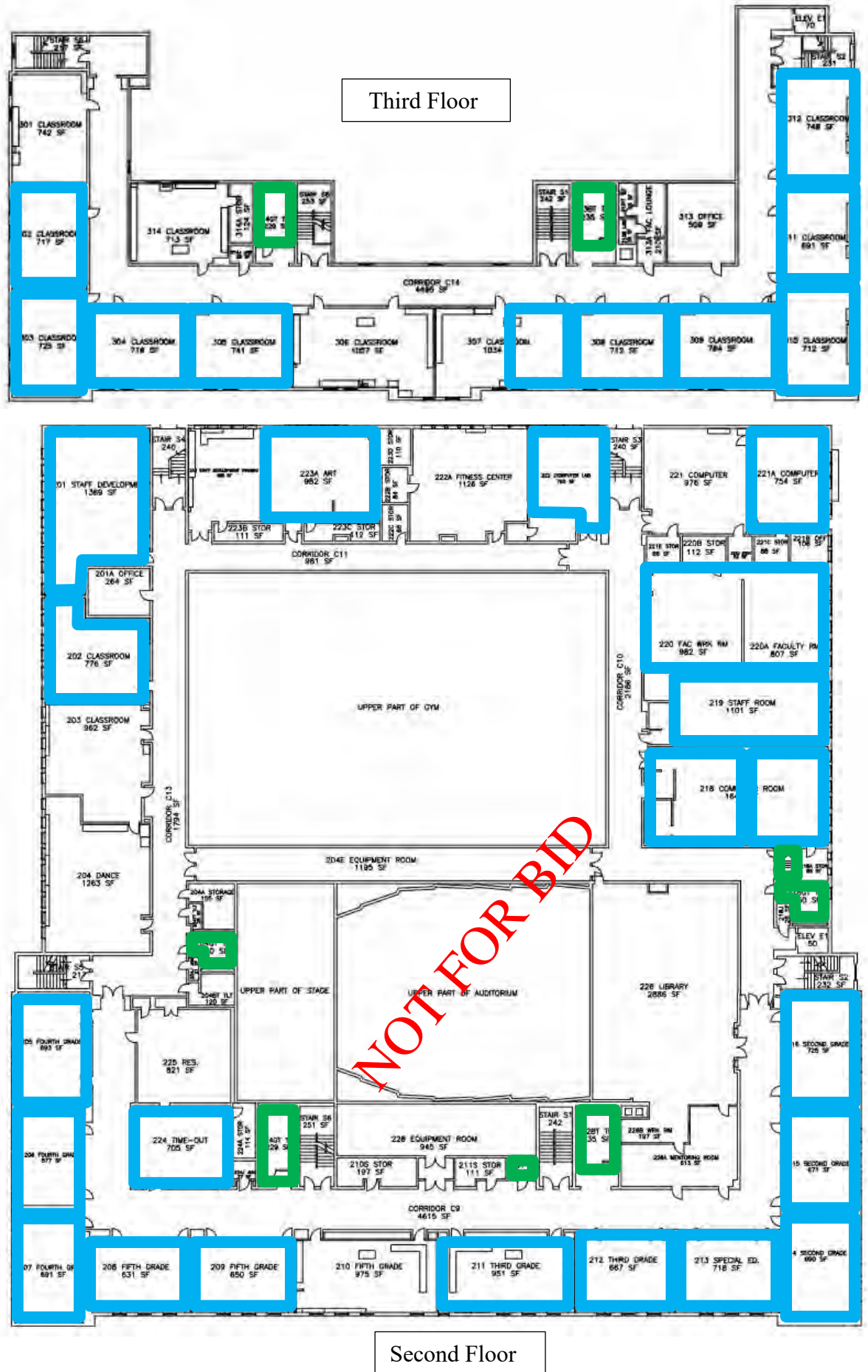


-  Presumed ACM (need testing) Board Mastics – Approx. 10,600 SF
-  Presumed ACM (need testing) Mirror Mastics - Approx. 300 SF

NOT FOR BID



First Floor



Second Floor

NOT FOR BID

← N. Lombard St. →



- Geo-Environmental
- Indoor Air Quality
- Industrial Hygiene
- Env. Engineering

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**Owings Mills, MD**  
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 Phone: 410-356-8849

PROJECT TITLE  
**Asbestos Abatement  
 Decontamination at  
 Bancroft School**  
 All Floors  
**Board & Mirror Mastics  
 Demolition Abatement  
 Summer 2024**  
 BEA#1063022  
 700 N. Lombard St.  
 Wilmington, DE 19801

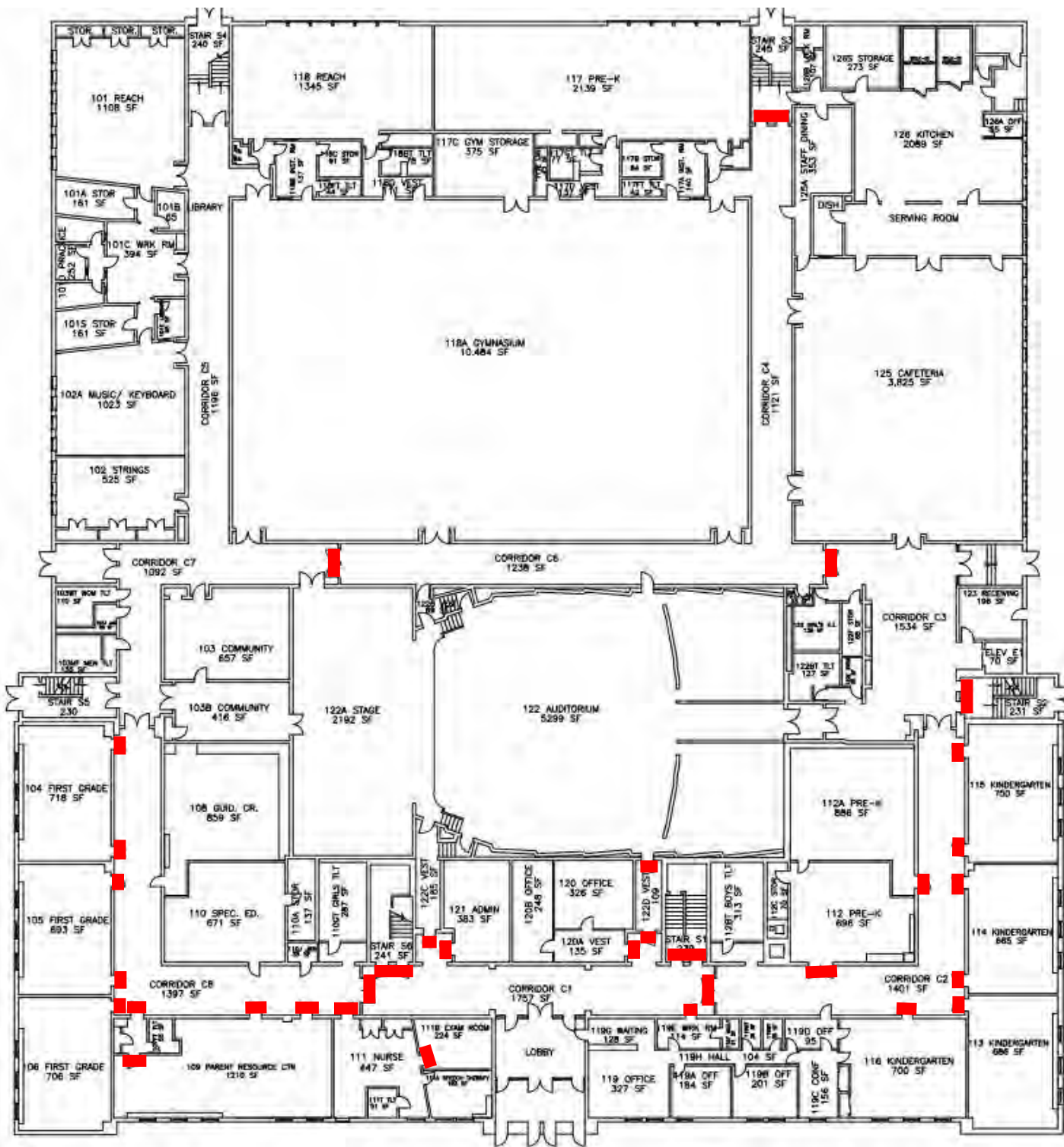
Dwg 6 of 8

DATE	8/25/2023
PROJECT NO.	1063022
CAD DWG FILE	1063022-1013
DRAWN BY:	TKZ
CHECKED BY:	NKB
DWG NO.:	1063022-1013-6
REVISION:	
SCALE:	NTS



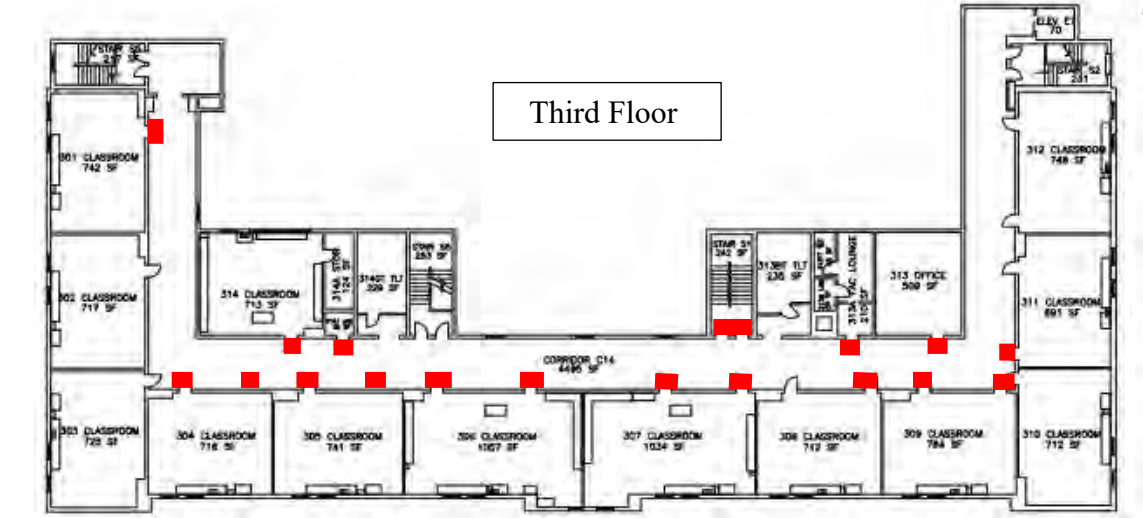
Presumed ACM (need testing) Fire Doors - Approx. 80 each

NOT FOR BID

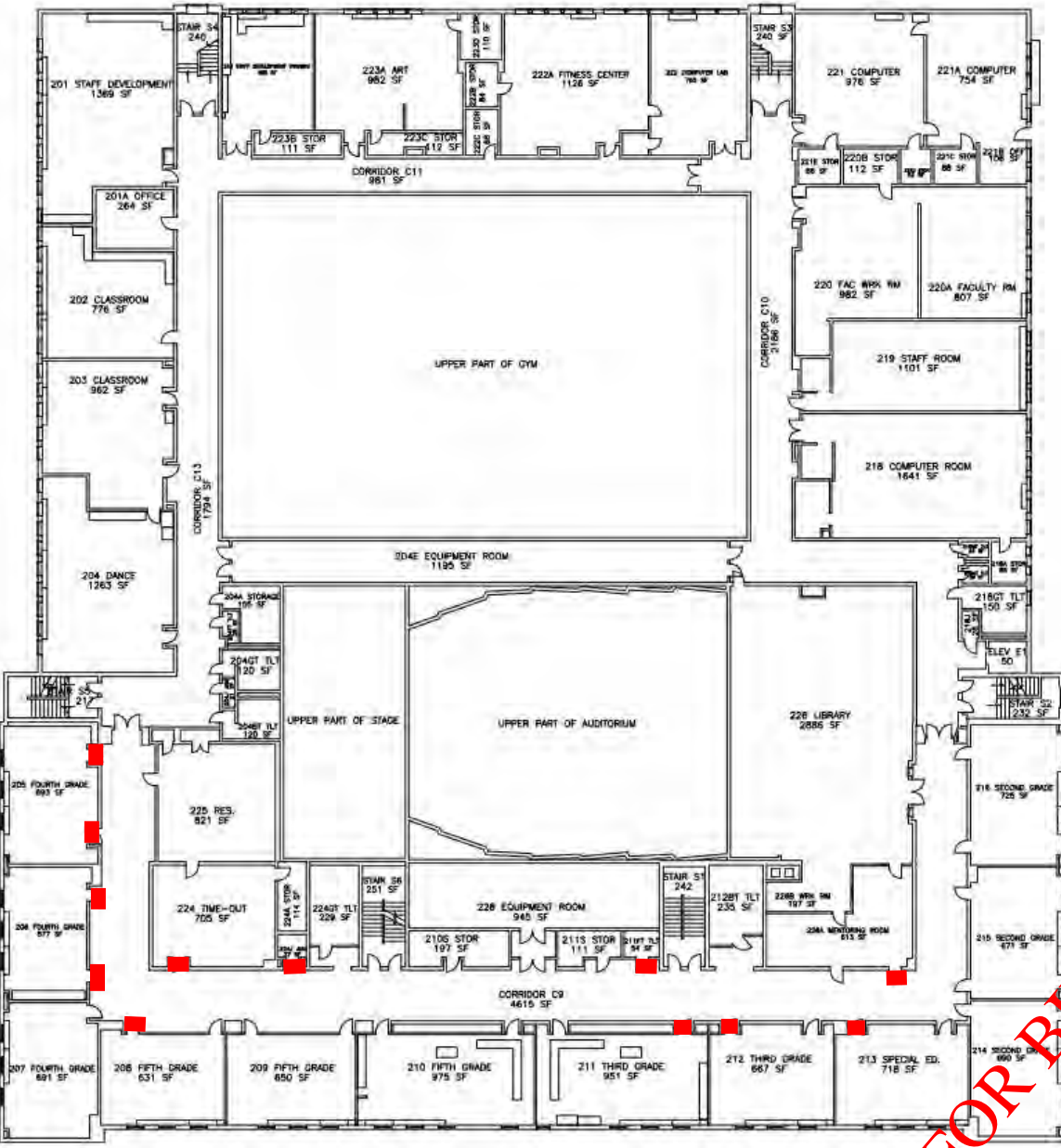


First Floor

← N. Lombard St. →



Third Floor



Second Floor

NOT FOR BID



- Geo-Environmental
- Indoor Air Quality
- Industrial Hygiene
- Env. Engineering

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**Owings Mills, MD**  
 10451 Mill Run Circle,  
 Suite 400  
 Owings Mills, Maryland 21117  
 Phone: 410-356-8849

PROJECT TITLE

**Asbestos Abatement  
 Decontamination at  
 Bancroft School**

**All Floors  
 Fire Doors  
 Demolition Abatement  
 Summer 2024**

**BEA#1063022  
 700 N. Lombard St.  
 Wilmington, DE 19801**

**Dwg 7 of 8**

DATE:	8/25/2023
PROJECT NO.:	1063022
CAD DWG FILE:	1063022-1013
DRAWN BY:	TKZ
CHECKED BY:	NKB
DWG NO.:	1063022-1013-7
REVISION:	
SCALE:	NTS

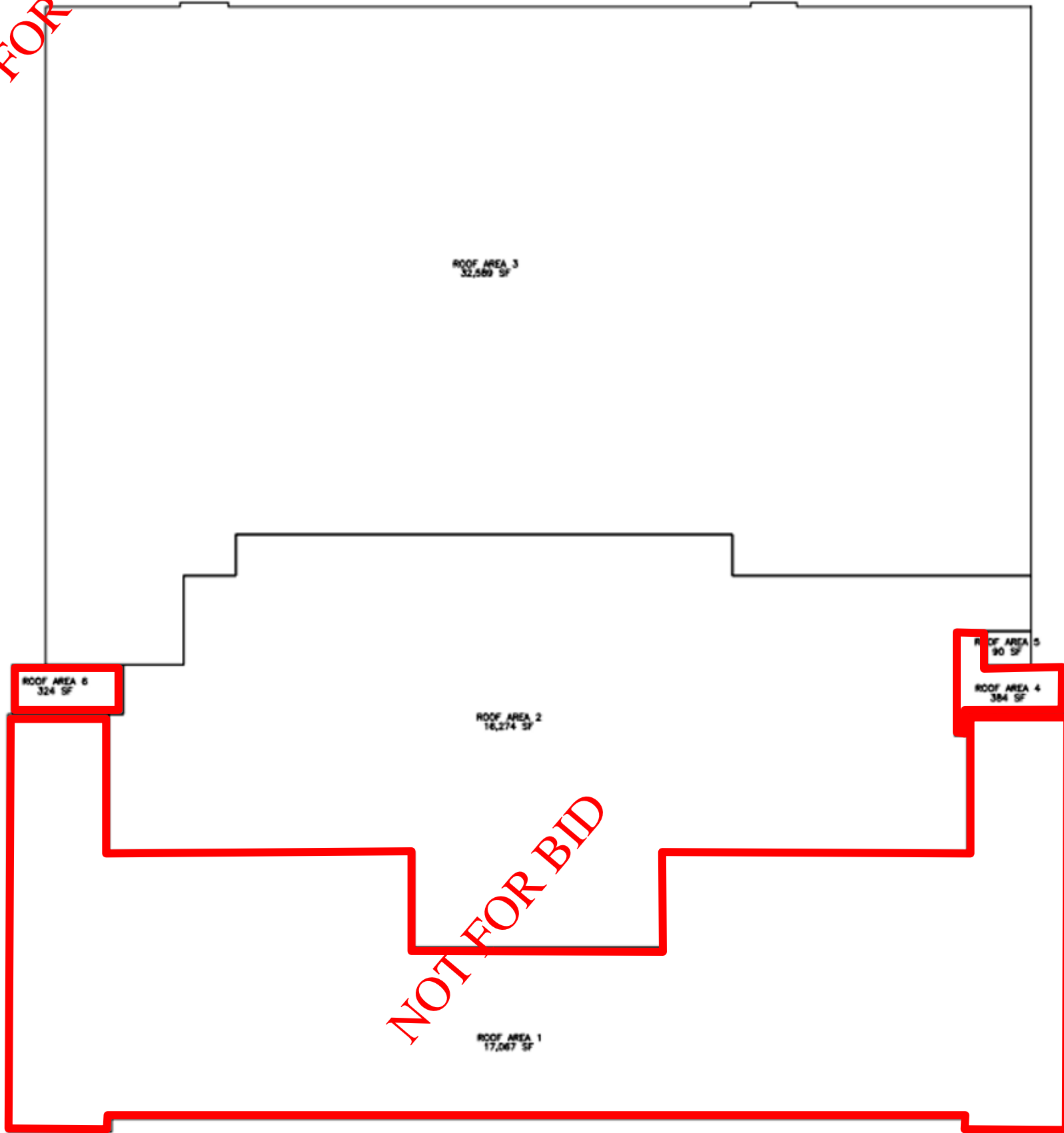




SECTION 02 82 00 – ASBESTOS ABATEMENT

NOT FOR BID

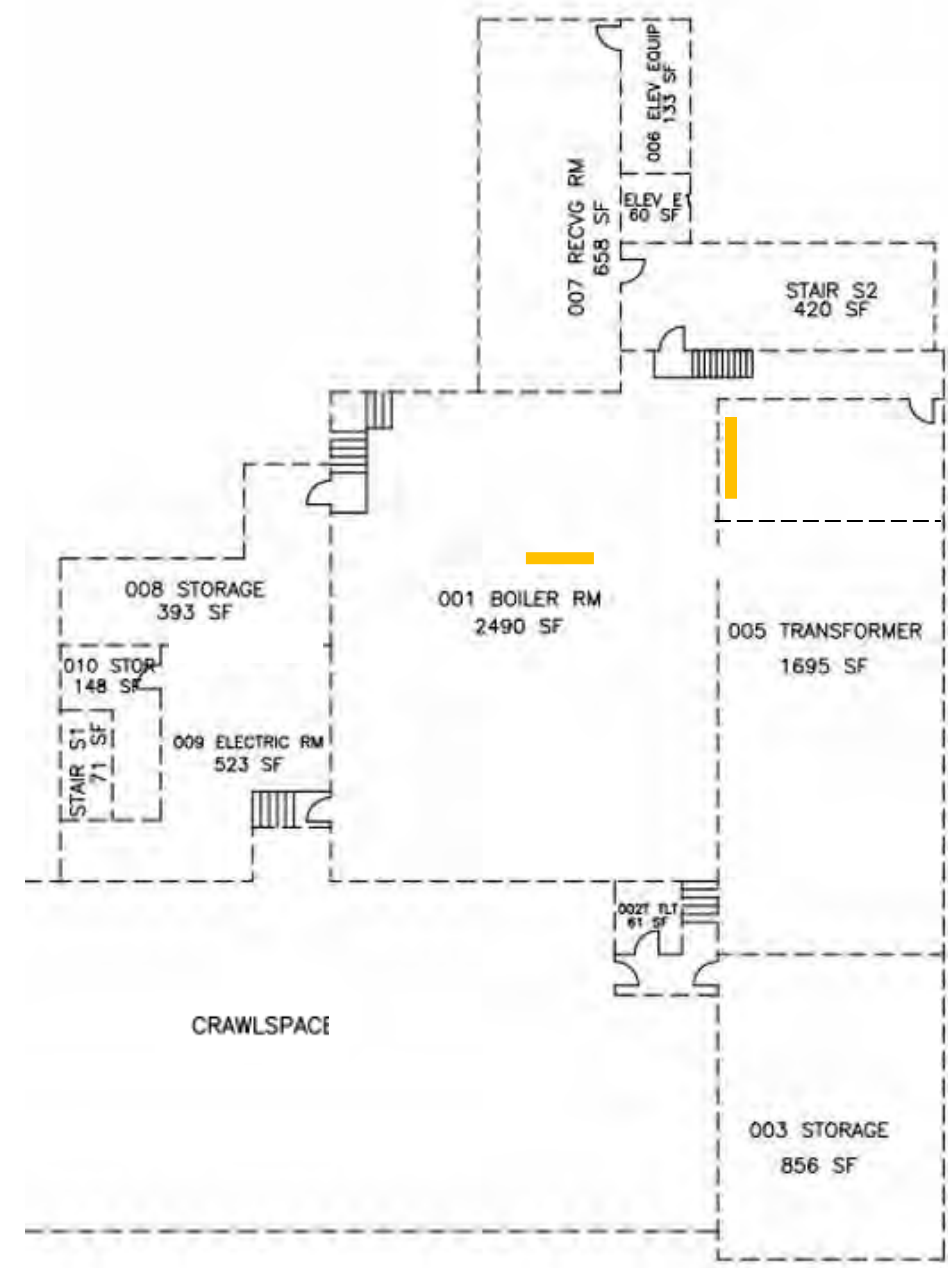
ACM Roof Flashing Tar - Approx. 1,050 SF



Roof

← N. Lombard St. →

ACM Pipe Insulation - 20 LF



Basement

NOT TO SCALE - FOR LOCATION REFERENCE ONLY - NOT FOR ESTIMATING



- Geo-Environmental
- Indoor Air Quality
- Industrial Hygiene
- Env. Engineering

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**Owings Mills, MD**  
 10451 Mill Run Circle,  
 Suite 400  
 Owings Mills, Maryland 21117  
 Phone: 410-356-8849

PROJECT TITLE

**Asbestos Abatement  
 Decontamination at  
 Bancroft School**

**Roof Flashing &  
 Basement Pipe  
 Insulation  
 Demolition Abatement  
 Summer 2024**

**BEA#1063022  
 700 N. Lombard St.  
 Wilmington, DE 19801**

**Dwg 8 of 8**

DATE	8/25/2023
PROJECT NO.	1063022
CAD DWG FILE	1063022-1013
DRAWN BY:	TKZ
CHECKED BY:	NKB
DWG NO.:	1063022-1013-8
REVISION:	
SCALE:	NTS

SECTION 31 10 00 - SITE CLEARING

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Site Clearing shall consist of clearing of the site within the limits of construction to include the following:
1. Removal and disposal of trees and brush, weeds, roots, and similar materials.
  2. Removal and disposal of civil structures, paving, base course, utilities, concrete sidewalks and aprons, and all other obstructions which are designated on the Plans for removal during construction.
  3. Removal and disposal of utilities in coordination with utility companies.
  4. Protection of existing utilities to remain and protection of adjacent property, structures, benchmarks, and monuments.

1.2 STANDARDS

- A. The quality and performance of work specified in this section shall be in accordance with the Delaware Department of Transportation Standard Specifications for Road and Bridge Construction, dated June 2021, latest revision (hereinafter referred to as the "Standard Specifications").
1. Section 201: Clearing and Grubbing
  2. Section 211: Removal of Structures and Obstructions
  3. Section 1047: Flowable Fill

1.3 PHASING

- A. Clearing, grubbing, and removal shall be performed prior to the grading and stripping operations, within the limits of grading, as indicated on the drawings and as specified herein. Following clearing, topsoil shall be stripped and stored for later use on the site or disposition as directed by the Owner.

1.4 PROTECTION

- A. The Contractor shall protect all trees, shrubs, ground plants, roads, walks, pavements, structures, civil improvements, and appurtenances not indicated to be cleared from the site. Methods of protection shall be by use of substantial wood or chain link fences, barriers, or other methods, as approved by the Engineer. Any trees, shrubs, ground plants, roads, walks, pavements, structures, or appurtenances indicated to remain that become damaged during construction of the project shall be repaired or replaced by the Contractor, as directed by the Engineer, at no additional cost to the Owner.
- B. The Contractor shall contact all utility companies to mark the location of their facilities. The contractor shall remove utilities only in coordination with the utility companies. The contractor shall protect all existing utilities to remain in place and shall maintain continuous service to the Owner, as applicable. Any damage to the utilities shall be corrected by the Contractor at his expense. The Contractor shall also be responsible for coordinating and/or relocating any utilities which must be relocated to accommodate the proposed construction.

**PART 2 - PRODUCTS**

**2.1 MATERIALS**

- A. Flowable fill shall meeting the requirements of Section 1047 of the Standard Specifications.
- B. All other materials shall be at the Contractor's option, subject to the approval of the Engineer or the Owner's Representative.

**PART 3 - EXECUTION**

**3.1 CLEARING AND GRUBBING**

- A. Clearing shall consist of the removal of all trees and shrubs, brush, down timber, rotten wood, heavy growth of grass and weeds, vines, rubbish, walks, roads, curbs, walls and foundations, existing utilities already abandoned, and all objectionable debris. All walls, foundations, slabs, pavements, curbs, and footings shall be removed to their full depth.
- B. Grubbing shall consist of the removal of stumps, roots, root mats, stubs, buried logs, and other debris within the project limits. The Contractor shall remove all stumps and root mats in their entirety and all buried logs and other debris from within building areas and from the limits of proposed drives and walks. Within proposed lawn areas, stumps, roots and debris shall be removed to a minimum depth of one foot below design rough grade.
- C. Construction methods shall be in accordance with Section 201 of the Standard Specifications.

**3.2 DISPOSAL OF REMOVED MATERIALS**

- A. All timber and cleared materials shall become the property of the Contractor, and shall be disposed of by the Contractor. Burning of materials on site is prohibited.
- B. Pavement, base course, concrete, utilities, and other obstructions shall be removed from the site and shall be disposed lawfully. The Contractor shall provide evidence of the lawful disposal when requested by the Owner or the Owner's Representative.
- C. Existing building and site materials to be used crushed and reused for fill or backfill shall be subject to the approval of the geotechnical engineer who shall determine their suitability for structural and site backfill.

**3.3 SALVAGED MATERIALS**

- A. Materials listed to be salvaged for reuse shall be stored by the Contractor in such a manner to prevent damage to the material. Salvaged materials which are not reused shall be disposed of lawfully by the Contractor unless the Owner specifically requests to take possession of the material.



3.4 SITE DEMOLITION

- A. Remove walks, roads, curbs, walls and foundations, existing utilities already abandoned, and all objectionable debris. All walls, foundations, slabs, pavements, curbs, and footings shall be removed to their full depth.
- B. Procure all permits required for demolition and disposal. All debris shall be removed and disposed lawfully.
- C. Provide protection for the general public. Disconnect all utilities prior to demolition in areas where live utilities may be located.
- D. Coordinate utility work with utility companies. Disconnect all utilities prior to demolition in areas where live utilities may be located. Fill abandoned utilities with flowable fill when indicated on the Plans.

**END OF SECTION**

**SECTION 31 20 00 - EARTHMOVING**

**PART 1 - GENERAL**

1.1 DESCRIPTION

- A. Provide labor, materials, and equipment necessary to complete the work of this Section, including but not limited to the following:
1. Filling and backfilling to attain indicated grades.
  2. Excavation, rough and finish grading.
  3. Furnishing and installing graded aggregate base course material for pavements, hot-mix patches and other structures.
  4. Undercut excavation and furnishing graded aggregate base course for undercut excavation.
  5. Furnishing excavation support systems, as required, including shoring and bracing.
  6. Excavation for trenches.
  7. Preparing topsoil stripped from the site and placing topsoil in locations requiring seeding or sodding.
- B. Definitions
1. Excavation: removal and disposal of all material encountered when establishing required grade elevations, including pavements and other obstructions visible on the ground surface, and underground structures and utilities indicated to be demolished and removed, and unsuitable subgrade material.
  2. Unauthorized excavation: Removal of materials beyond specified subgrade elevations without approval of Engineer.

1.2 QUALITY ASSURANCE

- A. Requirements of Regulatory Agencies
1. All excavations shall be in compliance with Federal Occupational Safety and Health Act.
  2. Excavation work shall be in compliance with application requirements of other governing authorities having jurisdiction.

B. Standards

1. Refer to the following sections in the Delaware Department of Transportation Standard Specifications for Road and Bridge Construction, dated June 2021, latest revision. (Hereinafter referred to as the "Standard Specifications")

Section 202:	Excavation and Embankment
Section 207:	Structural Excavation and Backfill
Section 209:	Borrow
Section 301:	Graded Aggregate Base Course
Section 302:	Stone
Section 901:	Erosion, Sediment, and Stormwater Management
Section 902:	Pumping or Dewatering Practices
Section 1001:	Borrow
Section 1004:	Coarse Aggregate
Section 1005:	Graded Aggregates

2. American Society for Testing and Materials (ASTM);
- D-1556: Density of Soil in Place by the Sand-Cone Method.
  - D-698: Moisture Density Relations of Soils and Soil Aggregate Mixtures
  - D-2049: Relative Density of Cohesionless Soils.
  - D-2166: Unconfined Compressive Strength of Cohesive Soil.
  - D-2922: Density of Soil and Soil Aggregate in Place by Nuclear Methods (Shallow Depth)

### 1.3 SUBMITTALS

- A. Material Certification and delivery Slips for:
- 1. Select Borrow
  - 2. Graded Aggregate Base Course

### 1.4 JOB CONDITIONS

A. Existing Utilities

- 1. Should uncharted, or incorrectly charted, piping or other utilities be encountered during excavation, consult the Utility Owner immediately for directions. Cooperate with the Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of utility Owner.
- 2. Do not interrupt existing utilities serving facilities occupied and used by the Owner.
- 3. Demolish and completely remove from site existing underground utilities indicated to be removed. Coordinate with utility companies for shut-off of services if lines are active.

B. Use of Explosives: The use of explosives is not permitted unless approved by the Engineer.

C. Protection of Persons and Property

- 1. Barricade open excavations occurring as part of this work and post with warning signs as required to protect persons on the site.
- 2. Protect trees, shrubs, lawns and other features remaining as part of final landscaping.
- 3. Protect structures, utilities, sidewalks, pavements and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.
- 4. In the event of damage, immediately make all repairs and replacements to the approval of the Engineer at no cost to the Owner.

D. Dust Control

- 1. Use all means necessary to control dust on and near the work if such dust is caused by the Contractor's operations during performance of the work or if resulting from the conditions in which the Contractor leaves the site.
- 2. Thoroughly moisten all surfaces as required to prevent dust being a nuisance to the public, neighbors and concurrent performance of other work on the site.

E. Weather Conditions: Do not place, spread, or roll fill material during freezing, raining, or otherwise unfavorable weather conditions

### **PART 2 - PRODUCTS**

2.1 GENERAL

- A. For approval of borrow materials for pavement, sidewalks, and civil structures, at least five (5) working days in advance of intention to import material, designate the proposed borrow area, and provide samples to prove the quality and suitability of the material.
- B. The use and approval of borrow material for structural fill will be the responsibility of the geotechnical engineer and the specification pertaining thereto.

2.2 ON-SITE FILL

- A. All on-site materials used for fill for pavement, sidewalk, and civil structures shall be acceptable to the Engineer and shall be minimally subject to the following requirements:
  - 1. Free from deleterious substances, stumps, brush, weeds, roots, sod, rubbish, garbage and matter that may decay.
  - 2. Free of large rocks or lumps that may create voids or prevent proper compaction.

2.3 BORROW FILL MATERIAL

- A. Free from deleterious substances, stumps, brush, weeds, roots, sod, rubbish, garbage and matter that may decay, and shall be Borrow Type "C" conforming to Section 1001 of the Standard Specifications. All excavated material which meets the requirements of Section 1001 of the Standard Specifications shall be used for borrow fill material.

2.4 TRENCH AND CIVIL STRUCTURE BACKFILL MATERIAL

- A. Backfill for civil structures shall conform to the requirements of Section 209 of the Standard Specifications.
- B. Backfill for trenches shall conform to the requirements of Section 209 of the Standard Specifications.
- C. All trench and civil structure backfill material shall meet the requirements of Section 1001 of the Standard Specifications for Borrow Type C backfill. All suitable excavated material, which meets the requirements of Section 1001 of the Standard Specifications shall be used for structure or trench backfill as far as practicable.

2.5 GRADED AGGREGATE BASE COURSE

- A. Graded Aggregate base course for bituminous and concrete pavements and other structures shall be Type "B" conforming to the requirements for Graded Aggregate in Section 301 and 1005 of the Standard Specifications.

2.6 GEOTEXTILE STABILIZATION FABRIC

- A. Geotextile stabilization fabric used for undercut excavation shall be a woven polypropylene geotextile designed for base course reinforcement and subgrade stabilization. Geotextile

shall have a minimum tensile strength of 500 lbs, and shall be Mirafi HP565, or approved equal.

- B. Geogrid, where specified on the plan, shall be an integrally formed biaxial polypropylene geogrid with positive mechanical interlock. Geogrid shall have tensile strength of 6.0 kN/m at 2% strain, and an ultimate tensile strength of 19.2 kN/m. Geogrid shall be model BX1200 as manufactured by the Tensar International Corporation, or approved equal.

## 2.7 TOPSOIL

- A. Topsoil furnished from within or outside the project limits shall conform to Section 908 of the Standard Specifications except as modified by the following requirements.
1. Topsoil shall be screened to not contain stones, lumps, roots or other objects larger than one-half inch in any dimension.
  2. Acid-Alkaline Range: pH 5.8 to 6.5.
  3. Free of pests, pest larvae, and matter toxic to plants.
  4. Maximum soluble salts: 500 ppm
  5. Free of viable Bermudagrass, quackgrass, Johnsongrass, nutsedge, poison ivy, Canada thistle, and other objectionable grassy or broadleaf weeds.
- B. Topsoil Furnished from Outside Project Limits
1. Gradation range:  
Sand (2.00 mm to 0.05 mm) 40-80 percent  
Silt (0.050 mm to 0.005 mm) 10-30 percent  
Clay (0.005 mm and smaller) 10-30 percent
    - a. When one-half of the sand content is larger than 0.500 mm, the maximum sand content shall be seventy-five percent; and maximum clay content shall be fifteen percent.
    - b. Lower limits of silt and clay shall be flexible to extent that soils with minimum combined silt and clay content of twenty percent shall be satisfactory. However, if more than one-half of the sand is larger than 0.50 mm., then minimum clay content shall be fifteen percent, or the minimum combined silt and clay content shall be twenty-five percent.
  2. Organic content:
    - a. Minimum of 2.75 percent by weight.
    - b. If necessary, add peat at the rate necessary to attain minimum organic content.
  3. No additional payment will be made for topsoil furnished from outside of the project limits.

## PART 3 - EXECUTION

### 3.1 INSPECTION BY CONTRACTOR

- A. Examine the areas and conditions under which excavating, filling and grading are to be performed. No extra cost or time allowances will be granted for conditions existing and visible at the time of the bid opening.

3.2 PREPARATION

- A. Prior to commencement of work, establish location and extent of all utilities in the work areas. Maintain and protect, as required, existing utilities which pass through the work area.
- B. Prior to excavation in pavement areas, saw cut existing pavement in accordance with Section 762 of the Standard Specifications.

3.3 EXCAVATION

A. Unauthorized Excavation

Unauthorized excavation shall not be at the Owner's expense. Under roadways and pipes, fill unauthorized excavation by removing all loosened material and providing select material as required to attain a firm and unyielding subgrade and/or foundation and to attain required grade elevations.

B. Rock Excavation

Rock Excavation shall apply to the removal of bedrock and ledgerock which cannot be accomplished without blasting or the use of rippers, and the use or disposal of such material. Excavation of material classified as "rock" shall conform to the requirements of Section 202 of the Standard Specifications.

- C. Rock Excavation for Structures and Trenches shall apply to the removal, use, or disposal of all boulders or other detached stones having a volume of 1/3 cubic yard or more. Excavation of such material shall conform Section 202 of the Standard Specifications.

D. Undercut Excavation

- 1. If unsuitable bearing materials are encountered at the required subgrade elevations notify the Engineer immediately.
- 2. Unstable bearing materials shall be removed to a depth of one foot below subgrade. Place geotextile stabilization fabric and one foot of graded aggregate base course, Type B.
- 3. Base course shall be placed and compacted in six-inch lifts.

E. Stability of Excavations

- 1. Slope sides of excavations to comply with local codes and ordinances having jurisdiction. Shore and brace where sloping is not possible because of space.
- 2. Maintain sides and slopes of excavations in a safe condition until completion of backfilling.

F. Shoring and Bracing

- 1. Provide materials for shoring and bracing, such as sheet piling, uprights, stringers and cross-braces, in good serviceable condition.
- 2. Establish requirements for trench shoring and bracing to comply with local codes and authorities having jurisdiction



3. Maintain shoring and bracing in excavations regardless of time period excavations will be open.
4. Brace, sheet, and support trench walls in such a manner that they will be safe and that the ground alongside the excavation will not slide or settle, and that all existing improvements of every kind, whether on public or private property, will be fully protected from damage.
5. In the event of damage to such improvements, immediately make all repairs and replacements necessary at no additional cost to the Owner.
6. Arrange bracing, sheeting and shoring so as to not place stress on any portion of the completed work until the general construction thereof has proceeded far enough to provide sufficient strength.
7. Exercise care in the drawing and removal of sheeting, shoring, bracing and timbering to prevent collapse and caving of excavation faces being supported.

G. Dewatering

1. Prevent surface water and subsurface or groundwater from flowing into excavations and from flooding the project site and surrounding area.
2. Do not allow water to accumulate in excavations. Remove water to prevent softening of foundation bottoms, undercutting footings, and soil changes detrimental to the stability of subgrades and foundations. Provide and maintain pumps, well points, sumps, suction and discharge lines, and other dewatering system components necessary to convey water from excavations.
3. Convey water removed from excavations and rainwater to collecting or runoff areas, which are not subject to erosion. Establish and maintain temporary drainage ditches and other diversions outside excavation limits for each structure. Do not use trench excavations as temporary drainage ditches.

H. Material Storage

1. Stockpile satisfactory excavated materials where directed until required for use as backfill or fill. Place, grade and shape stockpiles for proper drainage.
2. Locate and retain soil materials away from edge of excavations.
3. Dispose of excess soil material and waste materials as herein specified. Excavated material unsuitable for backfilling shall be kept separate from other materials excavated, and disposed of. Materials suitable for backfilling shall not be disposed of until completion of filling or backfilling operations.

I. Excavation for Pavements and Pavement Patches

1. Cut surface under pavements to comply with cross-sections, elevations and grades as shown.

J. Excavation for Trenches

1. Dig trenches to the uniform width required for the particular item to be installed sufficiently wide to provide ample working room. Trench width to a point no less than two feet (2') above the outside top of pipe shall be the pipe outer diameter plus twenty-four inches (24").
2. Excavate trenches to the depth indicated or required. Carry the depth of trenches for piping to establish the indicated flow lines and invert elevations. Beyond the building

perimeter, keep bottoms of trenches for which elevations are not given sufficiently below finish grade to avoid freeze-ups.

3. Trenches for pipes shall not be opened more than the number of linear feet of pipe that can be placed and backfilled in one (1) day.
4. Grub roots and stumps within six inches (6") of outside surface of pipe bottom and sides to minimum depth of six inches (6") below grade. Backfill trenches with concrete where trench excavations pass within eighteen inches (18") of column or wall footings and which are carried below the bottom of such footings, or which pass under wall footings. Place concrete to the level of the bottom of adjacent footing.
5. Pipe bedding shall be as shown on the Plans.

K. Cold Weather Protection

1. Protect excavation bottoms against freezing when atmospheric temperature is less than thirty-five degrees (35°).

3.4 BACKFILL FILL AND COMPACTION

A. General

1. The project Inspector or Engineer shall be notified 24 hours in advance of any fill, backfill or compaction operations.
2. Place acceptable material in 8" lifts to required subgrade elevations.
3. Fills: Use suitable material (per Section 2.2 of this section) obtained from on-site excavation, except use borrow material when suitable on-site material is not available or when specified by the Engineer or shown on the Plans.
4. Backfilling: Use suitable material (per Section 2.2 of this section) obtained from on-site excavation, except use select backfill where indicated on Plans. Backfill to a height of two feet (2') above the top of pipe with earth free from stones, rock fragments, dirt clogs or frozen material greater than two inches (2") in largest dimension.
5. Do not provide additional off-site borrow material until all acceptable excavated materials on the site have been utilized in the work unless approved by the Engineer.
6. Place the various types of materials in the areas as designated on the Plans.

B. Backfill excavation as promptly as work permits, but not until completion of the following:

1. Inspection, testing, approval and recording locations of underground utilities.
2. Removal of concrete formwork.
3. Removal of shoring and bracing, and backfilling of voids satisfactory materials. Cut off temporary sheet piling driven below bottom of structures and remove in manner to prevent settlement of the structure or utilities, or leave in place if required.
4. Removal of trash and debris.
5. Permanent or temporary horizontal bracing is in place on horizontally supported walls.

C. Backfilling Prior to Approvals

1. Should any of the work be so enclosed or covered up before it has been approved, uncover all such work at no additional cost to the Owner.

2. After the work has been completely tested, inspected and approved, make all repairs and replacements necessary to restore the work to the condition in which it was found at the time of uncovering, all at no additional cost to the Owner.

D. Ground Surface Preparation Prior to Filling

1. Remove all vegetation, debris, topsoil, unsatisfactory soil materials, obstructions and deleterious materials from existing ground surface to a depth of not less than four inches (4") and not more than six inches (6") prior to placement of fills. Plow, strip or break-up sloped surfaces steeper than one (1) vertical to four (4) horizontal to a depth of not less than six inches (6") so that fill material will bond with existing surface.
2. When existing ground surface has a density less than that specified under "Compaction," for the particular area classification, break up the ground surface, pulverize, moisture condition to the optimum moisture content, and compact to required depth and percentage of maximum density.

E. Placement and Compaction

1. Place backfill materials in layers not more than eight inches (8") in loose depth.
2. Control soil compaction during construction providing minimum percentage of density specified for each area classification listed below.
3. Pavement areas are defined, for the purpose of this Section, as extending a minimum of five feet (5') beyond the building and/or pavement.
4. Compact soil to not less than the following percentages of maximum dry density for soils which exhibit a well-defined moisture density relationship determined in accordance with ASTM D-1557; and not less than the following percentages of relative density determined in accordance with ASTM D-2049, for soils which will not exhibit a well-defined moisture-density relationship.
  - a. Lawn or Unpaved Areas: Compact top six inches (6") of subgrade and each layer of backfill or fill material at 90 percent (90%) maximum dry density.
  - b. Walkways: Compact top six inches (6") of subgrade and each layer of backfill or full material at 95 percent (95%) maximum dry density.
  - c. Pavement Areas: Compact top twelve inches (12") of subgrade and each layer of backfill or fill material at 95 percent (95%) maximum dry density.
  - d. Base Course Materials: Compact each layer of base course material to 95 percent (95%) of maximum dry density.
  - e. Trench Stabilization Materials: Compact each layer of material to 95 percent (95%) of maximum dry density.
5. Moisture control:
  - a. Where subgrade or layer of soil material must be moisture conditioned before compaction, uniformly apply water to surface of subgrade, or layer of soil material, to prevent free water appearing on surface during or subsequent to compaction operations.
  - b. Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density.
  - c. Soil material that has been removed because it is too wet to permit compaction may be stockpiled or spread and allowed to dry. Assist drying by discing, harrowing or pulverizing until moisture content is reduced to a satisfactory value.

- NOT FOR BID
- d. Moisture condition fills materials to within 3 percent (3%) of the optimum moisture. Fill that is so wet that it is unstable under compaction equipment shall be dried and re-compacted to achieve a stable fill.
  6. Puddling or jetting will not be permitted.
  7. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice, or other unsuitable materials.
  8. Place backfill and fill material evenly adjacent to structures, to be required elevations. Take care to prevent wedging action of backfill against structures by carrying the material uniformly around structure to approximately same elevation in each lift.
  9. Compact backfill to height of two feet (2') above top of pipe using approved flat-faced mechanical tampers.

### 3.5 GRADING

#### A. General

Uniformly grade areas within limits of grading under this section, including adjacent transition areas. Smooth finished surface within specified tolerances, compact with uniform levels or slopes between points where elevations are shown, or between such points and existing grades.

#### B. Grading Outside Building Lines

Grade areas adjacent to building lines to drain away from structures and to prevent ponding. Finish surfaces free from irregular surface changes, and as follows:

1. Lawn or unpaved areas: Finish area to receive topsoil to within not more than 0.10 feet above or below the required subgrade elevations.
2. Walks: Shape surface of areas under walks to line, grade and cross-section, with finish surface not more than 0.10 feet above or below the required subgrade elevation.
3. Pavement: Shape surface of areas under pavement line, grade and cross-section, with finish surface not more than 1/2 inch above or below the required subgrade elevation. All topsoil and other unsuitable material shall be removed and replaced with suitable backfill.

#### C. Compaction

1. After grading, compact subgrade surfaces to the depth and percentage of maximum density for each area classification.

#### D. Treating after Grading

1. After grading is completed, permit no further excavating, filling or grading.
2. Use all means necessary to prevent erosion of freshly graded areas during construction and until such time as permanent drainage and erosion control measures have been installed.

#### E. Subgrade Preparation

1. All subgrade preparation shall be performed in accordance with the applicable Sections of the Delaware Department of Transportation Standard Specifications except as may be modified by this Specification Section.
2. Subgrades for paving shall be firm and unyielding when proof-rolled in accordance with Section 202 of the Standard Specifications.

### 3.6 GRADED AGGREGATE BASE COURSE

#### A. General

1. Base Course consists of placing graded aggregate base course material in layers of specified thickness over subgrade surface to support pavements, pavement patches and structures, as shown on Plans.
2. Provide Base Course in accordance with Section 301 of the Standard Specifications, except as otherwise modified by this Specification Section.

#### B. Grade Control

1. During construction, maintain lines and grades including crown and cross-slope of base course.

#### C. Placing

1. Place base course material on prepared subgrade in layers of uniform thickness, conforming to indicated cross-section and thickness. Maintain optimum moisture content for compacting base course material during placement operations.
2. When a compacted base course is shown to be eight inches (8") or less, place material in a single layer. When shown to be more than eight inches (8") thick, place material in equal layers, except no single layer shall be more than eight inches (8") in thickness when compacted.
3. Spread, shape and compact all base course material deposited on the subgrade during the same day.

### 3.7 FIELD QUALITY CONTROL

- A. Quality control testing during construction. Allow testing service to inspect and approve subgrades and fill layers before further construction work is performed.
- B. If subgrade or fills which have been placed are below specified density, provide additional compaction and testing at no expense to the Owner. This shall include compaction and testing at areas initially tested and at other locations as directed.

### 3.8 MAINTENANCE

#### A. Protection of Graded Areas

1. Protect newly graded areas from traffic and erosion. Keep free of trash and debris.
2. Repair and establish grades in settled, eroded and rutted areas to specified tolerances.

#### B. Reconditioning Compacted Areas

1. Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify surface, reshape and compact to required density prior to further construction.

### 3.9 DISPOSAL OF EXCESS AND WASTE MATERIALS

- A. Remove waste materials, including excess and unacceptable excavated material, trash and debris, and dispose of it off the Owner's property.

### 3.10 TOPSOILING

#### A. Preparation

1. Verify that clearing, earthwork, grading and other preceding work affecting ground surface have been completed and that the area to be topsoiled is cleared, shaped, and dressed.
2. Preparation of Topsoil Subsoil
  - a. Shape and dress area to be topsoiled. This work includes grading to required lines and elevations; removal of all stones, clods, lumps one inch or larger in any dimension; removal of all wires, cables, pieces of concrete, tree roots, and debris or other unsuitable material.
  - b. Do not proceed with installation of topsoil until this work has been approved.

#### B. Installation

1. Place in even layers that will produce the minimum compacted thickness as indicated on the Plans.
2. If quantity of topsoil obtained from stripping is insufficient for the project requirements, provide required topsoil from approved sources located outside project limits at no additional expense to the Owner.
3. Screen to remove stones, lumps, roots and other objects larger than one-half inch in any dimension from graded topsoil surface.

#### C. Maintenance

1. Immediately before establishment of ground cover, re-topsoil and regrade areas, which become eroded or otherwise disturbed.
2. Perform all maintenance work in accordance with the Specifications without additional compensation.
3. Maintenance period to extend until installation of ground cover.

#### D. Cleaning

1. Immediately clean spills, soil, and conditioners on paved and finished areas.
2. Haul and dispose of topsoil in excess of the quantity required for the project off site.
3. Dispose of protective barricades and warning signs at termination of maintenance period.

**END OF SECTION**



**SECTION 31 25 00 - EROSION AND SEDIMENT CONTROLS**

**PART 1 - GENERAL**

1.1 DESCRIPTION

- A. General: Provide temporary soil erosion and sediment control measures in accordance with the Plans and Contract Documents.

1.2 QUALITY ASSURANCE

A. Standards

Except as modified by governing codes and by the Contract Documents, comply with the applicable provisions and recommendations of the following:

1. Delaware Erosion and Sediment Control Handbook, latest revision.
2. Delaware Department of Transportation Standard Specifications for Highways and Bridges, dated June 2021 (hereinafter referred to as the "Standard Specifications").

B. Design Criteria

1. The primary objective of this specification is to control soil erosion to the maximum extent practicable.
2. The temporary control provisions contained herein shall be coordinated with permanent erosion control features to the extent practical to assure effective and continuous erosion control throughout the construction and post-construction period.
3. The erosion control measures described herein shall be continued until the construction is complete and all disturbed areas are fully stabilized.
4. Wherever construction exposes work which is subject to erosion, erosion control features or other work to be completed within such areas shall follow as soon after exposure as practicable.

**PART 2 - PRODUCTS**

2.1 MATERIALS

- A. Temporary mulches shall conform to Section 908 of the Delaware Department of Transportation Standard Specifications for Bridges and Highways.
- B. Temporary grass mixtures shall be as shown on the Plans, or in the absence of plan information, shall conform to the Section 908 of the Standard Specifications.
- C. Temporary structural Erosion Control measures shall conform to the requirements of the Delaware Erosion and Sediment Control Handbook and the Delaware Department of Transportation Standard Specifications.
- D. Erosion control matting and blankets shall conform with the Delaware Erosion and Sediment Control Handbook requirements for soil stabilization matting (SSM) I and II, as indicated on the

Plans. Matting shall be composed of 100% agricultural straw (minimum 0.5 pounds per square yard) or 100% wood excelsior fiber (0.8 pounds per square yard) with a single or double netting of either photo-degradable or bio-degradable material. SSM-I shall be North American Green S75, American Excelsior Curlex I, or approved equal. SSM-II shall be North American Green S150, American Excelsior Curlex II, or approved equal.

### **PART 3 - EXECUTION**

#### **3.1 CONSTRUCTION REQUIREMENTS**

- A. Vegetative stabilization shall be used on graded or cleared areas, which are subject to erosion for a period of 14 days or more.
- B. All temporary erosion control measures shall be installed in accordance with the Delaware Erosion and Sediment Control Handbook.
- C. Erosion control matting shall be installed in accordance with the manufacturer's written instructions, the requirements of the Delaware Erosion and Sediment Control Handbook, and the details on the Plans.
- D. In the event of conflict between these requirements and pollution control laws, rules, or regulations of other federal or state agencies, the more restrictive laws, rules, or regulations shall apply.
- E. The Contractor shall be responsible for maintaining all soil erosion and sediment control measures in an acceptable and functional manner. The Contractor shall remove all temporary measures after all other construction is complete, final restorations installed, and all disturbed areas have been adequately stabilized.

END OF SECTION