

**STATE OF DELAWARE  
DEPARTMENT OF CORRECTION  
OMB/DFM CONTRACT # MC3804000029**

**SPECIFICATIONS  
FOR**

**HIGH VOLTAGE LOOP REPAIRS**

**AT**

**JAMES T. VAUGHN CORRECTIONAL CENTER  
SMYRNA, DELAWARE**



**ISSUED FOR RE-BID  
May 2013**

**DEDC PROJECT # 11P353**

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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 A101, 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.

## **ARTICLE 2: BIDDER'S REPRESENTATIONS**

- 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 his 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 and shall submit a valid Delaware Business License Number with their Bid or shall state that the process of application for a Delaware Business License has been initiated.

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 4 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.
- 4.2 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 As required by Delaware Code, Title 29, section 6962(d)(10)b, 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. A Bid will be considered non-responsive unless the completed list is included.
- 4.3.2 Provide the Name and Address for each listed subcontractor. Addresses by City, Town or Locality, plus State, will be acceptable.
- 4.3.3 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 EQUALITY OF EMPLOYMENT OPPORTUNITY ON PUBLIC WORKS
- 4.4.1 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, color, sex 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,

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.

- 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, color, sex or national origin."

#### 4.5 PREVAILING WAGE REQUIREMENT

4.5.1 Wage Provisions: In accordance with Delaware Code, Title 29, Section 6960, renovation projects whose total cost shall exceed \$15,000, and \$100,000 for new construction, 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.

4.5.2 The prevailing wage shall be the wage paid to a majority of employees performing similar work as reported in the Department's annual prevailing wage survey or in the absence of a majority, the average paid to all employees reported.

4.5.3 The employer shall pay all mechanics and labors employed directly upon the site of work, 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.

4.5.4 The scale of the wages to be paid shall be posted by the employer in a prominent and easily accessible place at the site of the work.

4.5.5 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.

#### 4.6 SUBMISSION OF BIDS

4.6.1 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.

4.6.2 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.

- 4.6.3 Bidder assumes full responsibility for timely delivery at location designated for receipt of bids.
- 4.6.4 Oral, telephonic or telegraphic bids are invalid and will not receive consideration.
- 4.6.5 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.
- 4.7 **MODIFICATION OR WITHDRAW OF BIDS**
- 4.7.1 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.
- 4.7.2 Bidders submitting Bids that are late shall be notified as soon as practicable and the bid shall be returned.
- 4.7.3 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."
- 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. 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 one year after the date of substantial completion.
- 5.4.6 If the successful Bidder fails to execute the required Contract and Bond, 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) or a Delaware business license number, and should the vendor be awarded a contract, such vendor shall provide to the agency the taxpayer identification or Delaware business 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. Prior to execution of the resulting contract, the successful Bidder shall be required to produce proof of its Delaware business license if not provided in its bid.
- 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 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 BUSINESS DESIGNATION FORM**

6.2.1 Successful bidder shall be required to accurately complete an Office of Management and Budget Business Designation Form for Subcontractors.

**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 AGENCY AND CONTRACTOR**

8.1 Unless otherwise required in the Bidding Documents, the Agreement for the Work will be written on AIA Document A101, Standard Form of Agreement Between Owner and Contractor Where the Basis of Payment is a Stipulated Sum.

END OF INSTRUCTIONS TO BIDDERS

JAMES T. VAUGHN CORRECTIONAL CENTER HI VOLTAGE REPAIRS  
SMYRNA DELAWARE  
OMB/DFM# MC3804000029

**BID FORM**

**For Bids Due:** June 27, 2013 (2:00 p.m.) **To:** Ms. Beverly Bartlett  
Construction Projects Coordinator  
State of Delaware  
Office of Management and Budget  
540 S. DuPont Highway, Suite 1  
Dover, Delaware 19901

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

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

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

**Phone No.:** ( ) \_\_\_\_\_ - \_\_\_\_\_ **Fax No.:** ( ) \_\_\_\_\_ - \_\_\_\_\_

The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself 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:

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

**ALTERNATES**

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

ALTERNATE No. 1: Work associated with the Preventative Maintenance Procedure 8 MV Power Fuses. This shall be an add alternate to perform the work described in this procedure.

Add: \_\_\_\_\_  
( \$ )

**UNIT PRICES**

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

	<b><u>ADD</u></b>	<b><u>DEDUCT</u></b>
UNIT PRICE No. 1: Provide a unit cost for replacing a stress cone on 1/0 Cu.	\$ _____	\$ _____
UNIT PRICE No. 2: Provide a unit cost for replacing a stress cone on 4/0 Cu.	\$ _____	\$ _____
UNIT PRICE No. 3: Provide a unit cost for replacing a 15kV 200 A LB elbow on 4/0 Cu.	\$ _____	\$ _____
UNIT PRICE No. 4: Provide a unit cost for replacing a 15kV 200 A LB elbow on 1/0 Cu.	\$ _____	\$ _____
UNIT PRICE No. 5: Provide a unit cost for resetting breakers or relays and testing a LV power circuit breaker with electronic trip.	\$ _____	\$ _____
UNIT PRICE No. 6: Provide a unit cost to replace an auto-transfer PMH-9 unit with (6) power fuses.	\$ _____	\$ _____
UNIT PRICE No. 7: Provide a unit cost to replace an auto-transfer PMH-6 unit with (3) power fuses.	\$ _____	\$ _____
UNIT PRICE No. 8: Provide a unit cost to replace a manual PMH-13 unit.	\$ _____	\$ _____

Not For Bidding Purposes

JAMES T. VAUGHN CORRECTIONAL CENTER HI VOLTAGE REPAIRS  
SMYRNA DELAWARE  
OMB/DFM# MC3804000029

BID FORM

I/We acknowledge Addendums numbered \_\_\_\_\_ and the price(s) submitted include any cost/schedule impact they may have.

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.

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 achieve substantial completion of all the work within \_\_\_\_\_ calendar days of the Notice to Proceed.

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 him 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: \_\_\_\_\_  
(SEAL) ( Authorized Signature )  
\_\_\_\_\_  
( Title )  
Date: \_\_\_\_\_

ATTACHMENTS

- Sub-Contractor List
- Non-Collusion Statement
- Bid Security
- (Others as Required by Project Manuals)

JAMES T. VAUGHN CORRECTIONAL CENTER HI VOLTAGE REPAIRS  
SMYRNA DELAWARE  
OMB/DFM# MC3804000029

**BID FORM**

**SUBCONTRACTOR LIST**

In accordance with Title 29, Chapter 6962 (d)(10)b Delaware Code, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor **must be listed for each category** where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the *Owner*, **it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.**

<u>Subcontractor Category</u>	<u>Subcontractor</u>	<u>Address (City &amp; State)</u>	<u>Subcontractors tax payer ID # or Delaware Business license #</u>
1. ELECTRICAL	_____	_____	_____
2. ELECTRICAL TESTING AGENCY	_____	_____	_____

Not For Bidding Purposes

**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 Office of Management and Budget, Division of Facilities Management.

All the terms and conditions of OMB/DFM# MC3804000029 have been thoroughly examined and are understood.

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

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

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

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

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

**E-MAIL:** \_\_\_\_\_

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

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.**

STATE OF DELAWARE  
OFFICE OF MANAGEMENT AND BUDGET

**BID BOND**

TO ACCOMPANY PROPOSAL  
(Not necessary if security is used)

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. \_\_\_\_\_, to be paid to the **State** for the use and  
benefit of the State of Delaware OMB/DFM 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 State of Delaware OMB/DFM 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 State of Delaware OMB/DFM 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

Corporate  
Seal

By:

\_\_\_\_\_  
Name of Bidder (Organization)

\_\_\_\_\_  
Authorized Signature

Attest \_\_\_\_\_

\_\_\_\_\_  
Title

\_\_\_\_\_  
Name of Surety

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

By:

\_\_\_\_\_  
Title

STANDARD FORM OF AGREEMENT  
BETWEEN OWNER AND CONTRACTOR

The Standard Form of Agreement Between Owner and Contractor are as stated in the American Institute of Architects Document AIA A101 (2007 version) entitled Standard Form of Agreement Between Owner and Contractor and is part of this project manual as if herein written in full. A draft sample has been included for reference.

Not For Bidding Purposes

# DRAFT AIA® Document A101™ - 2007

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

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

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

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

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

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

The Owner and Contractor agree as follows.

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

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

AIA Document A201™-2007, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

Not For Bidding Purposes

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## TABLE OF ARTICLES

- 1 THE CONTRACT DOCUMENTS
- 2 THE WORK OF THIS CONTRACT
- 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION
- 4 CONTRACT SUM
- 5 PAYMENTS
- 6 DISPUTE RESOLUTION
- 7 TERMINATION OR SUSPENSION
- 8 MISCELLANEOUS PROVISIONS
- 9 ENUMERATION OF CONTRACT DOCUMENTS
- 10 INSURANCE AND BONDS

### ARTICLE 1 THE CONTRACT DOCUMENTS

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

### ARTICLE 2 THE WORK OF THIS CONTRACT

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

### ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be the date of this Agreement unless a different date is stated below or provision is made for the date to be fixed in a notice to proceed issued by the Owner.

*(Insert the date of commencement if it differs from the date of this Agreement or, if applicable, state that the date will be fixed in a notice to proceed.)*

«The commencement date will be fixed in a notice to proceed.»

If, prior to the commencement of the Work, the Owner requires time to file mortgages and other security interests, the Owner's time requirement shall be as follows:

« »

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

§ 3.3 The Contractor shall achieve Substantial Completion of the entire Work not later than ----- days from the date of commencement, or as follows:

*(Insert number of calendar days. Alternatively, a calendar date may be used when coordinated with the date of commencement. If appropriate, insert requirements for earlier Substantial Completion of certain portions of the Work.)*

<< >>

Portion of Work

Substantial Completion Date

, subject to adjustments of this Contract Time as provided in the Contract Documents.  
(Insert provisions, if any, for liquidated damages relating to failure to achieve Substantial Completion on time or for bonus payments for early completion of the Work.)

<< >>

ARTICLE 4 CONTRACT SUM

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

§ 4.2 The Contract Sum is based upon the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:  
(State the numbers or other identification of accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)

<< >>

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

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

§ 4.4 Allowances included in the Contract Sum, if any:  
(Identify allowance and state exclusions, if any, from the allowance price.)

Item	Price

ARTICLE 5 PAYMENTS

§ 5.1 PROGRESS PAYMENTS

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

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

<< >>

§ 5.1.3 Provided that 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.

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

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

§ 5.1.6 Subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

- .1 Take that portion of the Contract Sum properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the Contract Sum allocated to that portion of the Work in the schedule of values, less retainage of five percent ( 5% ). Pending final determination of cost to the Owner of changes in the Work, amounts not in dispute shall be included as provided in Section 7.3.9 of AIA Document A201™–2007, General Conditions of the Contract for Construction;
- .2 Add that portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing), less retainage of five percent (5% );
- .3 Subtract the aggregate of previous payments made by the Owner; and
- .4 Subtract amounts, if any, for which the Architect has withheld or nullified a Certificate for Payment as provided in Section 9.5 of AIA Document A201–2007.

§ 5.1.7 The progress payment amount determined in accordance with Section 5.1.6 shall be further modified under the following circumstances:

- .1 Add, upon Substantial Completion of the Work, a sum sufficient to increase the total payments to the full amount of the Contract Sum, less such amounts as the Architect shall determine for incomplete Work, retainage applicable to such work and unsettled claims, and *(Section 9.8.5 of AIA Document A201–2007 requires release of applicable retainage upon Substantial Completion of Work with consent of surety, if any.)*
- .2 Add, if final completion of the Work is thereafter materially delayed through no fault of the Contractor, any additional amounts payable in accordance with Section 9.10.3 of AIA Document A201–2007.

§ 5.1.8 Reduction or limitation of retainage, if any, shall be as follows:

*(If it is intended, prior to Substantial Completion of the entire Work, to reduce or limit the retainage resulting from the percentages inserted in Sections 5.1.6.1 and 5.1.6.2 above, and this is not explained elsewhere in the Contract Documents, insert here provisions for such reduction or limitation.)*

« »

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

## § 5.2 FINAL PAYMENT

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

- .1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Section 12.2.2 of AIA Document A201–2007, and to satisfy other requirements, if any, which extend beyond final payment; and
- .2 a final Certificate for Payment has been issued by the Architect.

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

« »

## ARTICLE 6 DISPUTE RESOLUTION

### § 6.1 INITIAL DECISION MAKER

The Architect will serve as Initial Decision Maker pursuant to Section 15.2 of AIA Document A201–2007, unless the parties appoint below another individual, not a party to this Agreement, to serve as Initial Decision Maker.

(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

<< >>  
<< >>  
<< >>  
<< >>

## § 6.2 BINDING DISPUTE RESOLUTION

For any Claim subject to, but not resolved by, mediation pursuant to Section 15.3 of AIA Document A201–2007, the method of binding dispute resolution shall be as follows:

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

Arbitration pursuant to Section 15.4 of AIA Document A201–2007

Litigation in a court of competent jurisdiction

Other (Any remedies available in law or in equity.)

<< >>

## ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2007.

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2007.

## ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2007 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

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

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

Payments are due 30 days after receipt of a valid Application for Payment. After that 30 day period, interest may be charged at the rate of 1% per month not to exceed 12% per annum.

§ 8.3 The Owner's representative:

(Name, address and other information)

<< >>  
<< >>  
<< >>  
<< >>  
<< >>  
<< >>

§ 8.4 The Contractor's representative:

(Name, address and other information)

<< >>  
<< >>  
<< >>

<< >>  
<< >>  
<< >>

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

§ 8.6 Other provisions:

<< >>

## ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 The Contract Documents, except for Modifications issued after execution of this Agreement, are enumerated in the sections below.

§ 9.1.1 The Agreement is this executed AIA Document A101–2007, Standard Form of Agreement Between Owner and Contractor.

§ 9.1.2 The General Conditions are AIA Document A201–2007, General Conditions of the Contract for Construction.

§ 9.1.3 The Supplementary and other Conditions of the Contract:

[Redacted]

§ 9.1.4 The Specifications:  
(Either list the Specifications here or refer to an exhibit attached to this Agreement.)

[Redacted]

§ 9.1.5 The Drawings:  
(Either list the Drawings here or refer to an exhibit attached to this Agreement.)

[Redacted]

§ 9.1.6 The Addenda, if any:

Number	Date	Pages
[Redacted]	[Redacted]	[Redacted]

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

§ 9.1.7 Additional documents, if any, forming part of the Contract Documents:

- 1 AIA Document E201™–2007, Digital Data Protocol Exhibit, if completed by the parties, or the following:

<< >>

- 2 Other documents, if any, listed below:  
(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201–2007 provides that bidding requirements such as advertisement or invitation to bid, Instructions to Bidders, sample forms and the Contractor's bid are not part of the Contract

*Documents unless enumerated in this Agreement. They should be listed here only if intended to be part of the Contract Documents.)*

<< >>

**ARTICLE 10 INSURANCE AND BONDS**

The Contractor shall purchase and maintain insurance and provide bonds as set forth in Article 11 of AIA Document A201-2007.

*(State bonding requirements, if any, and limits of liability for insurance required in Article 11 of AIA Document A201-2007.)*

Type of insurance or bond	Limit of liability or bond amount (\$)

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

\_\_\_\_\_  
OWNER (Signature)  
\_\_\_\_\_  
<< >>  
\_\_\_\_\_  
(Printed name and title)

\_\_\_\_\_  
CONTRACTOR (Signature)  
\_\_\_\_\_  
<< >>< >>  
\_\_\_\_\_  
(Printed name and title)

Not For Bidding Purposes



**SUPPLEMENT TO THE CONTRACT FOR CONSTRUCTION A101-2007**

The following supplements modify the "Standard Form of Agreement Between Owner and Constructor," AIA Document A101-2007. 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 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."

**ARTICLE 6: DISPUTE RESOLUTION**

## 6.2 BINDING DISPUTE RESOLUTION

Check Other – and add the following sentence:

"Any remedies available in law or in equity."

**ARTICLE 8: MISCELLANEOUS PROVISIONS**

## 8.2 Insert the following:

"Payments are due 30 days after receipt of a valid Application for Payment. After that 30 day period, interest may be charged at the rate of 1% per month not to exceed 12% per annum."

## 8.5 Delete paragraph 8.5 in its entirety and replace with the following:

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

**END OF SUPPLEMENT TO THE CONTRACT FOR CONSTRUCTION**

STATE OF DELAWARE  
OFFICE OF MANAGEMENT AND BUDGET

**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 of the State of Delaware OMB/DFM (“**Owner**”), 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. \_\_\_\_\_ 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.

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:

STATE OF DELAWARE  
OFFICE OF MANAGEMENT AND BUDGET

**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 State of Delaware OMB/DFM (“**Owner**”), 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. \_\_\_\_\_ 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:

APPLICATION AND  
CERTIFICATE FOR PAYMENT

The Application and Certificate for Payment are as stated in the American Institute of Architects Document AIA G702 & AIA G703 (1992 version) entitled Application and Certificate for Payment and is part of this project manual as if herein written in full. A draft sample has been included for reference.

Not For Bidding Purposes

## Application and Certificate for Payment

<b>TO OWNER:</b> State of Delaware	<b>PROJECT:</b>	<b>APPLICATION NO:</b> 001 <b>PERIOD TO:</b> <b>CONTRACT FOR:</b> <b>CONTRACT DATE:</b> <b>PROJECT NOS:</b> / /	<b>Distribution to:</b> OWNER: <input type="checkbox"/> ARCHITECT: <input type="checkbox"/> CONTRACTOR: <input type="checkbox"/> FIELD: <input type="checkbox"/> OTHER: <input type="checkbox"/>
<b>FROM CONTRACTOR:</b>	<b>VIA ARCHITECT:</b> Delaware Engineering and Design Corporation 315 S. Chapel Street Newark, DE 19711		

### CONTRACTOR'S APPLICATION FOR PAYMENT

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

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

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Total changes approved in previous months by Owner	\$ 0.00	\$ 0.00
Total approved this Month	\$ 0.00	\$ 0.00
<b>TOTALS</b>	<b>\$ 0.00</b>	<b>\$ 0.00</b>
NET CHANGES by Change Order	\$	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: \_\_\_\_\_

### ARCHITECT'S CERTIFICATE FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising this application, the Architect certifies to the Owner that to the best of the Architect's 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 certified.)

**ARCHITECT:** \_\_\_\_\_  
 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

## Continuation Sheet

AIA Document G702, APPLICATION AND CERTIFICATION FOR PAYMENT, containing Contractor's signed certification is attached.

In tabulations below, amounts are stated to the nearest dollar.

Use Column I on Contracts where variable retainage for line items may apply.

APPLICATION NO: 001

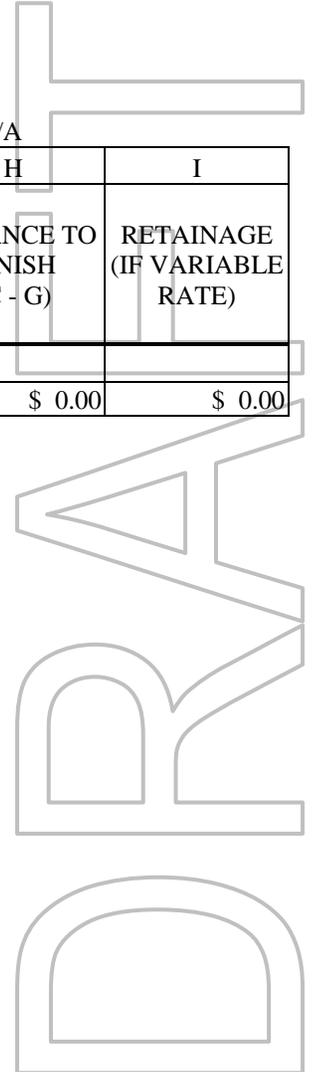
APPLICATION DATE:

PERIOD TO:

ARCHITECT'S PROJECT NO: N/A

A ITEM NO.	B DESCRIPTION OF WORK	C SCHEDULED VALUE	D WORK COMPLETED		F MATERIALS PRESENTLY STORED (NOT IN D OR E)	G		H BALANCE TO FINISH (C - G)	I RETAINAGE (IF VARIABLE RATE)
			FROM PREVIOUS APPLICATION (D + E)	THIS PERIOD		TOTAL COMPLETED AND STORED TO DATE (D+E+F)	% (G ÷ C)		
	GRAND TOTAL	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	\$ 0.00	0.00 %	\$ 0.00	\$ 0.00

Not For Bidding Purposes



GENERAL CONDITIONS  
OF THE  
CONSTRUCTION CONTRACT

The General Conditions of this Contract are as stated in the American Institute of Architects Document AIA A201 (2007 Edition) entitled General Conditions of the Construction Contract and is part of this project manual as if herein written in full. A draft sample has been included for reference.

Not For Bidding Purposes

# DRAFT AIA® Document A201™ - 2007

## General Conditions of the Contract for Construction

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

THE OWNER:  
(Name, legal status and address)

THE ARCHITECT:  
(Name, legal status and address)

«Delaware Engineering and Design Corporation»«, Professional Corporation»  
«315 S. Chapel Street  
Newark, DE 19711»

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- 12 UNCOVERING AND CORRECTION OF WORK
- 13 MISCELLANEOUS PROVISIONS
- 14 TERMINATION OR SUSPENSION OF THE CONTRACT
- 15 CLAIMS AND DISPUTES

#### 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.

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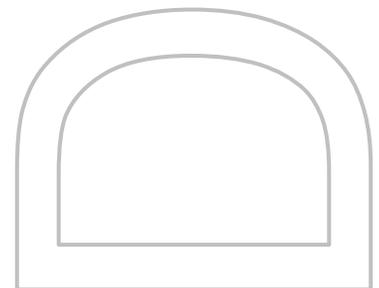
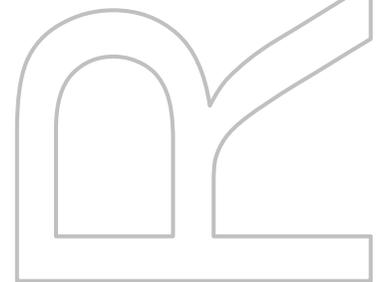
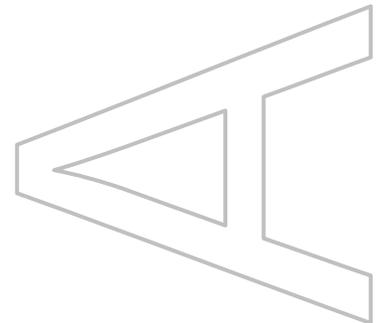
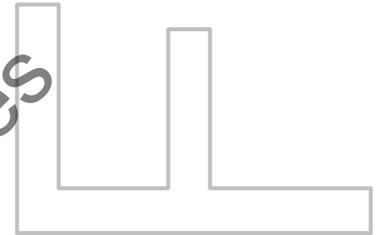
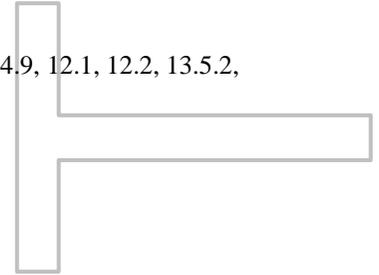
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## ARTICLE 1 GENERAL PROVISIONS

### § 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 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 a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's 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 the Owner and by separate contractors.

#### § 1.1.5 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.

#### § 1.1.6 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.

#### § 1.1.7 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.

#### § 1.1.8 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 and certify termination of the Agreement under Section 14.2.2.

### § 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.

§ 1.2.2 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 will retain all common law, statutory and other reserved rights, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and material or equipment 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 this 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 material or equipment suppliers are authorized to use and reproduce the Instruments of Service provided to them 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 material or equipment suppliers may not use the Instruments of Service 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 the Architect’s consultants.

### § 1.6 TRANSMISSION OF DATA IN DIGITAL FORM

If the parties intend to transmit Instruments of Service or any other information or documentation in digital form, they shall endeavor to establish necessary protocols governing such transmissions, unless otherwise already provided in the Agreement or the Contract Documents.

## 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 Architect does 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 INFORMATION AND SERVICES REQUIRED OF THE OWNER

§ 2.2.1 Prior to commencement of the Work, the Contractor may request in writing that the Owner provide reasonable evidence that the Owner has made financial arrangements to fulfill the Owner’s obligations under the Contract. Thereafter, the Contractor may only request such evidence if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) a change in the Work materially changes the Contract Sum; or (3) the Contractor identifies in writing a reasonable concern regarding the Owner’s ability to make payment when due. The Owner shall furnish such evidence as a condition precedent to commencement or continuation of the Work or

the portion of the Work affected by a material change. After the Owner furnishes the evidence, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.2 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.

§ 2.2.3 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.

§ 2.2.4 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.

§ 2.2.5 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 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.

### § 2.4 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 written 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 deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect or failure. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner.

## 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 obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's 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 2.2.3, 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 Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the 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 Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the 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 make 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 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, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and 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 written notice to the Owner and Architect and shall not proceed with that portion of the Work without further written instructions from the Architect. If the Contractor is then instructed to proceed with the required means, methods, techniques, sequences or procedures without acceptance of changes proposed by the Contractor, the Owner shall be solely responsible for any loss or damage arising solely from those Owner-required 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 Work 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 authorized by the Architect in accordance with Sections 3.12.8 or 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect 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

The Contractor warrants to the Owner 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 Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

### § 3.6 TAXES

The Contractor shall pay sales, consumer, use and similar taxes for the Work 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 Contractor shall secure and pay for the building permit as well as 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 and the Architect before conditions are disturbed and in no event later than 21 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect 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 an equitable adjustment in the Contract Sum or Contract Time, or both. If the Architect 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 and Contractor in writing, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may proceed 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 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 furnish in writing to the Owner through the Architect the name and qualifications of a proposed superintendent. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to the proposed superintendent or (2) that the Architect requires additional time to review. Failure of the Architect to reply 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 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 SCHEDULES

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall not exceed time limits current under the Contract Documents, shall be revised at appropriate intervals as required by the conditions of the Work and Project, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.

§ 3.10.2 The Contractor shall prepare a submittal schedule, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, and shall submit the schedule(s) for the Architect's approval. The Architect's approval shall not unreasonably be delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a 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 perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

### § 3.11 DOCUMENTS AND SAMPLES AT THE SITE

The Contractor shall maintain at the site for the Owner one copy of the Drawings, Specifications, Addenda, Change Orders and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and one copy of approved Shop Drawings, Product Data, Samples and similar required submittals. These shall be available to the Architect and shall be delivered to the Architect 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 the way by which 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 is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is 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 Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents to the Owner 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 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 requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect in writing 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 Architect on previous submittals. In the absence of such written 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. 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 cause such services or certifications to be provided by a properly 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 and the Architect shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor all performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review, 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 Contractor shall not be responsible for the adequacy of the performance and design criteria specified in the Contract Documents.

### § 3.13 USE OF SITE

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

### § 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 and patching shall be restored to the condition existing prior to the cutting, fitting and 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 or separate contractors by cutting, patching or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter such construction by the Owner or a separate contractor except with written consent of the Owner and of such separate contractor; such consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold from the Owner or a separate contractor the Contractor's 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 or 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 may do so and Owner shall be entitled to reimbursement from the Contractor.

### § 3.16 ACCESS TO WORK

The Contractor shall provide the Owner and Architect 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 and Architect harmless from loss on account thereof, but shall not be responsible for such 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 or Architect. However, if the Contractor has reason to believe that the required design, process or product is an infringement of a copyright or a patent, the Contractor shall be responsible for such loss unless such information is promptly furnished to the Architect.

### § 3.18 INDEMNIFICATION

§ 3.18.1 To the fullest extent permitted by law the Contractor shall indemnify and hold harmless the Owner, Architect, 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 which 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

### § 4.1 GENERAL

§ 4.1.1 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.

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

§ 4.1.3 If the employment of the Architect is terminated, the Owner shall employ a successor architect as to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

### § 4.2 ADMINISTRATION OF THE CONTRACT

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate For Payment. The 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. The 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, except as provided in Section 3.3.1.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and report to the Owner (1) known deviations from the Contract Documents and from the most recent construction schedule submitted by the Contractor, and (2) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of and will not be responsible for acts or omissions of the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

#### § 4.2.4 COMMUNICATIONS FACILITATING CONTRACT ADMINISTRATION

Except as otherwise provided in the Contract Documents or when direct communications have been specially authorized, the Owner and Contractor shall endeavor to communicate with each other through the Architect about matters arising out of or relating to the Contract. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

§ 4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.5.2 and 13.5.3, whether or not such Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 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. Review of such submittals 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 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 Architect's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by the Architect, 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.

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may authorize minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 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 duties, responsibilities and limitations of authority of such project representatives shall be as set forth in an exhibit to be incorporated in the Contract Documents.

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

§ 4.2.12 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 rendered in good faith.

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

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests 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 a separate contractor or subcontractors of a separate contractor.

§ 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 or the bidding requirements, the Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner through the Architect the names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for each principal portion of the Work. The Architect may reply within 14 days to the Contractor in writing stating (1) whether the Owner or the Architect has reasonable objection to any such proposed person or entity or (2) that the Architect requires additional time for review. Failure of the Owner or Architect to reply 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 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 or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner 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 previously selected if the Owner or Architect makes reasonable objection to such substitution.

### § 5.3 SUBCONTRACTUAL RELATIONS

By appropriate agreement, written where legally required for validity, 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, which the Contractor, by these Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner 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 in writing; 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 such 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 AND TO AWARD SEPARATE 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 to award separate contracts in connection with other portions of the Project or other construction or operations on the site under Conditions of the Contract identical or substantially similar to these including those portions related to insurance and waiver of subrogation. If the Contractor claims that delay or additional cost is involved because of such action by the Owner, the Contractor shall make such Claim as provided in Article 15.

§ 6.1.2 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 Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces, the Owner shall be deemed to be subject to the same obligations and to have the same rights that apply to the Contractor 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 and separate 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 or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Architect apparent discrepancies or defects in such other construction that would render it unsuitable for such proper execution and results. Failure of the Contractor so to report shall constitute an acknowledgment that

the Owner's or separate contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discoverable.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a separate contractor 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 a separate contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or separate contractors as provided in Section 10.2.5.

§ 6.2.5 The Owner and each separate contractor 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 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 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, Contractor and Architect; a Construction Change Directive requires agreement by the Owner 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, and the Contractor shall proceed promptly, unless otherwise provided in the Change Order, Construction Change Directive or order for a minor change in the Work.

### § 7.2 CHANGE ORDERS

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor and Architect 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 Architect and signed by the Owner 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 7.3.7.

§ 7.3.4 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed in a proposed Change Order or Construction Change Directive so that application of such unit prices to quantities of Work proposed will cause substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 7.3.5 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect 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.

§ 7.3.6 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.

§ 7.3.7 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the method and 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 Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.7 shall be limited to the following:

- .1 Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers' compensation insurance;
- .2 Costs of materials, supplies and equipment, including cost of transportation, whether incorporated or consumed;
- .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 related to the Work; and
- .5 Additional costs of supervision and field office personnel directly attributable to the change.

§ 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 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 Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's 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 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 Architect will 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 has authority to order minor changes in the Work not involving adjustment in the Contract Sum or extension of the Contract Time and not inconsistent with the intent of the Contract Documents. Such changes will be effected by written order signed by the Architect and shall be binding on the Owner and Contractor.

## 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, prematurely commence operations on the site or elsewhere prior to the effective date of insurance required by Article 11 to be furnished by the Contractor and Owner. The date of commencement of the Work shall not be changed by the effective date of such insurance.

§ 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 an act or neglect of the Owner or Architect, or of an employee of either, or of a separate contractor employed by the Owner; or by changes ordered in the Work; or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties or other causes beyond the Contractor's control; or by delay authorized by the Owner pending mediation and arbitration; or by other causes that the Architect determines may justify delay, then the Contract Time shall be extended by Change Order 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

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.

### § 9.2 SCHEDULE OF VALUES

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

### § 9.3 APPLICATIONS FOR PAYMENT

§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect 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. Such application shall be notarized, if required, and supported by such data substantiating the Contractor's right to payment as the Owner or Architect may require, such as copies of requisitions from Subcontractors and material 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 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 material 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, material suppliers, or other persons or entities making a claim by reason of having provided labor, materials and equipment relating to the Work.

#### § 9.4 CERTIFICATES FOR PAYMENT

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either issue to the Owner a Certificate for Payment, with a copy to the Contractor, for such amount as the Architect determines is properly due, or notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in whole or in part as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data comprising the Application for Payment, that, to the best of the Architect's knowledge, information and belief, the Work has progressed to the point indicated and that the quality of the Work is in accordance with the Contract Documents. The foregoing representations 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 Architect. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified. However, the issuance of a Certificate for Payment will not be a representation that the 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 material 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 Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The 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 previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from 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 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;
- .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 the above reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.3 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or material or equipment suppliers 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 Architect 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, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the 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 Architect 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 Architect and Owner 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 material and equipment 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 to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay or to see to the payment of money to a Subcontractor, except as may otherwise be required by law.

§ 9.6.5 Contractor payments to material and equipment 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 and 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, shall create any fiduciary liability or tort liability on the part of the Contractor for breach of trust or shall entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

## § 9.7 FAILURE OF PAYMENT

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after 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 Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' written notice to the Owner 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 shut-down, 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 that 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 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 Contractor's list, the Architect 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 Contractor's 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 to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion, shall establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall 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 such Certificate. Upon such acceptance and consent of surety, if any, the Owner shall make payment of retainage applying to such 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 as required under Section 11.3.1.5 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 shall 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.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, 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 receipt of the Contractor's written notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection and, when the

Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with terms and conditions of 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 Architect's final 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 (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 and will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner, (3) a written statement that the Contractor knows of no substantial 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 and (5), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, 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. If such lien 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 such lien, 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 Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed 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 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 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; or
- .3 terms of special warranties required by the Contract Documents.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor or material 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.

### § 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 or the Contractor's Subcontractors or Sub-subcontractors; and
- .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.

§ 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 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 owners and users of adjacent sites and utilities.

§ 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 and 10.2.1.3 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 and 10.2.1.3, except damage or loss attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either 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 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, written notice of such 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. 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 report the condition to the Owner and Architect in writing.

§ 10.3.2 Upon receipt of the Contractor's written 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 and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of such material or substance or who are to perform the task of removal or safe containment of such material or substance. The Contractor and the Architect will promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor 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 in the amount of the Contractor's reasonable additional costs of shut-down, delay and start-up.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, 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 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 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 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 indemnify the Owner for the cost and expense the Owner incurs (1) for remediation of a material or substance 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 indemnify 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 LIABILITY INSURANCE

§ 11.1.1 The Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations and completed operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- .1 Claims under workers' compensation, disability benefit and other similar employee benefit acts that are applicable to the Work to be performed;
- .2 Claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
- .3 Claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
- .4 Claims for damages insured by usual personal injury liability coverage;
- .5 Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
- .6 Claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle;
- .7 Claims for bodily injury or property damage arising out of completed operations; and
- .8 Claims involving contractual liability insurance applicable to the Contractor's obligations under Section 3.18.

§ 11.1.2 The insurance required by Section 11.1.1 shall be written for not less than limits of liability specified in the Contract Documents or required by law, whichever coverage is greater. Coverages, whether written on an occurrence or claims-made basis, shall be maintained without interruption from the date of commencement of the Work until the date of final payment and termination of any coverage required to be maintained after final payment, and, with respect to the Contractor's completed operations coverage, until the expiration of the period for correction

of Work or for such other period for maintenance of completed operations coverage as specified in the Contract Documents.

§ 11.1.3 Certificates of insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work and thereafter upon renewal or replacement of each required policy of insurance. These certificates and the insurance policies required by this Section 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner. An additional certificate evidencing continuation of liability coverage, including coverage for completed operations, shall be submitted with the final Application for Payment as required by Section 9.10.2 and thereafter upon renewal or replacement of such coverage until the expiration of the time required by Section 11.1.2. Information concerning reduction of coverage on account of revised limits or claims paid under the General Aggregate, or both, shall be furnished by the Contractor with reasonable promptness.

§ 11.1.4 The Contractor shall cause the commercial liability coverage required by the Contract Documents to include (1) the Owner, the Architect and the Architect'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 during the Contractor's completed operations.

#### § 11.2 OWNER'S LIABILITY INSURANCE

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

#### § 11.3 PROPERTY INSURANCE

§ 11.3.1 Unless otherwise provided, the Owner shall purchase and maintain, in a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located, property insurance written on a builder's risk "all-risk" or equivalent policy form in the amount of the initial Contract Sum, plus value of subsequent Contract Modifications and cost of materials supplied or installed by others, comprising total value for the entire Project at the site on a replacement cost basis without optional deductibles. Such property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made as provided in Section 9.10 or until no person or entity other than the Owner has an insurable interest in the property required by this Section 11.3 to be covered, whichever is later. This insurance shall include interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Project.

§ 11.3.1.1 Property insurance shall be on an "all-risk" or equivalent policy form and shall include, without limitation, insurance against the perils of fire (with extended coverage) and physical loss or damage including, without duplication of coverage, theft, vandalism, malicious mischief, collapse, earthquake, flood, windstorm, falsework, testing and startup, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for Architect's and Contractor's services and expenses required as a result of such insured loss.

§ 11.3.1.2 If the Owner does not intend to purchase such property insurance required by the Contract and with all of the coverages in the amount described above, the Owner shall so inform the Contractor in writing prior to commencement of the Work. The Contractor may then effect insurance that will protect the interests of the Contractor, Subcontractors and Sub-subcontractors in the Work, and by appropriate Change Order the cost thereof shall be charged to the Owner. If the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain insurance as described above, without so notifying the Contractor in writing, then the Owner shall bear all reasonable costs properly attributable thereto.

§ 11.3.1.3 If the property insurance requires deductibles, the Owner shall pay costs not covered because of such deductibles.

§ 11.3.1.4 This property insurance shall cover portions of the Work stored off the site, and also portions of the Work in transit.

§ 11.3.1.5 Partial occupancy or use in accordance with Section 9.9 shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or

otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

#### § 11.3.2 BOILER AND MACHINERY INSURANCE

The Owner shall purchase and maintain boiler and machinery insurance required by the Contract Documents or by law, which shall specifically cover such insured objects during installation and until final acceptance by the Owner; this insurance shall include interests of the Owner, Contractor, Subcontractors and Sub-subcontractors in the Work, and the Owner and Contractor shall be named insureds.

#### § 11.3.3 LOSS OF USE INSURANCE

The Owner, at the Owner's option, may purchase and maintain such insurance as will insure the Owner against loss of use of the Owner's property due to fire or other hazards, however caused. The Owner waives all rights of action against the Contractor for loss of use of the Owner's property, including consequential losses due to fire or other hazards however caused.

§ 11.3.4 If the Contractor requests in writing that insurance for risks other than those described herein or other special causes of loss be included in the property insurance policy, the Owner shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate Change Order.

§ 11.3.5 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, the Owner shall waive all rights in accordance with the terms of Section 11.3.7 for damages caused by fire or other causes of loss covered by this separate property insurance. All separate policies shall provide this waiver of subrogation by endorsement or otherwise.

§ 11.3.6 Before an exposure to loss may occur, the Owner shall file with the Contractor a copy of each policy that includes insurance coverages required by this Section 11.3. Each policy shall contain all generally applicable conditions, definitions, exclusions and endorsements related to this Project. Each policy shall contain a provision that the policy will not be canceled or allowed to expire, and that its limits will not be reduced, until at least 30 days' prior written notice has been given to the Contractor.

#### § 11.3.7 WAIVERS OF SUBROGATION

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, and (2) the Architect, Architect's consultants, separate contractors described in Article 6, 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 covered by property insurance obtained pursuant to this Section 11.3 or other property insurance applicable to the Work, except such rights as they have to proceeds of such insurance held by the Owner as fiduciary. The Owner or Contractor, as appropriate, shall require of the Architect, Architect's consultants, separate contractors described in Article 6, if any, and the subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

§ 11.3.8 A loss insured under the Owner's property insurance 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 11.3.10. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner.

§ 11.3.9 If required in writing by a party in interest, the Owner as fiduciary shall, upon occurrence of an insured loss, give bond for proper performance of the Owner's duties. The cost of required bonds shall be charged against proceeds received as fiduciary. The Owner shall deposit in a separate account proceeds so received, which the

Owner shall distribute in accordance with such agreement as the parties in interest may reach, or as determined in accordance with the method of binding dispute resolution selected in the Agreement between the Owner and Contractor. If after such loss no other special agreement is made and unless the Owner terminates the Contract for convenience, replacement of damaged property shall be performed by the Contractor after notification of a Change in the Work in accordance with Article 7.

§ 11.3.10 The Owner as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five days after occurrence of loss to the Owner's exercise of this power; if such objection is made, the dispute shall be resolved in the manner selected by the Owner and Contractor as the method of binding dispute resolution in the Agreement. If the Owner and Contractor have selected arbitration as the method of binding dispute resolution, the Owner as fiduciary shall make settlement with insurers or, in the case of a dispute over distribution of insurance proceeds, in accordance with the directions of the arbitrators.

#### § 11.4 PERFORMANCE BOND AND PAYMENT BOND

§ 11.4.1 The Owner shall have the right to require the Contractor to furnish bonds covering faithful performance of the Contract and payment of obligations arising thereunder as stipulated in bidding requirements or specifically required in the Contract Documents on the date of execution of the Contract.

§ 11.4.2 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.

### 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 Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's 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 Architect has not specifically requested to examine prior to its being covered, the 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, costs of uncovering and replacement shall, by appropriate Change Order, be at the Owner's expense. If such Work is not in accordance with the Contract Documents, such costs and the cost of correction shall be at the Contractor's expense unless the condition was caused by the Owner or a separate contractor in which event the Owner shall be responsible for payment of such costs.

#### § 12.2 CORRECTION OF WORK

##### § 12.2.1 BEFORE OR AFTER SUBSTANTIAL COMPLETION

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, whether discovered before or after 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 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 an 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 written 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 or Architect, the Owner may correct it in accordance with Section 2.4.

§ 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, whether completed or partially completed, of the Owner or separate contractors 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 except that, 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 such 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 such assignment.

### § 13.3 WRITTEN NOTICE

Written notice shall be deemed to have been duly served if delivered in person to the individual, to a member of the firm or entity, or to an officer of the corporation for which it was intended; or if delivered at, or sent by registered or certified mail or by courier service providing proof of delivery to, the last business address known to the party giving notice.

### § 13.4 RIGHTS AND REMEDIES

§ 13.4.1 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.

§ 13.4.2 No action or failure to act by the Owner, 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 there under, except as may be specifically agreed in writing.

## § 13.5 TESTS AND INSPECTIONS

§ 13.5.1 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 Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of (1) tests, inspections or approvals that do not become requirements until after bids are received or negotiations concluded, and (2) tests, inspections or approvals where building codes or applicable laws or regulations prohibit the Owner from delegating their cost to the Contractor.

§ 13.5.2 If the Architect, Owner or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection or approval not included under Section 13.5.1, the 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 Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.5.3, shall be at the Owner's expense.

§ 13.5.3 If such procedures for testing, inspection or approval under Sections 13.5.1 and 13.5.2 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 Architect's services and expenses shall be at the Contractor's expense.

§ 13.5.4 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 Architect.

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

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

## § 13.6 INTEREST

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at such rate as the parties may 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.

## § 13.7 TIME LIMITS ON CLAIMS

The Owner and Contractor shall commence all claims and causes of action, whether in contract, tort, breach of warranty or otherwise, against the other arising out of or related to the Contract in accordance with the requirements of the final dispute resolution method selected in the Agreement within the time 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 13.7.

## 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 or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, 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 Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, 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 promptly, upon the Contractor's request, reasonable evidence as required by Section 2.2.1.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor or a Subcontractor, Sub-subcontractor or their agents or employees or any other persons or entities performing portions of the Work under direct or indirect contract with the Contractor, 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' written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, including reasonable overhead and profit, costs incurred by reason of such termination, and damages.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing portions of the Work under contract with the Contractor 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' written notice to the Owner and the 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 for materials or labor in accordance with the respective agreements between the Contractor and the Subcontractors;
- .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 above reasons exist, the Owner, upon certification by the Initial Decision Maker that sufficient cause exists to justify such action, 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' written 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 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 be certified by the Initial Decision Maker, upon application, 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 Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay or interruption as described in 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 the 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 written 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 Contractor shall be entitled to receive payment for Work executed, and costs incurred by reason of such termination, along with reasonable overhead and profit on the Work not executed.

### 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, 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.

##### § 15.1.2 NOTICE OF CLAIMS

Claims by either the Owner or Contractor must be initiated by written notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party must 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 CONTINUING CONTRACT PERFORMANCE

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. The Architect will prepare Change Orders and issue Certificates for Payment in accordance with the decisions of the Initial Decision Maker.

##### § 15.1.4 CLAIMS FOR ADDITIONAL COST

If the Contractor wishes to make a Claim for an increase in the Contract Sum, written notice as provided herein shall be given before proceeding to execute the Work. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

##### § 15.1.5 CLAIMS FOR ADDITIONAL TIME

§ 15.1.5.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, written notice as provided herein 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.

§ 15.1.5.2 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.

### § 15.1.6 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 15.1.6 shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

### § 15.2 INITIAL DECISION

§ 15.2.1 Claims, excluding those arising under Sections 10.3, 10.4, 11.3.9, and 11.3.10, 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 arising prior to the date final payment is due, unless 30 days have passed after the Claim has been referred to the Initial Decision Maker with no 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 such 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 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 an initial decision, demand in writing that the other party file for mediation within 60 days of the initial decision. If such a demand is made and the party receiving the demand fails to file for mediation within the time required, 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 15.1.6 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 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. 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 Either party, at its sole discretion, 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 Either party, at its sole discretion, 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 the Owner and Contractor under this Agreement.

Not For Bidding Purposes



**SUPPLEMENTARY GENERAL CONDITIONS A201-2007**

The following supplements modify the "General Conditions of the Contract for Construction," AIA Document A201-2007. 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
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**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.”

Add the following Paragraph:

1.1.2 In the event of conflict or discrepancies among the Contract Documents, the Documents prepared by the State of Delaware, Division of Facilities Management shall take precedence over all other documents.

## 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. 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. Prior to re-use of construction documents for a Project in which the Architect is not also involved, the Owner will remove from such documents all identification of the original Architect, including name, address and professional seal or stamp.”

Delete Paragraph 1.5.2 in its entirety.

## **ARTICLE 2: OWNER**

### **2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER**

To Subparagraph 2.2.3 – Add the following sentence:

“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.”

Delete Subparagraph 2.2.5 in its entirety and substitute the following:

2.2.5 The Contractor shall be furnished free of charge up to five (5) sets of the Drawings and Project Manuals. Additional sets will be furnished at the cost of reproduction, postage and handling.

## **ARTICLE 3: CONTRACTOR**

### **3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR**

Amend Paragraph 3.2.2 to state that any errors, inconsistencies or omissions discovered shall be reported to the Architect and Owner immediately.

Delete the third sentence in Paragraph 3.2.3.

### **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 so 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 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

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:

- 3.5.1 The Contractor will guarantee all materials and workmanship against original defects, except injury from proper and usual wear when used for the purpose intended, for two years after Acceptance by the Owner, and will maintain all items in perfect condition during the period of guarantee.
- 3.5.2 Defects appearing during the period of guarantee will be made good by the Contractor at his expense upon demand of the Owner, it being required that all work will be in perfect condition when the period of guarantee will have elapsed.
- 3.5.3 In addition to the General Guarantee there are other guarantees 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 guarantees will commence at the same time as the General Guarantee.
- 3.5.4 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

pipng, 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.

3.17 In the first sentence of the paragraph, insert "indemnify" between "shall" and "hold".

#### **ARTICLE 4: ADMINISTRATION OF THE CONTRACT**

##### **4.2 ADMINISTRATION OF THE CONTRACT**

Delete the first sentence of Paragraph 4.2.7 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 4.2.7 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 Paragraph:

4.2.10.1 There will be no full-time project representative provided by the Owner or Architect on this project.

Add to Paragraph 4.2.13 "and in compliance with all local requirements." 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 or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect 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**

Delete Paragraph 6.1.4 in its entirety.

**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 "arbitration" 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 their rights under the Contract.

**ARTICLE 9: PAYMENTS AND COMPLETION**

## 9.2 SCHEDULE OF VALUES

Add the following Paragraphs:

- 9.2.1 The Schedule of Values shall be submitted using AIA Document G702, Continuation Sheet to G703.
- 9.2.2 The Schedule of Values is to include a line item for Project Closeout Document Submittal. The value of this item is to be no less than 1% of the initial contract amount.

## 9.3 APPLICATIONS FOR PAYMENT

Add the following Paragraph:

- 9.3.1.3 Application for Payment shall be submitted on AIA Document G702 "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 has 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.

## 9.7 FAILURE OF PAYMENT

In first sentence, strike "seven" and insert "thirty (30)". Also strike "binding dispute resolution" and insert "remedies at law or in equity".

## 9.8 SUBSTANTIAL COMPLETION

To Subparagraph 9.8.3- Add the following sentence:

"If the Architect is required to make more than 2 inspections of the same portion of work, the Contractor shall be responsible for all costs associated with subsequent inspections including but not limited to any Architect's fees."

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:

10.1.1.1 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 work place, 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, along with the shipping slips that include those products.

## 10.3 HAZARDOUS MATERIALS

Delete Paragraph 10.3.3 in its entirety.

10.5 Delete Paragraphs 10.3.6 in its entirety.

**ARTICLE 11: INSURANCE AND BONDS**

## 11.1 CONTRACTOR'S LIABILITY INSURANCE

11.1.4 Strike "the Owner" immediately following "(1)" and strike "and (2) the Owner as an additional insured for claims caused in whole or in part by the Contractor's negligent acts or omissions during the Contractor's completed operations."

11.2 OWNER'S LIABILITY INSURANCE

Delete Paragraph 11.2 in its entirety.

11.3 PROPERTY INSURANCE

Delete Paragraph 11.3 in its entirety and replace with the following:

11.3 The State will not provide Builder's All Risk Insurance for the Project. The Contractor and all Subcontractors shall provide property coverage for their tools and equipment, as necessary. Any mandatory deductible required by the Contractor's Insurance shall be the responsibility of the Contractor.

11.4 PERFORMANCE BOND AND PAYMENT BOND

Add the following sentence: "The bonds will conform to those forms approved by the Office of Management and Budget."

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

12.2.2 AFTER SUBSTANTIAL COMPLETION

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.

12.2.2.1 Strike "one" and insert "two".

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

Strike "except that, if the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4."

13.6 INTEREST

Strike "the date payment is due at such rate as the parties may 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." Insert "30 days of presentment of the authorized Certificate of Payment at the annual rate of 12% or 1% per month.

13.7 TIME LIMITS ON CLAIMS

Strike the last sentence.

Add the following Paragraph:

13.8 CONFLICTS WITH FEDERAL STATUTES OR REGULATIONS

13.8.1 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 Throughout the Paragraph strike "21" and insert "45".

15.1.6 CLAIMS FOR CONSEQUENTIAL DAMAGES

Delete Paragraph 15.1.6 in its entirety.

15.2 INITIAL DECISION

Delete Paragraph 15.2.5 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

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,” Strike “binding dispute resolution” and insert “remedies at law and in equity”.

15.4 ARBITRATION

Delete Paragraph 15.4 and its sub-sections in its entirety.

END OF SUPPLEMENTARY GENERAL CONDITIONS

Not For Bidding Purposes

STATE OF DELAWARE  
DEPARTMENT OF LABOR  
DIVISION OF INDUSTRIAL AFFAIRS  
OFFICE OF LABOR LAW ENFORCEMENT  
PHONE: (302) 451-3423

Mailing Address:  
225 CORPORATE BOULEVARD  
SUITE 104  
NEWARK, DE 19702

Located at:  
225 CORPORATE BOULEVARD  
SUITE 104  
NEWARK, DE 19702

PREVAILING WAGES FOR BUILDING CONSTRUCTION EFFECTIVE MARCH 15, 2013

CLASSIFICATION	NEW CASTLE	KENT	SUSSEX
ASBESTOS WORKERS	21.87	26.94	39.20
BOILERMAKERS	65.47	33.22	48.83
BRICKLAYERS	46.83	46.83	46.83
CARPENTERS	50.06	50.06	39.82
CEMENT FINISHERS	27.61	29.11	21.20
ELECTRICAL LINE WORKERS	43.49	37.29	28.44
ELECTRICIANS	60.60	60.60	60.60
ELEVATOR CONSTRUCTORS	75.33	40.93	30.55
GLAZIERS	64.10	64.10	54.20
INSULATORS	51.48	51.48	51.48
IRON WORKERS	59.12	59.12	59.12
LABORERS	38.30	38.30	38.30
MILLWRIGHTS	62.18	62.18	48.75
PAINTERS	42.02	42.02	42.02
PILEDRIVERS	37.87	37.64	30.45
PLASTERERS	28.55	28.55	17.50
PLUMBERS/PIPEFITTERS/STEAMFITTERS	59.00	49.26	46.28
POWER EQUIPMENT OPERATORS	57.06	57.06	24.13
ROOFERS-COMPOSITION	21.77	17.96	19.34
ROOFERS-SHINGLE/SLATE/TILE	17.59	17.50	16.45
SHEET METAL WORKERS	62.74	62.74	62.74
SOFT FLOOR LAYERS	45.97	45.97	45.97
SPRINKLER FITTERS	51.75	51.75	51.75
TERRAZZO/MARBLE/TILE FINISHERS	51.41	51.41	45.45
TERRAZZO/MARBLE/TILE SETTERS	59.03	59.03	52.63
TRUCK DRIVERS	26.58	23.89	20.03

CERTIFIED: 4/30/13

BY: *Frank J. Lon*  
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) 451-3423.

NON-REGISTERED APPRENTICES MUST BE PAID THE MECHANIC'S RATE.

PROJECT: James T. Vaughn Correctional Center Hi-Voltage Repairs, New Castle County

## GENERAL REQUIREMENTS

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Not For Bidding Purposes

**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."
- 3.12. 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 judgement 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:
  - 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 General Contractor is allowed a fifteen percent (15%) markup for overhead and profit for additional work performed by the General 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 General 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.
- 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.

9.1.3 Section 6516, Title 29 of the Delaware Code annualized interest is not to exceed 12% per annum beginning thirty (30) days after the "presentment" (as opposed to the date) of the invoice.

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,

- 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 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	\$ 500,000	for each person
	\$1,000,000	for each occurrence
	\$1,000,000	aggregate
Property Damage	\$ 500,000	for each occurrence
	\$1,000,000	aggregate

11.7.2 Contractor's Protective Liability Insurance

Minimum coverage to be:

Bodily Injury	\$ 500,000	for each person
	\$1,000,000	for each occurrence
	\$1,000,000	aggregate
Property Damage	\$ 500,000	for each occurrence
	\$500,000	aggregate

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 one year 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.
- 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.

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 GENERAL REQUIREMENTS

## SECTION 01 10 00

### SUMMARY

#### PART 1 GENERAL

##### 1.01 PROJECT

- A. Project Name: James T. Vaughn Correctional Center Hi Voltage Repairs.
- B. Owner's Name: State of Delaware - OMB/DFM
- C. The work to be performed consists of preventive maintenance services to 25 kV Cables, (2) 25 kV Transformers with VFI, (1) 12 kV Main Substation, Electronic Trip 12 kV Circuit Breakers, (2) Pad-Mounted Capacitor Banks, 12 kV Cables, 12 kV Air-Insulated Tap Boxes, MV Power Fuses, 12 kV PMH Switches with Auto-Transfer, 12 kV Manual PMH Switches, 12 kV Indoor Substations with Auto-Transfer, 12 kV Indoor Manual Primary Selective Substations, 12 kV to Low Voltage Indoor Substations, UPS's, 12 kV Padmounted Transformers, 12 kV Dry-type and Cast-coil Transformers, Secondary Voltage Power Circuit Breakers with Electronic Trip, (1) Utility/Generator ATS within Substation, (1) 480 - 208Y/120 Power Dry Type Transformer and Switchboard Considered Part of the Substation, Manholes, and Lightning Arresters as shown on the contract documents. Also, demolish and properly dispose of (1) 750 kVA padmount transformer as shown on the contract documents. Testing showed this padmount's insulating oil to be free of PCB contamination.
- D. Testing Agency Qualifications: Company to be a member of the International Electrical Testing Association and specializing in testing products with a minimum three years documented experience. Electrical tests are detailed in the drawings and specifications.

##### 1.02 CONTRACT DESCRIPTION

- A. Contract Type: A single prime contract based on a Stipulated Price as described in Division 0 - Procurement and Contract Requirements).

##### 1.03 DESCRIPTION OF WORK

- A. Repair defects identified below..
  1. Building B - Provide a placard, per site standards, to identify Transformer 1.
  2. Building C - Maintenance tool (racking tool) was not found. Provide a new one.
  3. Building D - Maintenance tool (racking tool) was not found. Provide a new one.
  4. Building E - Maintenance tool was found badly rusted and possibly inoperable, in a water-stained area. Discard same and provide a new maintenance tool.
  5. Building G - Power House - Inspect for whether substation remote alarm and shunt trip are connected. If not provide a cost to connect them.
  6. As detailed in other sections of this RFB and other contract documents, demolish and properly dispose of the off-system 750 kVA padmount.
  7. Building P - DCC Well #3 - Padmounted transformer has an unusual burning smell inside the compartments. Draw samples and analyze transformer insulating/cooling fluid as in the procedure for 25 kV Transformer with VFI (#2)
  8. Building R -The outdoor 500 kVA padmount has a failed external IQ DP-4000 power meter. The meter's front HMI panel was sun faded and water-logged due to its incapability to work out in the elements. Meter needs a weather protective NEMA 3R housing with a door over it. Recommend meter be taken out and repaired or replaced, with a new design implemented. Provide a cost to replace the meter inside a new NEMA 3R cabinet with a window in door and extend wiring to new meter.
  9. Building T3 - Padmount does not cover the primary window. There is a crack in the secondary side of the pad due to a pad extension. Fluid was observed on the lip under the X2 secondary bushing. Provide a cost to repair pad and stop oil leak.

10. MSU - Remove the abandoned un-jacketed concentric BD cable, with un-taped ends, that formerly fed the now off-system padmount at Building G, from its duct in the padmount at this location. Removal of this cable is included in the work associated with the demolition of the 750 kVA padmount at Building G, as detailed in other sections of this RFB and other contract documents
11. The PMH switch's hex bolt (not pentahead), for the switch compartments, is stripped and difficult to turn. Replace bolt in-kind.
12. Building W - Pad has a crack through the secondary compartment. Has excessive straw in the secondary compartment. Provide a cost to repair the pad. Remove the straw.
13. Building 12 - Padmount has oil on the lip under the load break bushings but we found no evidence that the oil is from the bushings. Fluid level may be low. The X1 secondary bushing has evidence of an oil leak and there is oil on the lip. The switches in the PMH gear have no identification labels or placards. Check primary and secondary bushings and their bushing gaskets. Provide a cost to repair same. Level pad and/or transformer, recheck fluid level and top off with same type of fluid if needed. Place ID labels or placards per site standards.
14. Building 13 - One mechanical lug bolt on a secondary spade is too short. Replace it with a bolt of sufficient length to completely pass through the nut.
15. Building 14 - Found excessive shrub growth at the padmount. Padmount doors are askew/tilted. Trim shrubbery. Provide a cost to repair doors.
16. Building 15 - Transformer pad has cracks near the high side. Has rust near the top of the secondary compartment. Check for pad levelness. All secondary phases need 4 longer ½" bolts per phase on the mechanical lugs that are on the 6-hole spades. Provide a cost to repair transformer pad. Provide a cost to sand, re-prime and repaint at the top of the secondary compartment. Provide a cost to level the pad. Provide (16) longer ½" stainless steel bolts to hold the mechanical lugs to the secondary spades.
17. Building 17 - The X0 and X3 secondary bushings were torqued CCW by cable strain. Replace the secondary bushings with ones with better support to hold the existing cable strain.
18. Building 18 - Oil level appeared low. All 2 bolts in each phase's mechanical lugs in the 4-hole secondary spades were too short to fully extend through the nuts. A secondary compartment pentahead bolt was difficult to grip to open the pad. We were unable to open the high side compartment to inspect. Check and top off with fluid. Replace (8) mechanical lug mounting bolts with SS ones of sufficient length to fully extend through the nuts. Replace secondary compartment pentahead bolt in-kind.
19. Building 20 - The secondary compartment pentahead bolt is stripped. One cable on low side bushing X1 is dug into, likely from a pull gone bad. Replace secondary compartment pentahead bolt in-kind. De-terminate, on both ends, and meggar, the scuffed cable. Provide a cost to repair, if significant.
20. Building 24 - Padmount doors bind. Check levelness. High side compartment pentahead bolts were in tight and rusty. PMH gear doors bind and are askew. Provide a cost to repair the doors, level the pad and/or transformer, replace the high-side pentahead bolts, in-kind and repair the PMH gear doors.
21. Maintenance Building - Padmount fins have been hit by the lawn mower tractor and are rusting. Sand, re-prime and repaint the fins, as needed. Provide a price for protective bollards.
22. DCC Well #4 - This transformer and its 12 kV feeder are not shown on the site SLD. As-built the transformer and primary extension on to a full size red-line set of SLD's and furnish to Engineer for update. Show components, cables and cable lengths.
23. Line 2500 Circuit 1B Loop Switch #1 - Switches are unlabeled and not clear with respect to the Single Line Diagram. Placard the switch compartments with designations matching those on the single lines, per site standards.

24. Line 2511 Circuit 2B Loop Switch #1 - Switches are unlabeled and not clear with respect to the Single Line Diagram. Placard the switch compartments with designations matching those on the single lines, per site standards.
  25. MH 7 - The Circuit 1A junction has bad rust on the housing and some rust on the ground sleeve. The Circuit 1B junction has bad rust on both the body and the ground sleeve. Both junctions' top surfaces are severely rusted. Sand, re-prime and repaint all rusted sides of the junction cabinets and ground sleeves as recommended by the manufacturer.
  26. MH 13 - The SLD does not document the taps between the manhole and a piece of PMH gear, nor the taps' origins in the manhole, nor the gear, itself, which was added to provide automatic transfer capability for the Maintenance Building and the Sewage Treatment Plant. As-built the switch, as-built the undocumented taps into the shown circuits on the SLD, in their correct location and as-built the primary extensions on to a full size red-line set of SLD's and furnish to Engineer for update. Show components, cables and cable lengths.
- B. Supply all labor, supervision, tools, and support materials necessary to complete the work scope in its entirety, including but not limited to switching, proving deenergization, grounding, mechanical disassembly for testing.
  - C. All work and procedures shall comply with the latest edition of the following codes in effect at the time: ANSI, AWS, ASME, OSHA, AISC, NEC, NESC, NFPA 70B, NFPA 70E, National Life Safety and ASTM.
  - D. The contractor shall arrange for an electrical permit and obtain an electrical inspection where required.
  - E. Engage the services of an electrical testing company to provide all testing and testing equipment.
  - F. The contractor shall provide all PPE's.
  - G. The contractor shall follow all State of Delaware Department of Corrections site safety requirements.
  - H. Before starting any excavation, the contractor shall obtain a mark out from Miss Utility and engage the services of an underground facilities location company, Soft Dig or equivalent, to locate all facilities in the area of excavation.
  - I. The contractor shall write a switching and grounding plan for each shutdown and obtain the approval of the designated DOC Representative.
  - J. The contractor shall provide adequate lighting, safety equipment, crane/man lift, and any scaffold or platform as required to perform the work.
  - K. The contractor shall note any discrepancies or additions to the single line diagrams on a full size red line mark up and furnish to the Engineer.
  - L. The correctional center is a 24/7 facility.
  - M. All entering personnel need to be prearranged and have to have passed a security check.
  - N. Outages are at the sole discretion of the DOC and are revocable or subject to being shortened while under way for any reason.
  - O. Tools shall be inventoried when entering and leaving the detention area via the Sally Port. The same list may be reused on different entries.
  - P. Walking around is permitted but no entry or exit from the detention area is permitted (via the Sally Port) between 11 AM and 1 PM. During this interval, no vehicles may enter or exit, nor are

they permitted, even non-moving, within the detention area.

- Q. Cell phones are prohibited in the detention area. Non-tool knives are not permitted including but not limited to pocket knives. A limited number of lockers are available at the Sally Port for while-in-detention-area storage of small personal items.
- R. Persons entering the detention area shall surrender their driver's license, or other photo ID, to the guards for the duration of their visit.
- S. No cameras are permitted in the correctional center without prior permission.
- T. All vehicles and carry-in bags entering and leaving the detention area through the Sally Port will be scrupulously inspected by the guards.
- U. Personnel entering the detention area through the Sally Port are subject to examination with a metal detector.
- V. All personnel in the detention area must have a pre-arranged escort accompanying them at all times.
- W. Record the state (open or closed) for all circuit breakers and switches. This data to be provided upon closeout.
- X. Record the Manufacturer, Cat. No. and amperage of all power, control and c.p.t. fuses. This will be used, by others, to generate a site inventory of fuses, and to, subsequently, for others to create a site-wide spare fuses list.
- Y. Demolish and properly dispose of the Westinghouse Style No. G73F770P44 S/N 82JC667150 750 kVA 12470Y/7200-480Y/277V padmounted transformer near the Power House, Building G, as shown on Site Plan E-1. Give the DOC the right of first refusal of the pad's (3) lightning arresters. Attempt to remove from duct the de-energized 12 kV cable, extending underground into the padmount at Building MSU. Demolish the concrete pad. Cut off all exposed conduit and cable. Abandon the remaining unused underground facilities.
- Z. Refer to Appendix "B" for the transformer oil test report stating the transformer oil is considered non- PCB contaminated.
- AA. At the completion of work, the contractor shall submit (3) copies of asbuilts with complete set of documentation for each type of equipment covered by this Request for Bids, using the same forms created during the bidding process as applicable for each substation as well as a summarized list of deficiencies in equipment.
- AB. The report shall include an executive summary of all equipment surveyed.
- AC. Additionally, there shall be a separate executive summary of all deficiencies.

#### **1.04 OWNER OCCUPANCY**

- A. State of Delaware intends to continue to occupy adjacent portions of the existing building during the entire construction period.
- B. State of Delaware intends to occupy the Project upon Substantial Completion.
- C. Cooperate with State of Delaware to minimize conflict and to facilitate continuation of normal State of Delaware's operations.
- D. Schedule the Work to accommodate State of Delaware occupancy.

#### **1.05 CONTRACTOR USE OF SITE AND PREMISES**

- A. Provide access to and from site as required by law and by State of Delaware:

State of Delaware  
James T. Vaughn Correctional Center Hi Voltage Repairs  
OMB/DFM Project # MC3804000029

1. Emergency Building Exits During Construction: Keep all exits required by code clear and open during construction period; provide temporary exit signs if exit routes are temporarily altered.
  2. Do not obstruct roadways, sidewalks, or other public ways without permit.
- B. Time Restrictions:
1. This project duration shall not be longer than 200 days.
- C. Utility Outages and Shutdown:
1. Limit disruption of utility services to hours the building is unoccupied.
  2. Do not disrupt or shut down life safety systems, including but not limited to fire sprinklers and fire alarm system, without 7 days notice to State of Delaware and authorities having jurisdiction.
  3. Prevent accidental disruption of utility services to other facilities.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**

Not For Bidding Purposes

**SECTION 01 20 00**

**PRICE AND PAYMENT PROCEDURES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Procedures for preparation and submittal of applications for progress payments.
- B. Change procedures.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 21 00 - Allowances: Payment procedures relating to allowances.
- B. Section 01 22 00 - Unit Prices: Monetary values of unit prices, payment and modification procedures relating to unit prices.

**1.03 SCHEDULE OF VALUES**

- A. Forms to be used: AIA G703.
- B. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Delaware Engineering and Design Corporation for approval.
- C. Forms shall be typed. Forms filled out by hand will not be accepted.
- D. Submit Schedule of Values in duplicate within 5 days after date of Pre-Construction Meeting.

**1.04 APPLICATIONS FOR PROGRESS PAYMENTS**

- A. Payment Period: Submit at intervals stipulated in the Agreement.
- B. Form to be used: AIA G702 and G703.
- C. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Delaware Engineering and Design Corporation for approval.
- D. Forms shall be typed. Forms filled out by hand will not be accepted.
- E. Execute certification by signature of authorized officer.
- F. Submit three copies of each Application for Payment.
- G. Include the following with the application:
  - 1. OMB/DFM Project Number.
  - 2. Contractors Purchase Order Number from the State.

**1.05 MODIFICATION PROCEDURES**

- A. For minor changes not involving an adjustment to the Contract Sum or Contract Time, Delaware Engineering and Design Corporation will issue instructions directly to Contractor.
- B. For other required changes, Delaware Engineering and Design Corporation will issue a document signed by State of Delaware instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.
  - 1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
  - 2. Promptly execute the change.
- C. For changes for which advance pricing is desired, Delaware Engineering and Design Corporation will issue a document that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing

the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit a fixed price quotation within 5 days.

- D. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.
- E. Execution of Change Orders: Delaware Engineering and Design Corporation will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.
- F. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.
- G. Promptly revise progress schedules to reflect any change in Contract Time, and revise sub-schedules to adjust times for other items of work affected by the change.
- H. Promptly enter changes in Project Record Documents.

#### **1.06 APPLICATION FOR FINAL PAYMENT**

- A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.
- B. Application for Final Payment will not be considered until the following have been accomplished:
  - 1. All closeout procedures specified in Section 01 70 00.

#### **PART 2 PRODUCTS - NOT USED**

#### **PART 3 EXECUTION - NOT USED**

**END OF SECTION**

Not For Bidding Purposes

**SECTION 01 21 00**

**ALLOWANCES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Contingency allowance.

**1.02 RELATED REQUIREMENTS**

- A. State of Delaware Front End Documents Division 0
- B. Section 01 20 00 - Price and Payment Procedures: Additional payment and modification procedures.

**1.03 CONTINGENCY ALLOWANCE**

- A. Contractor's costs for products, delivery, installation, labor, insurance, payroll, taxes, bonding, equipment rental, overhead and profit will be included in Change Orders authorizing expenditure of funds from this Contingency Allowance.
- B. Funds will be drawn from the Contingency Allowance only by Change Order.
- C. At closeout of Contract, funds remaining in Contingency Allowance will be credited to Owner by Change Order.

**1.04 ALLOWANCES SCHEDULE**

- A. Contingency Allowance: Include the stipulated sum/price of \$50,000 for use upon Owner's instructions for miscellaneous repairs during construction and unit costs specified on the Bid Form in the specifications.
- B. This Allowance shall be a separate line item on the Schedule of Values.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**

**SECTION 01 22 00**

**UNIT PRICES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. List of unit prices, for use in preparing Bids.

**1.02 COSTS INCLUDED**

- A. Unit Prices included on the Bid Form shall include full compensation for all required labor, products, tools, equipment, plant, transportation, services and incidentals; erection, application or installation of an item of the Work; overhead and profit.

**1.03 UNIT QUANTITIES SPECIFIED**

- A. Quantities indicated in the Bid Form are for bidding and contract purposes only. Quantities and measurements of actual Work will determine the payment amount.

**1.04 MEASUREMENT OF QUANTITIES**

- A. Measurement methods delineated in the individual specification sections complement the criteria of this section. In the event of conflict, the requirements of the individual specification section govern.
- B. Assist by providing necessary equipment, workers, and survey personnel as required.

**1.05 PAYMENT**

- A. Payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities of Work that is incorporated in or made necessary by the Work and accepted by the Delaware Engineering and Design Corporation, multiplied by the unit price.

**1.06 SCHEDULE OF UNIT PRICES**

- A. Provide a unit cost for replacing a stress cone on 1/0 Cu.
- B. Provide a unit cost for replacing a stress cone on 4/0 Cu.
- C. Provide a unit cost for replacing a 15 kV 200 A LB elbow on 4/0 Cu.
- D. Provide a unit cost for replacing a 15 kV 200 A LB elbow on 1/0 Cu.
- E. Provide a unit cost for resetting breaker or relays and testing a LV power circuit breaker with electronic trip.
- F. Provide a unit cost to replace an auto-transfer PMH-9 unit with (6) power fuses.
- G. Provide a unit cost to replace an auto-transfer PMH-6 unit with (3) power fuses.
- H. Provide a unit cost to replace a manual PMH-13 unit.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**

**SECTION 01 23 00**

**ALTERNATES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Description of alternates.

**1.02 RELATED REQUIREMENTS**

- A. State of Delaware Front End Documents Division 0

**1.03 ACCEPTANCE OF ALTERNATES**

- A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at State of Delaware's option. Accepted alternates will be identified in the Owner-Contractor Agreement.
- B. Coordinate related work and modify surrounding work to integrate the Work of each alternate.

**1.04 SCHEDULE OF ALTERNATES**

- A. Alternate No. 1 - Work associatd with Preventive Maintenance Procedure 8 MV Power Fuses. This shall be an add alternate to perform the work described in this proceedure.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**

Not For Bidding Purposes

**SECTION 01 30 00**

**ADMINISTRATIVE REQUIREMENTS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Preconstruction meeting.
- B. Progress meetings.
- C. Construction progress schedule.
- D. Progress photographs.
- E. Coordination drawings.
- F. Submittals for review, information, and project closeout.
- G. Number of copies of submittals.
- H. Submittal procedures.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 70 00 - Execution and Closeout Requirements: Additional coordination requirements.
- B. Section 01 78 00 - Closeout Submittals: Project record documents.

**1.03 PROJECT COORDINATION**

- A. Project Coordinator: State of Delaware's Project Manager and DEDC.
- B. Cooperate with the Project Coordinator in allocation of mobilization areas of site; for field offices and sheds, for access, traffic, and parking facilities.
- C. During construction, coordinate use of site and facilities through the Project Coordinator.
- D. Comply with Project Coordinator's procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.
- E. Comply with instructions of the Project Coordinator for use of temporary utilities and construction facilities.
- F. Coordinate field engineering and layout work under instructions of the Project Coordinator.
- G. Make the following types of submittals to Delaware Engineering and Design Corporation through the Project Coordinator:
  - 1. Requests for interpretation.
  - 2. Requests for substitution.
  - 3. Shop drawings, product data, and samples.
  - 4. Test and inspection reports.
  - 5. Manufacturer's instructions and field reports.
  - 6. Applications for payment and change order requests.
  - 7. Progress schedules.
  - 8. Coordination drawings.
  - 9. Closeout submittals.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION**

### **3.01 PRECONSTRUCTION MEETING**

- A. State of Delaware will schedule a meeting after Notice of Award.
- B. Attendance Required:
  - 1. State of Delaware.
  - 2. Delaware Engineering and Design Corporation.
  - 3. Contractor.
- C. Agenda:
  - 1. Execution of State of Delaware-Contractor Agreement.
  - 2. Designation of personnel representing the parties to Contract, State of Delaware, Contractor, Subcontractors, and Delaware Engineering and Design Corporation.
  - 3. Designation of personnel representing the parties to Contract, owner, and Delaware Engineering and Design Corporation.
  - 4. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
  - 5. Scheduling.

### **3.02 PROGRESS MEETINGS**

- A. Schedule and administer meetings throughout progress of the Work at maximum two week intervals.
- B. Delaware Engineering and Design Corporation will make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.
- C. Attendance Required: Job superintendent, major Subcontractors and suppliers, State of Delaware, Delaware Engineering and Design Corporation, as appropriate to agenda topics for each meeting.
- D. Contractor shall provide a 3-week look ahead schedule in writing at each meeting and be prepared to review with attendees.
- E. Agenda:
  - 1. Review minutes of previous meetings.
  - 2. Review of Work progress.
  - 3. Field observations, problems, and decisions.
  - 4. Identification of problems that impede, or will impede, planned progress.
  - 5. Review of submittals schedule and status of submittals.
  - 6. Maintenance of progress schedule.
  - 7. Review contractor's 3 week look ahead schedule.
  - 8. Corrective measures to regain projected schedules.
  - 9. Planned progress during succeeding work period.
  - 10. Maintenance of quality and work standards.
  - 11. Effect of proposed changes on progress schedule and coordination.
  - 12. Other business relating to Work.

### **3.03 CONSTRUCTION PROGRESS SCHEDULE**

- A. If preliminary construction progress schedule requires revision after review, submit revised schedule within 10 days.
- B. Within 20 days after review of preliminary construction progress schedule, submit draft of proposed final schedule for review.
  - 1. Include written certification that major Subcontractors have reviewed and accepted proposed schedule.
- C. Within 10 days after joint review, submit final schedule.

- D. Submit updated schedule with each Application for Payment.

### **3.04 PROGRESS PHOTOGRAPHS**

- A. Submit photographs with each application for payment, taken not more than 3 days prior to submission of application for payment.
- B. Photography Type: Digital; electronic files.
- C. Provide photographs of construction throughout progress of Work produced by an experienced photographer, acceptable to Delaware Engineering and Design Corporation.
- D. In addition to periodic, recurring views, take photographs of each of the following events:
- E. Views:
1. Provide non-aerial photographs from four cardinal views at each specified time, until Date of Substantial Completion.
  2. Consult with Delaware Engineering and Design Corporation for instructions on views required.
  3. Provide factual presentation.
  4. Provide correct exposure and focus, high resolution and sharpness, maximum depth of field, and minimum distortion.
- F. Digital Photographs: 24 bit color, minimum resolution of 1024 by 768, in JPG format; provide files unaltered by photo editing software.
1. Delivery Medium: On photo CD.
  2. File Naming: Include project identification, date and time of view, and view identification.
  3. Point of View Sketch: Include digital copy of point of view sketch with each electronic submittal; include point of view identification in each photo file name.

### **3.05 COORDINATION DRAWINGS**

- A. Provide information required by Project Coordinator for preparation of coordination drawings.

### **3.06 SUBMITTALS FOR REVIEW**

- A. When the following are specified in individual sections, submit them for review:
1. Product data.
  2. Shop drawings.
  3. Samples for selection.
  4. Samples for verification.
- B. Submit to Delaware Engineering and Design Corporation for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
- C. Samples will be reviewed only for aesthetic, color, or finish selection.
- D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below.

### **3.07 SUBMITTALS FOR INFORMATION**

- A. When the following are specified in individual sections, submit them for information:
1. Design data.
  2. Certificates.
  3. Test reports.
  4. Inspection reports.
  5. Manufacturer's instructions.
  6. Manufacturer's field reports.
  7. Other types indicated.

- B. Submit for Delaware Engineering and Design Corporation's knowledge as contract administrator or for State of Delaware.

### **3.08 SUBMITTALS FOR PROJECT CLOSEOUT**

- A. When the following are specified in individual sections, submit them at project closeout:
  - 1. Project record documents.
  - 2. Operation and maintenance data.
  - 3. Warranties.
  - 4. Bonds.
  - 5. Other types as indicated.
- B. Submit for State of Delaware's benefit during and after project completion.

### **3.09 NUMBER OF COPIES OF SUBMITTALS**

- A. Documents for Review:
  - 1. Small Size Sheets, Not Larger Than 8-1/2 x 11 inches: Submit the number of copies that Contractor requires, plus one copy that will be retained by Delaware Engineering and Design Corporation.
- B. Documents for Information: Submit one copy.
- C. Documents for Project Closeout: Make one reproduction of submittal originally reviewed. Submit one extra of submittals for information.
- D. Samples: Submit the number specified in individual specification sections; one of which will be retained by Delaware Engineering and Design Corporation.
  - 1. After review, produce duplicates.
  - 2. Retained samples will not be returned to Contractor unless specifically so stated.

### **3.10 SUBMITTAL PROCEDURES**

- A. Transmit each submittal with approved form.
- B. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.
- C. Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate on each copy.
- D. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.
- E. Deliver submittals to Delaware Engineering and Design Corporation at business address.
- F. Schedule submittals to expedite the Project, and coordinate submission of related items.
- G. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.
- H. Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of the completed Work.
- I. Provide space for Contractor and Delaware Engineering and Design Corporation review stamps.
- J. When revised for resubmission, identify all changes made since previous submission.
- K. Distribute reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.
- L. Submittals not requested will not be recognized or processed.

**END OF SECTION**

Not For Bidding Purposes

**SECTION 01 35 53**

**SECURITY PROCEDURES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Security measures including formal security program, entry control, personnel identification, guard service, and miscellaneous restrictions.
- B. The correctional facility has issued regulations to be observed by all Contractors, their subcontractors and employees and other firms providing services for or otherwise assigned to or working on the Project in order to minimize disruption to prison operations, maintain security and to facilitate the construction process. While working inside the prison facilities on a regular or occasional basis, it must be clearly understood that prison security requirements will at all times take precedence over construction operations. The contractor shall comply with all such regulations and consider the regulations when preparing his/her bid.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 10 00 - Summary: use of premises and occupancy.
- B. Section 01 50 00 - Temporary Facilities and Controls:.

**1.03 SECURITY PROGRAM**

- A. Protect Work, existing premises and State of Delaware's operations from theft, vandalism, and unauthorized entry.
- B. Initiate program in coordination with State of Delaware's existing security system at project mobilization.
- C. Maintain program throughout construction period until State of Delaware acceptance precludes the need for Contractor security.

**1.04 ENTRY CONTROL**

- A. Restrict entrance of persons and vehicles into Project site and existing facilities.
- B. Allow entrance only to authorized persons with proper identification.
- C. Maintain log of workers and visitors, make available to State of Delaware on request.
- D. State of Delaware will control entrance of persons and vehicles related to State of Delaware's operations.
- E. Contractor shall control entrance of persons and vehicles related to State of Delaware's operations.

**1.05 PERSONNEL IDENTIFICATION AND BACKGROUND CHECK**

- A. All contractors shall have their employees and their subcontractors complete and submit to the Maintenance Superintendent a request for criminal history record information. The background check takes approximately one week from the date of receipt to be processed. Without this background check, workers will not be permitted to enter the prison grounds and/or the construction site.
- B. Should any employees request for criminal history be processed and the employee be found to have a criminal record, the superintendent, or his/her designee, has the right to refuse that employee access to any areas under direct custody control. The Department of Administrative Services will be notified in writing of any workers refused access due to criminal record.

**C. IDENTIFICATION CARDS**

1. All persons who have submitted a request for criminal history information will be required to submit a photograph for an identification card which will be retained on file in an area designated by the Maintenance Superintendent. Each employee will be required to visually display this identification card while working in any area under the control of the Department of Corrections.
  - a. The following information must be provided and will be displayed on the identification card:
    - 1) Contractor working for
    - 2) Worker's name
    - 3) Photograph
2. The identification card will be issued for authorized access to controlled custody areas and shall be surrendered upon existing.
3. Contractors are requested to notify the Director of Custody of Operations upon the termination of worker's services in order that the identification card on file can be pulled and rendered inactive.

**1.06 GENERAL REQUIREMENTS**

- A. When workers are finished for the day, all tools will be accounted for by the worker and the escorting officer.
- B. Workers once entering controlled areas are not permitted to wander from the work area. Should a worker need to go to another area, he/she will be escorted by an officer.
- C. Should work require more than one day to complete the job, permission to construct and use temporary storage facilities is solely at the discretion of the prison authorities. The facility will not accept responsibility for any loss or damage to materials left on site. All tools and equipment should be removed daily.
- D. It is essential that construction operation and debris removal be conducted in a manner to assure that materials which might be used as weapons do not fall into the hands of inmates.
- E. Anything of unusual nature such as loss of key, identification cards, tools, piping, etc., shall be reported immediately to the escorting officer.
- F. In the event that construction requires disruption of plumbing, electrical power, etc., the Director of Custody of Operations must receive at least twenty four (24) hours advance notice in order to preserve security and not to disrupt routine activities. When temporary shutdown of service is unavoidable, the work shall be completed at night during a time when the institution's routine will not be interfered with.
- G. Workers shall be subjected to all rules and regulations and shall comply with the escorting officer's instruction accordingly.
- H. Contractors shall include, in their bid, a sufficient amount of time to enter and depart the facility in a given day. as an example of past projects at a Department of Correction site, it takes between one half (1/2) hour to one (1) hour to enter or leave the facility.

**1.07 SPECIAL REQUIREMENTS**

- A. Materials shall be moved through the buildings using rubber tired vehicles which shall be properly controlled at all times to avoid damage to existing walls, floors, and ceiling surfaces, including doors and door and/or window frames.
- B. Water damage will not be tolerated and it is incumbent upon the contractor to take all steps necessary to keep the existing premises dry at all times.

- C. All welding and cutting shall be performed by qualified and certified welders. Certificates shall be on file with the Construction Manager prior to commencement of any welding.
- D. Existing streets, pavements, lawns, curbs, and other finished surfaces disturbed or damaged by excavation or other construction activities shall be repaired and restored to their original conditions to the satisfaction of the Owner, Construction Manager, and local authorities.
- E. Open trenches must be barricaded. Nothing which can be used as a weapon or could conceal an inmate can be used as a barricade. Contractors are directed to use plastic tape and the existing trees, shubbery, or fences where available.
- F. No dumping will be allowed on the project site. Trash, debris, and waste must be removed from the compound daily and from the site as required or directed.

#### 1.08 SITE SECURITY

- A. The following regulations must be observed by all persons having any association with the construction of this project ( employees, subcontractors, workmen, service men, manufacturer's representative, etc.)
  - 1. Photo Identification Card
    - a. Each trade subcontractor shall submit a list of workers who will be on site. The list will contain the following information on each employee:
      - 1) Name
      - 2) Date of Birth
      - 3) Social Security Number
      - 4) Address
    - b. Each trade subcontractor will pick up the photo identification cards at the Main Gate (where they will be secured when not in use). He will transport the identification cards and issue the identification card upon arrival of the construction workers (after identifying the worker). The cards will be collected at the end of the day and returned to the Main Gate.
    - c. All contractors shall enter and leave as a group with an escort (Maintenance Personnel or Correctional Officer)
    - d. One day workers will receive a temporary identification card after providing Main Gate Officers with pertinent information.
  - 2. Assigning Men to the Site
    - a. each trade subcontractor shall notify the Maintenance Superintendent twenty four (24) hours in advance, but not later than 12:00 noon, on the previous work day before sending men to the project site, so an officer can be assigned to accompany all his personnel.
  - 3. Tools and Materials
    - a. No tool or materials shall be left unguarded at any time, and they shall be removed from the working areas at the end of each working day or at anytime the workmen or assigned officer leave the area.
  - 4. Prison Records
    - a. Where workmen or representative visiting the institution has a prison record, the trade subcontractor shall be responsible for obtaining the particulars concerning his record, and notifying the institution at least twenty four (24) hours in advance of his visit. The institution will then notify the trade subcontractor and give or deny permission for that person to enter the institution. Any workmen denied entrance to the institution must be replaced by the trade subcontractor or subcontractor at no additional cost.
  - 5. Workmen Lunch Area/Searches
    - a. Workmen will be expected to stay in their respective working areas during their lunch period, unless leaving the grounds is permitted.
    - b. All workmen will be expected to submit to search of themselves, their tool boxes,

lunch containers, and/or their vehicles at any time, if the search is deemed necessary.

6. Prohibited Items
  - a. The following items are prohibited from being brought onto the prison grounds and construction site:
    - 1) Any intoxicating beverage.
    - 2) Any narcotic, hypnotic, barbiturate, hallucinogenic drug, central nervous stimulant or prescription drug except as authorized or approved by an institution affiliated physician.
    - 3) Any firearm or instrument customarily used or designed to be used as a dangerous weapon, or an explosive device, except as authorized by the institution and/or Departmental Administration.
    - 4) Any instrument that may be used as an aid in attempting an escape.
    - 5) Hypodermic needle, syringe or article, instrument or substance specifically prohibited by the institution administration except as authorized.
7. Working Dress and Workmen
  - a. Workmen will maintain proper attire while working at the institution.
    - 1) Short pants, open toed shoes, or bare chest are not permitted.
8. It is forbidden to aid or abet the escape of any inmate, or to advise, connive or assist in any escape, or to conceal any inmate after escape, or withhold information pertaining thereto. Violation of this prohibition can result in prosecution and the law provides for punishment of fine and imprisonment.
9. It is likewise strictly forbidden to bring into or take out of the prison either for pay, or for favor, for any inmate, any article without the proper authorization from the Maintenance Superintendent.
10. You are not authorized to roam at will throughout the prison. You will restrict yourself to going directly to those places where your work is conducted and remaining away from areas where you have no business.
11. Stopping to socialize, exchange pleasantries, or conduct business with inmates in traffic areas (hallways, center areas, etc.) is prohibited. Also no affectionate or intimate behavior between official visitors and inmates is permitted.
12. Your automobile is to be parked in a location designated by the Director of Custody of Operations. Parked vehicles must always have the ignition locked and if the interior of the car contains packages, clothing, or any other removable articles, the doors must be locked as well.
13. No photographs may be taken without proper authorization. No public news releases may be given without similar authorization.
14. You are not authorized to escort any person, not previously approved, onto the prison grounds or into the prison.
15. The offering and/or giving of any tips, gratuities, fees, etc. to any inmate and/or prison personnel is strictly prohibited.
16. The use of indecent, abusive or profane language is forbidden anywhere on the prison property.
17. Civilian or other clothing should not be left carelessly in places where it may be acquired and worn by inmates.
18. In the event an acquaintance, friend, or relative of contractor's employee should be an inmate of the institution at which you are working, it is advisable that you communicate this confidentially to the Maintenance Superintendent.
19. Tool and Equipment Safety
  - a. Flammable Liquids: Maintain flammable liquid (e.g., gasoline, fuels, etc. ) in secure containers at all times, in compliance with OSHA regulations.
  - b. Tools: Maintain tools and related equipment (e.g., sprinkler heads, hydrants, wires, cables, ducts, manholes, posts, poles, signals, alarm boxes, etc.) at all times.
  - c. Powder Actuated Tools: Comply with Owner's Manual, and Maintenance Superintendent directions for control of powder used and storage.

- d. Tool boxes shall be kept locked at all times.
- 20. Construction Personnel Vehicle Parking
  - a. Parking spaces for privately owned vehicles operated by construction personnel may be limited.
  - b. The Maintenance Superintendent will assign areas within the prison site for parking. Sufficient space will be provided to park privately owned vehicles operated by construction personnel on site.
  - c. Vehicle inspections may be conducted at the discretion of the Maintenance Superintendent for the duration of the Contract.
  - d. Vehicles should be kept clean. Trash within the vehicle increases the amount of time it takes the guards to inspect vehicle.
  - e. Do not leave keys in vehicles whether locked or unlocked.
- 21. Contractors shall not bring glass containers into the facility.
- 22. The use of cellular phones, pages, and other electronic communication devices will not be permitted unless specific approval is granted by the Security Superintendent.

#### **1.09 FIRE PROTECTION**

- A. Protect and maintain fire department facilities (e.g., sprinkler heads, hydrants, wire, cables, ducts, manholes, posts, poles, signals, alarm boxes, etc.) at all times.
- B. Maintain unobstructed access to the following at all times: Fire hydrants, and fire alarm boxes.
- C. Immediately notify the Fire Department in the event of accidental damage to fire department facilities.
- D. Immediately restore damage facilities to original conditional at no increase to the Contract Sum.

#### **1.10 RESPONSIBILITY FOR DAMAGE AND CARE OF STATE PROPERTY**

- A. The contractor in the performance of this Contract will be held financially responsible for any damage to the grounds, buildings, or equipment caused by them, their subcontractors or employees, or other persons engaged in the performance of the Contract.
- B. Every reasonable effort shall be made by workmen to proceed with the work as described in these specifications in a manner in trade circles as the highest level of workmanship. The successful bidder for this work shall be responsible for all damage to other work caused by his workmen or through the neglect of his workmen on the site.
- C. Workmenlike care shall be expected at all times in performing the work. It shall be the responsibility of the successful bidder to repair or replace all damaged property, the damage for which they or anyone working under his direction is responsible.

#### **PART 2 PRODUCTS - NOT USED**

#### **PART 3 EXECUTION - NOT USED**

#### **PART 4 DAILY CONTRACTOR TOOL AND EQUIPMENT INVENTORY**

##### **4.01 The contractor tool/equipment form shall be completed and signed by all contractor personnel prior to entering a DOC facility. The following requirements apply:**

- A. An original signed and dated tool/equipment form shall be prepared each day.
- B. This form shall serve as an inventory of all work and personal equipment carried into a Department of Correction facility and will serve to ensure that the inventoried equipment is removed from the facility at the end of the work day.
- C. Each piece of work and personal equipment noted on this form shall be described in sufficient detail so that it can easily be identified and matched to the inventory by a Department of Correction staff.
- D. Department of Correction strongly recommends that when work/personal equipment is to be carried into a Department of Correction facility on a repetitive basis, the equipment be marked with a unique identifier (e.g. personnel initials + number) so that it can be matched to the same unique identifier noted on the tool/equipment form.
- E. Prior to entering and exiting secured areas of a Department of Correction facility, the daily tool/equipment inventory shall be reviewed and signed by the escorting officer.
- F. If, prior to exiting a secured area, the preparer of this form determines that he or she cannot account for each piece of equipment, then he or she shall immediately notify the escorting officer.
- G. If, prior to exiting a secure area, a Department of Correction staff cannot identify each tool or piece of equipment and reconcile it to the items inventoried on this form, then the Department of Correction staff will hold the group of contractor employees in the secure area until the discrepancy is resolved.
- H. The following list of tools and equipment is representative of the items inventoried on the form. All tools and equipment being brought into the institution will be inventoried. Every job box will have an exact inventory of all tool boxes and equipment stored in that box. The box must be lockable and remained locked when not in use. There are no exceptions to this rule. List all tools for example hand tools (ex. hammers, pliers, wrenches, and screwdrivers), electrical tools (ex. measuring equipment, splicing equipment), power tools (ex. drills, saws, demolition equipment) and supplies (saw blades, drill bits, fasteners). List all other equipment (ex. Two-way radios, writing pads, pens, pencils, etc.). However, the list may be expanded to cover equipment specific to a scope of work or project.
- I. Items not permitted include, but are not limited to: firearms, medicines, pocket knives, leather man tools, tobacco, matches, lighters, gum, beer, alcohol of any kind, glass bottles or containers, aluminum cans, metal knives, spoons or forks, music radios, i-Pods, newspapers, fliers, or magazines.
- J. Laptop computers, cameras, cell phones, and pagers are restricted items and their use can only be approved in writing, in advance by the Warden or his designee. Failure to declare an item at the sally port will result in that item being confiscated.

Contractor Name:

Signature & Date:





**SECTION 01 40 00**

**QUALITY REQUIREMENTS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Control of installation.
- B. Testing and inspection services.
- C. Manufacturers' field services.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 30 00 - Administrative Requirements: Submittal procedures.

**1.03 REFERENCE STANDARDS**

- A. ASTM C1077 - Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation; 2011c.

**1.04 SUBMITTALS**

- A. Design Data: Submit for Delaware Engineering and Design Corporation's knowledge as contract administrator for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents, or for State of Delaware's information.
- B. Test Reports: After each test/inspection, promptly submit two copies of report to Delaware Engineering and Design Corporation and to Contractor.
  - 1. Include:
    - a. Date issued.
    - b. Project title and number.
    - c. Name of inspector.
    - d. Date and time of sampling or inspection.
    - e. Identification of product and specifications section.
    - f. Location in the Project.
    - g. Type of test/inspection.
    - h. Date of test/inspection.
    - i. Results of test/inspection.
    - j. Conformance with Contract Documents.
    - k. When requested by Delaware Engineering and Design Corporation, provide interpretation of results.

**1.05 TESTING AND INSPECTION AGENCIES**

- A. State of Delaware will employ and pay for services of an independent testing agency to perform other specified testing.
- B. Employment of agency in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION**

**3.01 CONTROL OF INSTALLATION**

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Delaware Engineering and Design Corporation before proceeding.
- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Have Work performed by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

### 3.02 TESTING AND INSPECTION

- A. Testing Agency Duties:
  - 1. Provide qualified personnel at site. Cooperate with Delaware Engineering and Design Corporation and Contractor in performance of services.
  - 2. Perform specified sampling and testing of products in accordance with specified standards.
  - 3. Ascertain compliance of materials and mixes with requirements of Contract Documents.
  - 4. Promptly notify Delaware Engineering and Design Corporation and Contractor of observed irregularities or non-conformance of Work or products.
  - 5. Perform additional tests and inspections required by Delaware Engineering and Design Corporation.
  - 6. Submit reports of all tests/inspections specified.
- B. Limits on Testing/Inspection Agency Authority:
  - 1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
  - 2. Agency may not approve or accept any portion of the Work.
  - 3. Agency may not assume any duties of Contractor.
  - 4. Agency has no authority to stop the Work.
- C. Contractor Responsibilities:
  - 1. Deliver to agency at designated location, adequate samples of materials proposed to be used that require testing, along with proposed mix designs.
  - 2. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.
  - 3. Provide incidental labor and facilities:
    - a. To provide access to Work to be tested/inspected.
    - b. To obtain and handle samples at the site or at source of Products to be tested/inspected.
    - c. To facilitate tests/inspections.
    - d. To provide storage and curing of test samples.
  - 4. Notify Delaware Engineering and Design Corporation and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
  - 5. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
  - 6. Arrange with State of Delaware's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
- D. Re-testing required because of non-conformance to specified requirements shall be performed by the same agency on instructions by Delaware Engineering and Design Corporation.

- E. Re-testing required because of non-conformance to specified requirements shall be paid for by Contractor.

### **3.03 MANUFACTURERS' FIELD SERVICES**

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

### **3.04 DEFECT ASSESSMENT**

- A. Replace Work or portions of the Work not conforming to specified requirements.
- B. If, in the opinion of Delaware Engineering and Design Corporation, it is not practical to remove and replace the Work, Delaware Engineering and Design Corporation will direct an appropriate remedy or adjust payment.

**END OF SECTION**

Not For Bidding Purposes

**SECTION 01 50 00**

**TEMPORARY FACILITIES AND CONTROLS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Vehicular access and parking.
- B. Waste removal facilities and services.

**1.02 VEHICULAR ACCESS AND PARKING - See Section 01 55 00**

- A. Coordinate access and haul routes with governing authorities and State of Delaware.
- B. Provide and maintain access to fire hydrants, free of obstructions.
- C. Provide means of removing mud from vehicle wheels before entering streets.
- D. Provide temporary parking areas to accommodate construction personnel. When site space is not adequate, provide additional off-site parking.

**1.03 WASTE REMOVAL**

- A. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
- B. Provide containers with lids. Remove trash from site periodically.
- C. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.
- D. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**

**SECTION 01 55 00**

**VEHICULAR ACCESS AND PARKING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Parking.

**PART 2 PRODUCTS**

**2.01 NOT USED**

**PART 3 EXECUTION**

**3.01 PARKING**

- A. Use of designated areas of existing parking facilities by construction personnel is permitted. Designated area for parking for construction personnel will be discussed at the preconstruction meeting.

**END OF SECTION**

Not For Bidding Purposes

**SECTION 01 70 00**

**EXECUTION AND CLOSEOUT REQUIREMENTS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Examination, preparation, and general installation procedures.
- B. Requirements for alterations work, including selective demolition, except removal, disposal, and/or remediation of hazardous materials and toxic substances.
- C. Pre-installation meetings.
- D. Cutting and patching.
- E. Cleaning and protection.
- F. Starting of systems and equipment.
- G. Demonstration and instruction of State of Delaware personnel.
- H. Closeout procedures, except payment procedures.
- I. General requirements for maintenance service.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 10 00 - Summary: Limitations on working in existing building; continued occupancy; work sequence; identification of salvaged and relocated materials.
- B. Section 01 30 00 - Administrative Requirements: Submittals procedures.
- C. Section 01 74 19 - Construction Waste Management and Disposal: Additional procedures for trash/waste removal, recycling, salvage, and reuse.
- D. Section 01 78 00 - Closeout Submittals: Project record documents, operation and maintenance data, warranties and bonds.

**1.03 REFERENCE STANDARDS**

- A. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2009.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
  - 1. Structural integrity of any element of Project.
  - 2. Integrity of weather exposed or moisture resistant element.
  - 3. Efficiency, maintenance, or safety of any operational element.
  - 4. Visual qualities of sight exposed elements.
  - 5. Work of State of Delaware or separate Contractor.
  - 6. Include in request:
    - a. Identification of Project.
    - b. Location and description of affected work.
    - c. Necessity for cutting or alteration.
    - d. Description of proposed work and products to be used.
    - e. Effect on work of State of Delaware or separate Contractor.
    - f. Written permission of affected separate Contractor.
    - g. Date and time work will be executed.

- C. Project Record Documents: Accurately record actual locations of capped and active utilities.

### **1.05 PROJECT CONDITIONS**

- A. Use of explosives is not permitted.
- B. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
- C. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.
  - 1. Provide dust-proof barriers between construction areas and areas continuing to be occupied by State of Delaware.
- D. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.
  - 1. Outdoors: Limit conduct of especially noisy exterior work to the hours of 8 am to 5 pm.
  - 2. Indoors: Limit conduct of especially noisy interior work to the hours of 6 pm to 7 am.
- E. Pest and Rodent Control: Provide methods, means, and facilities to prevent pests and insects from damaging the work.

### **1.06 COORDINATION**

- A. See Section 01 10 00 for occupancy-related requirements.
- B. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- C. Notify affected utility companies and comply with their requirements.
- D. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- E. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- F. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- G. Coordinate completion and clean-up of work of separate sections.
- H. After State of Delaware occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of State of Delaware's activities.

## **PART 2 PRODUCTS**

### **2.01 PATCHING MATERIALS**

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.
- E. Verify that utility services are available, of the correct characteristics, and in the correct locations.
- F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

### **3.02 PREPARATION**

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

### **3.03 PREINSTALLATION MEETINGS**

- A. When required in individual specification sections, convene a preinstallation meeting at the site prior to commencing work of the section.
- B. Require attendance of parties directly affecting, or affected by, work of the specific section.
- C. Notify Delaware Engineering and Design Corporation four days in advance of meeting date.
- D. Prepare agenda and preside at meeting:
  - 1. Review conditions of examination, preparation and installation procedures.
  - 2. Review coordination with related work.
- E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Delaware Engineering and Design Corporation, State of Delaware, participants, and those affected by decisions made.

### **3.04 GENERAL INSTALLATION REQUIREMENTS**

- A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- E. Make neat transitions between different surfaces, maintaining texture and appearance.

### 3.05 ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
  - 1. Verify that construction and utility arrangements are as shown.
  - 2. Report discrepancies to Delaware Engineering and Design Corporation before disturbing existing installation.
  - 3. Beginning of alterations work constitutes acceptance of existing conditions.
- B. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
  - 1. Where openings in exterior enclosure exist, provide construction to make exterior enclosure weatherproof.
  - 2. Insulate existing ducts or pipes that are exposed to outdoor ambient temperatures by alterations work.
- C. Remove existing work as indicated and as required to accomplish new work.
  - 1. Remove items indicated on drawings.
  - 2. Relocate items indicated on drawings.
  - 3. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces as required to receive new finish; remove existing finish if necessary for successful application of new finish.
  - 4. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.
- D. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove, relocate, and extend existing systems to accommodate new construction.
  - 1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components, if necessary, modify installation to allow access or provide access panel.
  - 2. Where existing systems or equipment are not active and Contract Documents require reactivation, put back into operational condition; repair supply, distribution, and equipment as required.
  - 3. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
    - a. Disable existing systems only to make switchovers and connections; minimize duration of outages.
    - b. See Section 01 10 00 for other limitations on outages and required notifications.
    - c. Provide temporary connections as required to maintain existing systems in service.
  - 4. Verify that abandoned services serve only abandoned facilities.
  - 5. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification; patch holes left by removal using materials specified for new construction.
- E. Protect existing work to remain.
  - 1. Prevent movement of structure; provide shoring and bracing if necessary.
  - 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
  - 3. Repair adjacent construction and finishes damaged during removal work.
- F. Adapt existing work to fit new work: Make as neat and smooth transition as possible.
- G. Patching: Where the existing surface is not indicated to be refinished, patch to match the surface finish that existed prior to cutting. Where the surface is indicated to be refinished, patch

so that the substrate is ready for the new finish.

- H. Refinish existing surfaces as indicated:
  - 1. Where rooms or spaces are indicated to be refinished, refinish all visible existing surfaces to remain to the specified condition for each material, with a neat transition to adjacent finishes.
  - 2. If mechanical or electrical work is exposed accidentally during the work, re-cover and refinish to match.
- I. Clean existing systems and equipment.
- J. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.
- K. Do not begin new construction in alterations areas before demolition is complete.
- L. Comply with all other applicable requirements of this section.

### 3.06 CUTTING AND PATCHING

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. See Alterations article above for additional requirements.
- C. Perform whatever cutting and patching is necessary to:
  - 1. Complete the work.
  - 2. Fit products together to integrate with other work.
  - 3. Provide openings for penetration of mechanical, electrical, and other services.
  - 4. Match work that has been cut to adjacent work.
  - 5. Repair areas adjacent to cuts to required condition.
  - 6. Repair new work damaged by subsequent work.
  - 7. Remove samples of installed work for testing when requested.
  - 8. Remove and replace defective and non-conforming work.
- D. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
- E. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- F. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- G. Restore work with new products in accordance with requirements of Contract Documents.
- H. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- I. Patching:
  - 1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
  - 2. Match color, texture, and appearance.
  - 3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

### 3.07 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
- C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
- D. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

### **3.08 PROTECTION OF INSTALLED WORK**

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.
- C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- G. Remove protective coverings when no longer needed; reuse or recycle plastic coverings if possible.

### **3.09 SYSTEM STARTUP**

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions that may cause damage.
- C. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- D. Verify that wiring and support components for equipment are complete and tested.
- E. Execute start-up under supervision of applicable Contractor personnel and manufacturer's representative in accordance with manufacturers' instructions.
- F. Submit a written report that equipment or system has been properly installed and is functioning correctly.

### **3.10 DEMONSTRATION AND INSTRUCTION**

- A. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at scheduled time, at equipment location.
- B. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.
- C. Provide a qualified person who is knowledgeable about the Project to perform demonstration and instruction of owner personnel.

### **3.11 ADJUSTING**

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

### **3.12 FINAL CLEANING**

- A. Use cleaning materials that are nonhazardous.
- B. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- C. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.
- D. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
- E. Clean filters of operating equipment.
- F. Clean debris from roofs, gutters, downspouts, and drainage systems.
- G. Clean site; sweep paved areas, rake clean landscaped surfaces.
- H. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

### **3.13 CLOSEOUT PROCEDURES**

- A. Make submittals that are required by governing or other authorities.
  - 1. Provide copies to Delaware Engineering and Design Corporation.
- B. Notify Delaware Engineering and Design Corporation when work is considered ready for Substantial Completion.
- C. Submit written certification that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Delaware Engineering and Design Corporation's review.
- D. Correct items of work listed in executed Certificates of Substantial Completion and comply with requirements for access to State of Delaware-occupied areas.
- E. Notify Delaware Engineering and Design Corporation when work is considered finally complete.
- F. Complete items of work determined by Delaware Engineering and Design Corporation's final inspection.

### **3.14 MAINTENANCE**

- A. Provide service and maintenance of components indicated in specification sections.
- B. Maintenance Period: As indicated in specification sections or, if not indicated, not less than two years from the Date of Substantial Completion or the length of the specified warranty, whichever is longer.
- C. Examine system components at a frequency consistent with reliable operation. Clean, adjust, and lubricate as required.
- D. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.
- E. Maintenance service shall not be assigned or transferred to any agent or subcontractor without prior written consent of the State of Delaware.

**END OF SECTION**

**SECTION 01 74 19**

**CONSTRUCTION WASTE MANAGEMENT**

**PART 1 - GENERAL**

**1.01 SUMMARY**

- A. Section includes: Administrative and procedural requirements for construction waste management activities.

**1.02 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 thematerials 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.
    - a. Mechanical, hand-separation, or a combination of both procedures, are used to recover
    - b. recyclable materials.

**1.03 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.

**1.04 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.

#### **1.05 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.

#### **1.06 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.
  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**

### **3.01 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.

### **3.02 SOURCE SEPARATION**

- A. General: Contractor shall separate recyclable materials from CDL waste to the maximum extent possible.

Separate recyclable materials by type.

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.

### **3.03 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.

### **3.04 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.

**WASTE MANAGEMENT PROGRESS REPORT**

MATERIAL CATEGORY	DISPOSED IN MUNICIPAL SOLID WASTE LANDFILL	DIVERTED FROM LANDFILL BY	DIVERTED FROM LANDFILL BY	DIVERTED FROM LANDFILL BY
		<b>RECYCLED</b>	<b>SALVAGED</b>	<b>REUSED</b>
ACOUSTICAL CEILING TILES				
ASPHALT				
ASPHALT SHINGLES				
CARDBOARD PACKAGING				
CARPET AND CARPET PAD				
CONCRETE				
DRYWALL				
FLUORESCENT LIGHTS AND BALLASTS				
LAND CLEARING DEBRIS (VEGETATION, STUMPAGE, DIRT)				
METALS				
PAINT (THROUGH HAZARDOUS WASTE OUTLETS)				
WOOD				
PLASTIC FILM (SHEETING, SHRINK WRAP, PACKAGING)				
WINDOW GLASS				
FIELD OFFICE WASTE (OFFICE PAPER, ALUMINUM CANS, GLASS, PLASTIC, AND COFFEE CARDBOARD)				
OTHER (INSERT DESCRIPTION)				
OTHER (INSERT DESCRIPTION)				
<b>TOTAL (IN WEIGHT)</b>				

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**PERCENTAGE OF WASTE DIVERTED.**

**(TOTAL WASTE DIVIDED BY TOTAL DIVERTED) \_\_\_\_\_**

**END OF SECTION**

**SECTION 01 77 00**

**CLOSEOUT PROCEDURES**

**PART 1 - GENERAL**

**1.01 RELATED DOCUMENTS**

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

**1.02 SUMMARY**

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
1. Inspection procedures.
  2. Project Record Documents.
  3. Operation and maintenance manuals.
  4. Warranties.
  5. Instruction of the Owner's personnel.
  6. Final cleaning.

**1.03 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 the 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 the 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 the Owner. Label with manufacturer's name and model number where applicable.
  7. Make final changeover of permanent locks and deliver keys to the Owner. Advise the 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 the Owner of changeover in heat and other utilities.
  12. Submit changeover information related to the 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, the Architect/Engineer will either proceed with inspection or notify the Contractor of unfulfilled requirements. The Architect/Engineer will prepare the Certificate of Substantial Completion after inspection or will notify the Contractor of items, either on the Contractor's list or additional items identified by the Architect/Engineer 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.

#### **1.04 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 I Section "Payment Procedures."
  - 2. Submit certified copy of the Architect/Engineer's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by the Architect/Engineer\_ 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. Instruct the 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, the Architect/Engineer will either proceed with inspection or notify the Contractor of unfulfilled requirements. The Architect/Engineer will prepare a final Certificate for Payment after inspection or will notify the Contractor of construction 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.

#### **1.05 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 the Contractor that are outside the limits of construction.
  - 1. Organize list of spaces in sequential order.
  - 2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
  - 3. Include the following information at the top of each page:
    - a. Project name.
    - b. Date.
    - c. Name of Architect/Engineer.
    - d. Name of Contractor.
    - e. Page number.

#### **1.06 PROJECT RECORD DOCUMENTS**

- A. General: Do not use Project Record Documents for construction purposes. Protect Project Record Documents from deterioration and loss. Provide access to Project Record Documents for the Architect/Engineer's reference during normal working hours.
- B. Record Drawings:

1. Maintain and submit one set of blue- or black-line white prints of Contract Drawings and Shop Drawings and submit digital scanned copies of all the Record Drawings; format to be .JPG or .TIF.
  2. The Contractor shall be responsible for updating the bid documents (CADD drawings and specifications) with the as-built changes. All changes shall be clouded and tagged as "as-built" revisions. The drawings shall also have a new "as-built" date; format to be AutoCadd 2006 to 2010 format.
  3. Deliverables: Three (3) sets of bond prints, two final sets.
  4. Drawings that replace the original bid drawings shall be cross referenced to the original bid drawing files.
  5. Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.
    - a. Give particular attention to information on concealed elements that cannot be readily identified and recorded later.
    - b. Accurately record information in an understandable drawing technique.
    - c. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.
    - d. Mark Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. Where Shop Drawings are marked, show cross-reference on Contract Drawings.
  6. Mark record sets with, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at the same location.
  7. Mark important additional information that was either shown schematically or omitted from original Drawings.
  8. Note Construction Change Directive numbers, Change Order numbers, alternate numbers, and similar identification where applicable.
  9. Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location. Organize into manageable sets; bind each set with durable paper cover sheets. Include identification on cover sheets.
- C. Record Specifications: Submit one copy of Project's Specifications, including addenda and contract modifications. Mark copy to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
  2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
  3. Note related Change Orders, Record Drawings, and Product Data, where applicable.
- D. Record Product Data: Submit one copy of each Product Data submittal. Mark one set to indicate the actual product installation where installation varies substantially from that indicated in Product Data.
1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
  2. Include significant changes in the product delivered to Project site and changes in manufacturer's written instructions for installation.
  3. Note related Change Orders, Record Drawings, and Record Specifications, where applicable.

- E. Miscellaneous Record Submittals: Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection-with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

#### **1.07 OPERATION AND MAINTENANCE MANUALS**

- A. Assemble three complete sets of operation and maintenance data indicating the operation and maintenance of each system, subsystem, and piece of equipment not part of a system. Include operation and maintenance data required in individual Specification Sections and as follows:
  - 1. Operation Data:
    - a. Emergency instructions and procedures.
    - b. System, subsystem, and equipment descriptions, including operating standards.
    - c. Operating procedures, including startup, shutdown, seasonal, and weekend operations.
    - d. Description of controls and sequence of operations.
    - e. Piping diagrams.
  - 2. Maintenance Data:
    - a. Manufacturer's information, including list of spare parts.
    - b. Name, address, and telephone number of Installer or supplier.
    - c. Maintenance procedures.
    - d. Maintenance and service schedules for preventive and routine maintenance.
    - e. Maintenance record forms.
    - f. Sources of spare parts and maintenance materials.
    - g. Copies of maintenance service agreements.
    - h. Copies of warranties and bonds.
- B. Organize operation and maintenance manuals into suitable sets of manageable size. Bind and index data in heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, with pocket inside the covers to receive folded oversized sheets.
  - 1. Identify each binder on front and spine with the printed title "OPERATION AND MAINTENANCE MANUAL," Project name, and subject matter of contents.

#### **1.08 WARRANTIES**

- A. Submittal Time: Submit written warranties on request of the Architect/Engineer for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated.
- B. Partial Occupancy: Submit properly executed warranties within 15 days of completion of designated portions of the Work that are completed and occupied or used by the Owner during construction period by separate agreement with the Contractor.
- C. 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 (115-by-280-mm) 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 the Contractor.
- D. Provide additional copies of each warranty to include in operation and maintenance manuals.

## **PART 2 - PRODUCTS**

### **2.01 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**

### **3.01 DEMONSTRATION AND TRAINING**

- A. Instruction: Instruct the Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
  - 1. Provide instructors experienced in operation and maintenance procedures.
  - 2. Provide instruction at mutually agreed-on times. For equipment that requires seasonal operation, provide similar instruction at the start of each season.
  - 3. Schedule training with the Owner, through the Architect/Engineer with at least seven days' advance notice.
  - 4. Coordinate instructors, including providing notification of dates, times, length of instruction, and course content.
- B. Program Structure: Develop an instruction program that includes individual training modules for each system and equipment not part of a system, as required by individual Specification Sections. For each training module, develop a learning objective and teaching outline. Include instruction for the following:
  - 1. System design and operational philosophy.
  - 2. Review of documentation.
  - 3. Operations.
  - 4. Adjustments.
  - 5. Troubleshooting.
  - 6. Maintenance.
  - 7. Repair.

### **3.02 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:
    - 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 and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.
  - n. Replace parts subject to unusual operating conditions.
  - o. Clean plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.
  - p. Replace disposable air filters and clean permanent air filters. Clean exposed surfaces of diffusers, registers, and grills.
  - q. Clean ducts, blowers, and coils if units were operated without filters during construction.
  - r. 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.
  - s. Leave Project clean and ready for occupancy.
- C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

### 3.03 SUMMARY OF CLOSEOUT DOCUMENTS

- A. Contractor's Affidavit of Payment of Debts and Claims (AIA Document G706)
- B. Contractor's Consent of Surety Company to Final Payment (MA Document G707) (one copy)
- C. Contractor's Affidavit of Release of Liens (AIA Document G706A) (one copy)
- D. Copy of Letter of Guarantee and Warranty Information (three copies)
- E. Balancing Reports
- F. Subcontractor's Release of Liens had been submitted with each previous Application of Payment (AIA Document G706A) (one copy)
- G. Operation and Maintenance Manuals
- H. Record Shop Drawings and Submittals
- I. As-built Drawings: All construction changes should be clouded and marked.
  - 1. Updated CAD files to reflect changes and as-built conditions; AutoCadd dwg file 2006 to 2010 format.
  - 2. Three (3) hard copies of As-builts

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3. Mylar prints of As-builts revised CAD file
- J. Affidavit of Discharge of State Tax Liability (Furnish an affidavit from the State Tax Department that all liabilities thereunder have been discharged by the Contractor and all subcontractors.
- K. Punch List Closeout Letter
- L. Electrical Inspection Certificate
- M. Fire Marshal Inspection Certificate
- N. Bond Certification.

**END OF SECTION**

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**SECTION 01 78 00**

**CLOSEOUT SUBMITTALS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Project Record Documents.
- B. Operation and Maintenance Data.
- C. Warranties and bonds.

**1.02 RELATED REQUIREMENTS**

- A. Division 00 Documents
- B. Section 01 30 00 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
- C. Section 01 70 00 - Execution and Closeout Requirements: Contract closeout procedures.
- D. Individual Product Sections: Specific requirements for operation and maintenance data.
- E. Individual Product Sections: Warranties required for specific products or Work.

**1.03 SUBMITTALS**

- A. Project Record Documents: Submit documents to Delaware Engineering and Design Corporation prior to final payment application.
- B. Operation and Maintenance Data:
  - 1. For equipment, or component parts of equipment put into service during construction and operated by State of Delaware, submit completed documents within ten days after acceptance.
  - 2. Submit one copy of completed documents 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Delaware Engineering and Design Corporation comments. Revise content of all document sets as required prior to final submission.
  - 3. Submit two sets of revised final documents in final form within 10 days after final inspection.
- C. Warranties and Bonds:
  - 1. For equipment or component parts of equipment put into service during construction with State of Delaware's permission, submit documents within 10 days after acceptance.
  - 2. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
  - 3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION**

**3.01 PROJECT RECORD DOCUMENTS**

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
  - 1. Drawings.
  - 2. Addenda.
  - 3. Change Orders and other modifications to the Contract.

4. Manufacturer's instruction for assembly, installation, and adjusting.
- B. Ensure entries are complete and accurate, enabling future reference by State of Delaware.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress.
- E. Record Drawings: Legibly mark each item to record actual construction including:
  1. Field changes of dimension and detail.
  2. Details not on original Contract drawings.

### **3.02 OPERATION AND MAINTENANCE DATA**

- A. For Each Product or System: List names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.
- B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.
- D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

### **3.03 OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS**

- A. For Each Item of Equipment and Each System:
  1. Description of unit or system, and component parts.
  2. Identify function, normal operating characteristics, and limiting conditions.
  3. Include performance curves, with engineering data and tests.
  4. Complete nomenclature and model number of replaceable parts.
- B. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; typed.
- C. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.
- D. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- E. Provide servicing and lubrication schedule, and list of lubricants required.
- F. Include manufacturer's printed operation and maintenance instructions.
- G. Include sequence of operation by controls manufacturer.
- H. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- I. Provide control diagrams by controls manufacturer as installed.
- J. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- K. Additional Requirements: As specified in individual product specification sections.

### **3.04 WARRANTIES AND BONDS**

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- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with State of Delaware's permission, leave date of beginning of time of warranty until the Date of Substantial completion is determined.
- B. Verify that documents are in proper form, contain full information, and are notarized.
- C. Co-execute submittals when required.
- D. Retain warranties and bonds until time specified for submittal.

**END OF SECTION**

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Appendix "A"  
Preventative Maintenance Procedures List  
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Not For Bidding Purposes

## **APPENDIX "A"**

### **PREVENTATIVE MAINTENANCE PROCEDURES**

The contractor shall thoroughly read the maintenance procedures in this Appendix. These procedures are to be implemented on the devices identified on the single line diagram drawings (E-2 thru E-4) with a number within a circle.

The contractor shall record results of all tests and or inspections required by these procedures. These records must be compiled at the end of the project and submitted to the Engineer as an "As-Built" conditions report. Sample of procedure test result data sheets have been included at the end of this Appendix.

The "As-built" conditions report shall identify the device, the date and time, the procedure/test, the results of the test, and any observations made by the contractor.

The contractor shall photograph all current carrying components, joints, separable elbows, contact points, etc with a digital infrared camera. The contractor shall identify any abnormal "hot spots" noted during construction to the engineer and DOC. These digital photos shall be provided as part of the As-Built documentation at the end of the project.

The contractor shall include a color photo 4"x6" of the device after the procedures have been implemented. This photo shall be part of the "As-Built" conditions documentation.

**1. 25KV Cables**

Check cable terminations for evidence of tracking or physical damage. (The brown discoloration of silicon tape is not a problem.) Report any problems immediately to the engineer for probable immediate correction.

**2. 25KV Transformer with VFI**

Transformer turns-ratio tests, Insulation Resistance tests, Polarization index, Power Factor test, Excitation Current tests, Core Insulation tests and Winding Resistance tests shall be performed on the transformer.

Insulation Resistance Test via a Dielectric Absorption Test – Perform insulation resistance tests winding-to-winding and each winding-to-ground. Apply a constant high potential in accordance with manufacturer's published data with an ammeter indicating current being drawn by the transformer under test. The voltage shall be applied for 10 minutes, and periodic readings are taken of the leakage current. Report discrepancies. Report results to engineer for evaluation.

Calculate Polarization Index, which shall be the ratio of insulation resistance at 10 minutes to the insulation resistance at 1 minute. A PI of less than 1.0 indicates that the transformer needs maintenance before being placed back in service.

The test data are evaluated on the basis that if the transformer insulation is in good condition, its apparent insulation resistance will increase as the test progresses.

Perform an Insulation Power Factor Test, on each of the windings, in accordance with NFPA 70B-11.9.3.2, to determine the primary excitation current. A pattern of two high phase readings and one low reading should be observed. Report discrepancies.

Power factor or dissipation factor of the following should be obtained.

Each winding with respect to ground.

Each winding with respect to every other winding.

For further information on insulation power-factor testing, see NFPA 70B-11.9.3.2, Insulation-Resistance Testing.

The high voltage side (CH) and low-voltage side (CL) power-factor or dissipation-factor values will vary due to support insulators and bus work utilized on dry type transformers. Consult transformer manufacturer's or test equipment manufacturer's data for additional information.

Maximum power-factor/dissipation-factor values of liquid-filled transformers corrected to 20°C should be in accordance with the transformer manufacturer's published data.

Excitation-current tests are used to detect short-circuited turn-to-turn insulation, short-circuited core laminations, loosening of the core clamping or improper winding connections. Perform excitation-current tests in accordance with the test equipment manufacturer's published data. Typical excitation-current test data pattern for a three-legged core transformer is two similar current readings and one lower current reading.

Perform a winding resistance test for the "as found" tap position. Temperature-corrected winding-resistance values should compare within one percent of the factory or previously obtained results.

Insulation Resistance test via a Dielectric Absorption test. Apply a constant high voltage to either winding with the opposite winding grounds with an ammeter indicating the current being drawn by the transformer under test. The voltage is applied for 10 minutes, and periodic readings are taken of the insulation resistance or leakage current.

At the end of each test, the test equipment control should be turned to zero voltage and the voltage should be monitored. When the voltage is reduced to 20 percent or lower of the maximum test voltage, the metallic components should be grounded in accordance with test procedures or for at least 30 minutes.

Before equipment insulation is tested, the equipment shall be cleaned, inspected, and repaired as necessary to minimize leakage currents. All lightning arresters, neutral grounds, and leads from the load side of the primary switch shall be disconnected and then replaced after completion of testing.

Record primary voltage and floating-Y, grounded-Y or delta, kVA and impedance from transformer nameplate.

Record oil level and min-current-max Temperature Readings on the transformer.

If the pad is level and transformer fluid is low, add same fluid per manufacturer's instructions.

Note corrosion of the transformer, tank and cable enclosure, the condition of the pad, including cracks and whether foreign cables are present in the cable enclosure.

Note a high noise level or change in level which could indicate improper installation or loose windings or barriers.

Inspect/clean for the following problems and furnish a price to mitigate major defects.

Grass or weeds intruding into the pad or compartment.

Shrubs close to the pad mount.

Levelness of the pad, levelness of the transformer and allow for a top-off of same fluid as in the pad mount, if required.

Discoloration caused by overheating.

Tracking and carbonization.

Cracked, contaminated or chipped insulators or bushings.

Bushings torqued by the weight of secondary's.

Inspect, on secondary's mechanical lugs bolted to the pad mount's secondary spades, that the bolts are of sufficient length to fully pass through the nuts and that all mounting holes in the mechanical lugs are bolted to the spades.

Report deficiencies.

Loose insulators, clamps, or coil spacers.

Bushing or insulator tracking.

Deterioration of barriers.

Cracked or leaking pressure relief device diaphragms. Report immediately to Engineer.

Corroded or loose electrical connections. Torque to proper values.

Leaking gaskets.

Leaking gasketed bushings or insulator bases.

Do not clean insulating components of the transformer with a cloth that has been used to clean metallic components. Use a solvent such as CRC Cableclean or Electro-clean. Do not use contact cleaning solvents on any insulating components.

Test all lightning arresters per specifications. Note the KV rating and MCOV of each arrester.

Inspect the equipment ground bus and grounds for corrosion or loose connections. Perform a grounding-electrode resistance test with a ground resistance test set.

Vacuum dirt and dust from the tank and compartment with a vacuum cleaner. If vacuum cleaning is insufficient, compressed air should be used only if it is clean, dry, and applied at a low pressure to avoid damage to components. Use compressed air in compliance with OSHA regulations in 29 CFR 1910.242(b), "Hand and Portable Powered Tools and Other Hand Held Equipment," including limiting air pressure for such cleaning to less than a gauge pressure of 208.85 kPa (30 psi) and the provision of effective chip guarding and appropriate personal protective equipment.

## Oil Sampling Guidelines

### Types of Oil Samples:

The unit must be de-energized before withdrawing an oil sample. Withdrawing an oil sample from a unit that has critically low oil level could result in flashover and unit failure when the unit is re-energized. Never energize this equipment without ensuring that it is filled to the proper oil level with clean, dry insulating oil.

Take two types of oil samples:

1. A bulk oil sample for general oil tests. Approximately one quart (one liter), taken in accordance with ASTM D923 (latest revision), is required.
2. A “gas-tight” oil sample, taken in accordance with ASTM D3613 (latest revision), for diagnosis and fault gas analysis.

Use the following oil sampling guidelines in order to prevent contamination of the samples taken:

De-energize and ground the transformer prior to sampling oil.

Never collect an oil sample immediately after oil has been added. A stabilization period of 96 hours is required prior to sampling.

Never sample oil during inclement weather (rain, sleet or snow). The oil sample could be contaminated by moisture.

Always use the drain plug and sampler, located near the bottom of the front plate of the tank, to collect oil samples.

Use only approved oil-resistant materials, such as nitrile rubber or silicone tubing, for sampling the oil. Use of other materials can result in contamination of the oil sample.

Be careful to prevent contamination of the oil sample from foreign material such as dirt, duct, chemicals, etc., in oil carrying and holding apparatus such as oil cans, transfer lubes, syringes, etc.

Upon completion of the sampling, recheck the oil level, and add oil or fluid of the same, if required.

The oil level indicator sight gauge on the front plate of the switchgear provides a convenient method to check oil level. The indicator provides the correct level for oil at 77°F (25°C).

If the oil level is low, use the following procedure to add dry mineral insulating oil to fill the unit to the correct level:

De-energize and ground the transformer prior to oil filling.

Use only insulating oil that complies with ASTM D3487 (latest revision). The oil must have a minimum dielectric strength of 30 kV when tested per ASTM D877. Never use oil that contains PCBs (Polychlorinated Biphenyls).

Use only transfer equipment that uses oil resistant materials for hoses, seals, valves, pumps, etc. Failure to use proper transfer equipment can result in contamination of the oil.

When adding oil, use the oil fill plug located on the front plate of the unit.

Avoid getting gas bubbles in the oil during filling. Gas bubbles in the oil can reduce the dielectric strength.

When filling is complete, check the oil level gauge to verify that the oil is filled to the correct level. Allow at least one hour for gas bubbles to dissipate prior to energizing the unit.

Replace oil fill plug and energize the unit.

Record the date and the amount of oil needed to re-fill the unit; retain information with the permanent maintenance record of the unit.

#### Oil Testing

The insulating oil in this equipment has been tested to meet the requirements of ASTM D3487, and it has been processed to remove moisture and dissolved gases. It must be tested on a regular basis in order to ensure that it meets those requirements.

Two types of oil tests are required to evaluate and maintain the quality of the insulating oil. They are general oil tests and dissolved gas analysis.

#### General Oil Tests

The general oil test requirements are taken from IEEE Standard C57.106-1991™, IEEE Guide for Acceptance and Maintenance of Insulating Oil in Equipment. The required oil tests and acceptable limits for service-aged oil are shown in Table 2.

Oil test results that do not meet the requirements may indicate a problem with either the oil or the unit. Report defects.

#### Dissolved Gas Analysis

Dissolved gas analysis is a useful technique for diagnosing abnormal conditions and assessing the “normal” condition of oil in oil-filled equipment. The method employed is ASTM D3612, which is used in conjunction with IEEE Standard C57.104-1987™, IEEE Guide for the Detection and Determination of Generated Gases in Oil-Immersed Transformers and their Relations to the

Serviceability of the Equipment. Table 3 provides recommendations on dissolved gas levels in oil-insulated switchgear.

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TABLE 2  
 Test Limits for Service-Aged Oil

Oil Test	Method	Requirement
Dielectric Strength	D877	26 kV minimum
Acid Number	D974	0.20 mg KOH/g maximum
Dissipation Factor	D924	1.0% maximum
Interfacial Tension	D971	24 mN/m minimum
Moisture Content	D1533	35 ppm maximum

TABLE 3  
 Dissolved Gas in Insulating Oil Maintenance Chart

Acetylene Level C <sub>2</sub> H <sub>2</sub>	Total Combustible Gas	Required Action
Less than 35 ppm	Less than 500 ppm	Normal Level Resample per routine maintenance schedule
35-50 ppm	500-1000 ppm	Caution Level Resample at 3-6 months to establish trend; maintain oil if gas levels increase to hazardous level.
More than 50 ppm	More than 1000 ppm	Hazardous Level Remove unit from service and maintain the oil.

#### Replacement Parts

Only factory-authorized replacement parts are to be used for Kyle Distributor Switchgear products. Replacement parts are available through the factory Service Department. To determine replacement parts, refer to the nameplate and provide the product type, serial number, catalog number, voltage rating, and a description of the part.

#### VFI Unit Testing

##### High-Potential Withstand Testing of Vacuum Interrupters

High-potential withstand tests shall be performed to check the vacuum integrity of the interrupters used in VFI switchgear.

To prevent accidental contact with high-voltage parts, the switchgear and high-voltage transformer must be placed in a suitable test cage and all proper grounding procedures must be observed.

With the vacuum interrupters open (manual operating handle(s) in the Open position), perform a high-potential test for one minute/ac (or 15 minutes/dc) across each open vacuum interrupter assembly at the voltages shown in Table 4. The interrupter should withstand the test voltage and should not load down the source.

TABLE 4  
High-Potential Withstand Test Voltages

<b>VFI Voltage Rating (kV)</b>	<b>High-Potential Test Voltages</b>
15	25.5 kV ac RMS or 37.1 kV dc
25	30 kV ac RMS or 42.4 kV dc
35	37.5 kV ac RMS or 74.2 kV dc

#### Trip and Control Testing

Cooper Power Systems VFI Tester device Catalog Number KVFI Tester shall be used for testing VFI pad mounted units equipped with Tri-phase or TPG controls. It is self-contained and provides quick verification of the correct operation of VFI trip mechanisms, supervisory controls, and accessory SCADA boards. Calibrate VFI unit per the DOC-furnished protective devices' settings list so that it conforms to manufacturer's published standards. If calibration cannot be achieved, report discrepancies.

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### **3. 12KV Main Substation**

Primary switchgear shall be opened, cleaned and inspected and each breaker removed. Inspection shall include general physical inspection, inspection of interior for evidence of moisture or animal intrusion, partial disassembly to permit cleaning and/or wiping down of all interphase barriers and all insulating surfaces, and inspection of bus and cable joints for looseness, burning or tracking. Check insulators for evidence of tracking or cracked/chipped surfaces. Check all insulating surfaces for cleanliness, tracking, broken components, etc.

Contact resistances shall be measured using a high current, low reading ohmmeter, measuring from input terminals to output terminals for each breaker feeder. Results are evaluated using a "go, no go" criterion, and by comparison of the three phases. Minimum insulation resistance values of 100 megOhms should be achieved. Contact resistances should be approximately the same for all three phases. Submit report to the engineer for evaluation. Report discrepancies.

Close and trip all breakers via the control handle for that cubicle. Also, trip circuits shall be checked by manually closing the relay contacts, operating the appropriate breaker.

Relays shall be removed from their box holder and physically inspected for mechanical damage, wear, loose connections, dirt, corroded contacts, etc., and shall be electrically tested for pick-up and timed operation for all in-service relay functions, using manufacturer's published data as reference. Clean cover glasses.

Calibrate relays, per the DOC-furnished protective devices settings list, so that they conform to manufacturer's published standards. If calibration cannot be achieved, report discrepancies.

Check all bulbs. Replace burned out bulbs.

Open draw-out type potential and control power transformers drawers and check the wipe of mating contacts. Confirm tightness of bolted connections at stationary terminals. Clean and check for moisture or animal intrusion. Verify that fuses are good and making adequate contact with holder. Note the type, amperage, quantity and catalog number of all power, control and PT fuses.

Vacuuuming and general cleaning and wiping down/inspection shall be performed in both front and rear compartments (remove breakers and both front and rear covers as necessary for access). Do not clean insulating components of the switchgear with a cloth that has been used to clean metallic components. Use a solvent such as CRC Cableclean or Electro-clean. Do not use contact cleaning solvents on any insulating components.

Evidence of flashover or over heating between any bus and adjacent metal enclosure or between bus conductors or flashover or tracking across insulators shall be investigated, documented, and removed if possible. Broken, missing or damaged insulation shall be reported.

Check all accessible joints for proper torque per tables for the hardware involved with that joint.

Check all ground connections for tightness and all ground conductors for damage or deterioration.

Check all ground connectors in the substation room mechanically, either tightened if bolted or tapped with a hammer if welded.

Report discrepancies.

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**4. Electronic Trip 12KV Circuit Breaker**

Do not clean insulating components of the breaker with a cloth that has been used to clean metallic components. Use a solvent such as CRC Cableclean or Electro-clean. Do not use contact cleaning solvents on any insulating components.

Contact resistances shall be measured using a digital type, high current, low reading ohmmeter. Submit report for evaluation by engineer.

Each breaker shall be operated "open" and "closed" by the control switch in its cubicle and shall be tripped by its associated relays after relays' calibration per the DOC furnished settings list. Report discrepancies.

Old lubrication deposits shall be removed. The operating mechanism, contacts, and rear finger clusters are to be lubricated per manufacturer's recommendations. No visual deposits of grease or lubricants should be apparent at any location.

Breakers should be considered defective if the insulation resistance of any pole is less than 100 megOhms, if the breaker does not reliably close when requested to do so either manually or electrically, if the spring tension in the rear finger clusters is such that it would not grip the bus when inserted into its position, if there is more than a 30% variation between resistances of similarly rated contacts, and if there is more than 20% loss of main finger contacts.

Report discrepancies.

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## **5. Pad Mounted Capacitor Bank**

### Enclosure Exterior

Ensure enclosure is receiving adequate ventilation. Check to see if filters are clean and airflow is not restricted. Replace filters and remove obstacles as required.

Ensure enclosure, enclosure doors, louvers, and rodent guards are adequate to prevent entry of liquids, insects, and rodents. Clean and correct as required.

Inspect operation and adjustment of key interlock systems to determine if security features are working properly. Correct deficiencies.

Examine enclosure for corrosion and paint adherence. Repaint scratched or marred exterior surfaces to closely match original finish, as required.

Examine warning signs and placards. If not legible, replace.

Clean all enclosure windows.

Examine concrete pad for cracking.

### Enclosure Interior

Remove accumulated dust and dirt.

Remove insects, nests, or animal material. Inspect for condensation. Clean and inspect strip heaters and check thermostats.

Check proper operation of ventilation equipment (fans) and thermostats. Report any improper operation to Engineer and DOC.

Examine enclosure for corrosion and paint adherence. Repaint scratched or marred exterior surfaces to closely match original finish, as required.

Examine warning signs and placards. If not legible, replace.

Clean all enclosure windows.

### Bus Bar & Wiring

Inspect for loose bus bar connections and discoloration. Tighten as required.

Inspect for proper phase to phase and phase to ground clearance.

Remove excess surface oxides from aluminum connectors.

Inspect control wire connections, tighten as required.

Inspect wire insulation for cuts, breakdown, or burns. Replace as required.

#### Capacitors

Check for physical damage, leaks, bulges, or discoloration. Provide cost to replace as required.

Clear capacitor case, insulation bushings, and any connectors that are dirty or corroded.

Check each capacitor for capacitive reactance by applying 120 Volt to each phase and measuring corresponding current. Verify with specification.

Confirm kVar, voltage, and BIL rating for each capacitor. Verify with specification.

Verify internal discharge resistors are working properly. Provide cost to replace cells as required.

#### Insulators

Check for cracks, chips, and signs of arc tracking. Replace as required.

Clean insulators and barriers.

Check all mounting hardware, tighten as required.

#### Fuses

Check all capacitor fuses, control fuses, and PT fuses for blown fuses. Replace as required.

Check all mounting hardware, tighten as required.

Confirm proper fuse rating. Verify with specification.

Note the type, amperage, quantity and catalog number of all power control and PT fuses.

Check functioning of neutral unbalance sensor.

Clean contact area of fuses and fuse holders.

#### Controls

Perform several manual switching operations of each capacitor stage to ensure equipment is in proper working order.

Check all indicator lights to ensure proper functioning. Replace lights as required.

Check controller for proper functionality to specification.

Check for physical damage and proper operation of ammeters and voltmeters.

Check that blown fuse detection system is working properly. Provide cost to correct as required.

Check that all alarms and indicators are per specification.

#### Oil Switches

De-energize and remove the switch from service.

Inspect external components.

Clean the bushings and inspect for chips, cracks and breaks. Provide cost to replace as necessary.

Check for paint scratches and other mechanical damage. Paint to inhibit corrosion.

Perform a dielectric withstand test to determine the insulation level per manufacturer's recommendations.

Loosen the head bolts and remove the mechanism from the tank. Be careful not to damage the gasket if the tank and head must be pried apart to break the seal.

Allow the oil to drain off the mechanism.

Clean the internal components.

Remove all traces of carbon by wiping with a clean, lint-free cloth.

Flush the internal components with clean transformer oil.

Check the moving and stationary contacts.

Dress slight pitting and discoloration with crocus cloth.

Report for replacement both the moving and stationary contacts if they are severely eroded.

NOTE: The contacts should be flagged for replacement before the erosion of the load current transfer surfaces impairs their effectiveness.

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Manually close and trip the switch several times to check that all components perform properly.

Inspect the tank wall liners. Soft or spongy areas indicate that water has been absorbed. Replace liners if this condition is detected or even suspected.

Check the dielectric strength of the insulating oil.

A sample taken near the bottom of the tank should have a dielectric strength of not less than 22 kV.

Low dielectric strength indicates the presence of water or carbon deposits. If bottom oil is below 22 kV, replace the oil per manufacturer's instructions.

If oil must be replaced, provide a cost to drain the tank and to replace the tank wall liners, thoroughly clean out all sludge and carbon deposits and rinse the tank with clean oil. Cost to include installing new tank wall liners and filling the tank with clean, new insulating oil to level prescribed by the manufacturer's specifications.

Clean and examine the head gasket. Provide a cost to replace if it is damaged or has taken a permanent set.

Clean the head gasket seat and retank the switch.

Replace the head bolts and torque to manufacturer's recommendations. Apply clamping force gradually and equally, in rotation, to each bolt to achieve an evenly distributed gasket sealing pressure.

Electrically operate the switch to check for proper operation.

Repeat the high voltage dielectric withstand test to make sure the dielectric clearances within the tank have not been compromised.

Measure insulation resistance on each pole, phase-to-phase and phase-to-ground with the switch closed and across each open pole for one minute. Apply voltage in accordance with manufacturer's published data. Insulation resistance values of the medium voltage oil switch should be in accordance with manufacturer's published data.

Measure the contact resistance across each pole. This test is used to test the quality of the contacts. The contact resistance should be kept as low as possible to reduce power losses at the contacts with the resultant localized heating, which will shorten the life of both the contacts and nearby insulation. Microhm values should not exceed the high levels of the normal range as indicated in the manufacturer's published data.

Physically check contacts on oil switches, clean as required.

#### Harmonic Filter Reactors

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Confirm nameplate rating.

Check torque on all bolts. Tighten as required.

Check for physical damage.

Measure inductance of each reactor phase by applying 35 volts across each reactor and measuring corresponding current.

Calculate tuning point of each phase by using capacitive and inductive reactance.

### Lightning Arresters

Check for physical damage. Replace as required.

Check torque on all bolts. Tighten as required.

Check for proper rating of surge arrester.

### **6. 12KV Cables**

Photograph each end of 12KV cables with digital infrared camera.

Clean and tighten all connectors.

### **7. Air Insulated Tap Boxes**

Primary voltage cable tap boxes shall be opened, cleaned and inspected. Inspection shall include general physical inspection, inspection of exterior of box and ground sleeve for rust, inspection of concrete pad for cracks, inspection of box for evidence of moisture or animal or grass/weeds intrusion, and inspection of bus and cable joints for looseness, burning or tracking. Check insulators for evidence of tracking or cracked/chipped surfaces. Check all insulating surfaces for cleanliness, tracking, broken components, etc.

Check ground wires from terminations and underground ducts to ground bar in tap box for conductor integrity and tightness of connections.

Do not clean insulating components with a cloth that has been used to clean metallic components. Use a solvent such as CRC Cableclean or Electro-clean. Do not use contact cleaning solvents on any insulating components.

Bus insulation should be considered defective if the insulation resistance of any pole is less than 100 megOhms.

State of Delaware  
James T. Vaughn Correctional Center Hi Voltage Repairs  
OMB/DFM Project # MC3804000029

Furnish a unit cost for reterminating a 4/0 Cu phase using a new 200 Amp load break elbow. Assume 220 mil 15 kV conductor.

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**8. MV Power Fuses (Add Alt. #1)**

Note the type, amperage and catalog number of each medium voltage power fuse and report to Engineer.

NOTE: This information will be used by DOC to stock spare fuses for the S&C switches. It is not the intent to catalogue MV Power Fuses on the substations in the west loop or the capacitors.

**9. 12KV PMH Switch with Auto-Transfer**

Inspection and Maintenance Procedures for the Enclosure and for Components in High-Voltage Compartments

Access to high-voltage compartments shall be restricted to qualified persons who observe the following procedures:

Adhere to prescribed safety rules at all times.

Be certain that fuses, Mini-Rupter Switches, their mechanisms, and any other devices are disconnected from all power sources and grounded before that device is inspected, serviced, or repaired.

Discharge all stored-energy switch operators by using the manual operating handle.

Always assume that both sets of terminals on any Mini-Rupter Switch or fuse are energized unless proven otherwise by test, by visual evidence of open-circuit conditions on both terminal ends, or by grounding.

All voltage sensors must be disconnected when external voltage is used to test any secondary-side wiring or devices, to avoid energizing the high-voltage conductors through the voltage sensors. To disconnect the voltage sensors, transfer the input plug from the input receptacle to the shorting receptacle.

Test for voltage. Qualified persons should be certain that they have and know how to operate the correct test equipment for determining the voltage on both sets of terminals on any fuse or interrupter switch.

After the gear has been completely disconnected from all sources of power and tested, properly connect suitable grounding leads to both sides of the equipment, that is, to the incoming and outgoing phases of the equipment to be maintained.

Install dual-purpose front barriers, if furnished, in the "slide-in" position. If a contact on either side of a barrier is energized, do not leave the barrier in the "slide-in" position for longer than one week. These barriers are intended for temporary use only to isolate the blades of the switch from the main contacts while work is being performed. If the barriers are left in the "slide-in" position for extended

periods of time, there is the possibility of corona discharge to the barriers. Prolonged exposure to corona discharge may damage the barriers and result in a flashover.

When the equipment to be inspected is not of S&C manufacture, follow instructions supplied by the manufacturer of the equipment.

Make certain the enclosure is properly grounded to the station or facility ground. No equipment should be returned to service unless such grounds are properly made.

NOTE: Occasionally, low-voltage components may require maintenance. The maintenance of low-voltage components isolated from high-voltage compartments may be performed under the safety rules for equipment rated 600 volts or less. If maintenance is to be performed on devices connected to the secondary of a voltage sensor, short-circuit the secondary connections. A separate drawing will be provided with any replacement part explaining how to properly short-circuit the secondary connections.

When returning the equipment to service, the following procedures should be observed:

Withdraw any dual-purpose front barriers, if furnished, from the "slide-in" position and return them to their normal, suspended position.

Make sure the fuses (or switch blades in lieu of fuses) are closed and securely latched.

Make sure that any grounding means are removed before energizing the associated Mini-Rupter Switch or fuse.

Close each door permitting access to high voltage and make sure that the associated door latching mechanisms are securely latched before energizing the circuit or operating any switching device.

Make certain that the input plug is in the input receptacle.

Make certain that the Mini-Rupter Switches are in the correct positions (open or closed) as dictated by the electric power system design. Indicate their position upon completion.

Padlock all doors before leaving the installation site, even momentarily. Observe this procedure even in those cases where the gear is accessible only to qualified persons.

Visually inspect the interior of each compartment for excess dirt and weeds, and rodent, reptile, and insect intrusion.

If cleaning is necessary, S&C recommends using water to wash dirty or contaminated surfaces. Mild soap may be used to remove particularly stubborn deposits on painted surfaces, barriers, and Cypoxy® parts.

Inspect insulators, surge arrestors, terminators, etc. for physical or electrical damage.

Check that gasketing around low-voltage compartment is securely affixed and that grouting around base of unit is in good condition. Verify that there has been no major water ingress.

Inspect barriers for signs of tracking and corona discharge. Surface deposits can be wiped off. If surface erosion is present, provide a cost to replace the eroded barriers.

Verify that interphase and end barriers hang vertically and that retaining hardware securely holds them in place. Be sure that the switch-side interphase barriers are properly seated in the support notch (if present) in the lower rear of the compartment.

Verify, as well, that the clearance from the terminators and other energized parts to the barriers and electrical ground is maintained to prevent flashover (e.g., fuse silencer to terminator drain wire). Minimum air clearances are listed below.

Rating, kv	Minimum Air Clearances (Inches)			
	Energized Parts to Barriers	Terminator Skirts to Barriers	Energized Parts to Elec. Ground	Phase-to-Phase
14.4	1	1/2	6	6

Exercise the Mini-Rupter Switches and check all blades for proper opening and closing. Be sure that barriers are not in open gap.

Inspect, clean, and re-lubricate the Mini-Rupter Switches.

Check blades for signs of galling and excessive arc interruption. Minor surface imperfections can be burnished out. Clean the blades and apply a thin layer of lubricant, as necessary.

Clean rotating hinge contacts and apply a thin layer of lubricant, as necessary.

Check contacts and joints for signs of overheating, as evidenced by distorted or discolored metal.

Open and close fuses to ensure proper latching. Refer to the applicable S&C Instruction Sheet for fuse handling instructions.

Inspect the fuse contact surfaces for signs of galling and overheating, as evidenced by distorted or discolored contacts. Minor imperfections can be furnished out. Clean contacts and apply a thin layer of lubricant, as necessary.

Verify proper functioning of key interlocks, if furnished.

Verify proper operation of the door latching mechanisms.

To maintain the original integrity of the finish, clean the exterior of the gear and touch up scratches and abrasions using S&C touch-up finish and red-oxide primer, available in aerosol spray cans. Order by Catalog No. 9999-058 for olive-green finish, 9999-080 for light gray finish, and 9999-061 for red-oxide primer.

If maintenance is required that is beyond the scope of this procedure or if replacement parts are necessary, provide a cost to Engineer and Doc.

CAUTION: Do not use industrial strength cleaning solutions (e.g., Formula-409<sup>®</sup>, Simple Green<sup>®</sup>) or lubricants which contain solvents. Solvent vapors can attack arc compressor components and fuse pull rings, resulting in reduced interrupting performance or weakened parts. NYE Rheolube 368 (available in small ¼ oz. tubes from S&C, Part No. 9999-044) is the only approved lubricant.

NOTE: There may be discoloration of copper or copper alloy surfaces due to oxidation. This, however, does not indicate overheating.

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## **10. 12KV Manual PMH Switch**

### Inspection and Maintenance Procedures for the Enclosure and for Components in High-Voltage Compartments

Access to high-voltage compartments shall be restricted to qualified persons who observe the following procedures:

Adhere to prescribed safety rules at all times.

Be certain that fuses, Mini-Rupter Switches, their mechanisms, and any other devices are disconnected from all power sources and grounded before that device is inspected, serviced, or repaired.

Discharge all stored-energy switch operators by using the manual operating handle.

Always assume that both sets of terminals on any Mini-Rupter Switch or fuse are energized unless proven otherwise by test, by visual evidence of open-circuit conditions on both terminal ends, or by grounding.

All voltage sensors must be disconnected when external voltage is used to test any secondary-side wiring or devices, to avoid energizing the high-voltage conductors through the voltage sensors. To disconnect the voltage sensors, transfer the input plug from the input receptacle to the shorting receptacle.

Test for voltage. Qualified persons should be certain that they have and know how to operate the correct test equipment for determining the voltage on both sets of terminals on any fuse or interrupter switch.

After the gear has been completely disconnected from all sources of power and tested, properly connect suitable grounding leads to both sides of the equipment, that is, to the incoming and outgoing phases of the equipment to be maintained.

Install dual-purpose front barriers, if furnished, in the "slide-in" position. If a contact on either side of a barrier is energized, do not leave the barrier in the "slide-in" position for longer than one week. These barriers are intended for temporary use only to isolate the blades of the switch from the main contacts while work is being performed. If the barriers are left in the "slide-in" position for extended periods of time, there is the possibility of corona discharge to the barriers. Prolonged exposure to corona discharge may damage the barriers and result in a flashover.

When the equipment to be inspected is not of S&C manufacture, follow instructions supplied by the manufacturer of the equipment.

Make certain the enclosure is properly grounded to the station or facility ground. No equipment should be returned to service unless such grounds are properly made.

NOTE: Occasionally, low-voltage components may require maintenance. The maintenance of low-voltage components isolated from high-voltage compartments may be performed under the safety rules for equipment rated 600 volts or less. If maintenance is to be performed on devices connected to the secondary of a voltage sensor, short-circuit the secondary connections. A separate drawing will be provided with any replacement part explaining how to properly short-circuit the secondary connections.

When returning the equipment to service, the following procedures should be observed:

Withdraw any dual-purpose front barriers, if furnished, from the "slide-in" position and return them to their normal, suspended position.

Make sure the fuses (or switch blades in lieu of fuses) are closed and securely latched.

Make sure that any grounding means are removed before energizing the associated Mini-Rupter Switch or fuse.

Close each door permitting access to high voltage and make sure that the associated door latching mechanisms are securely latched before energizing the circuit or operating any switching device.

Make certain that the input plug is in the input receptacle.

Make certain that the Mini-Rupter Switches are in the correct positions (open or closed) as dictated by the electric power system design. Indicate their position upon completion.

Padlock all doors before leaving the installation site, even momentarily. Observe this procedure even in those cases where the gear is accessible only to qualified persons.

Visually inspect the interior of each compartment for excess dirt and weeds, and rodent, reptile, and insect intrusion.

If cleaning is necessary, S&C recommends using water to wash dirty or contaminated surfaces. Mild soap may be used to remove particularly stubborn deposits on painted surfaces, barriers, and Cypoxy® parts.

Inspect insulators, surge arresters, terminators, etc. for physical or electrical damage.

Check that gasketing around low-voltage compartment is securely affixed and that grouting around base of unit is in good condition. Verify that there has been no major water ingress.

Inspect barriers for signs of tracking and corona discharge. Surface deposits can be wiped off. If surface erosion is present, provide a cost to replace the eroded barriers.

Verify that interphase and end barriers hang vertically and that retaining hardware securely holds them in place. Be sure that the switch-side interphase barriers are properly seated in the support notch (if present) in the lower rear of the compartment.

Verify, as well, that the clearance from the terminators and other energized parts to the barriers and electrical ground is maintained to prevent flashover (e.g., fuse silencer to terminator drain wire). Minimum air clearances are listed below.

Rating, kv	Minimum Air Clearances (Inches)			
	Energized Parts to Barriers	Terminator Skirts to Barriers	Energized Parts to Elec. Ground	Phase-to-Phase
14.4	1	1/2	6	6

Exercise the Mini-Rupter Switches and check all blades for proper opening and closing. Be sure that barriers are not in open gap.

Inspect, clean, and re-lubricate the Mini-Rupter Switches.

Check blades for signs of galling and excessive arc interruption. Minor surface imperfections can be burnished out. Clean the blades and apply a thin layer of lubricant, as necessary.

Clean rotating hinge contacts and apply a thin layer of lubricant, as necessary.

Check contacts and joints for signs of overheating, as evidenced by distorted or discolored metal.

Open and close fuses to ensure proper latching. Refer to the applicable S&C Instruction Sheet for fuse handling instructions.

Inspect the fuse contact surfaces for signs of galling and overheating, as evidenced by distorted or discolored contacts. Minor imperfections can be furnished out. Clean contacts and apply a thin layer of lubricant, as necessary.

Verify proper functioning of key interlocks, if furnished.

Verify proper operation of the door latching mechanisms.

To maintain the original integrity of the finish, clean the exterior of the gear and touch up scratches and abrasions using S&C touch-up finish and red-oxide primer, available in aerosol spray cans. Order by Catalog No. 9999-058 for olive-green finish, 9999-080 for light gray finish, and 9999-061 for red-oxide primer.

If maintenance is required that is beyond the scope of this procedure or if replacement parts are necessary, provide a cost.

**CAUTION:** Do not use industrial strength cleaning solutions (e.g., Formula-409®, Simple Green®) or lubricants which contain solvents. Solvent vapors can attack arc compressor components and fuse pull rings, resulting in reduced interrupting performance or weakened parts. NYE Rheolube 368 (available in small ¼ oz. tubes from S&C, Part No. 9999-044) is the only approved lubricant.

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NOTE: There may be discoloration of copper or copper alloy surfaces due to oxidation. This, however, does not indicate overheating.

Not For Bidding Purposes

## **11. 12kV Indoor Substation with Auto Transfer**

Gear shall be opened, cleaned and inspected. Inspection shall include general physical inspection, inspection of interior for evidence of moisture or animal intrusion, partial disassembly to permit cleaning and/or wiping down of all interphase barriers and all insulating surfaces, and inspection of bus and cable joints for looseness, burning or tracking. Check insulators for evidence of tracking or cracked/chipped surfaces. Check all insulating surfaces for cleanliness, tracking, broken components, etc

Operate the primary switches to ensure that the switches, their mechanism, and control features are functioning properly. The maintenance instructions of the particular manufacturer of each mechanism should be followed.

Check the following features:

Limit switch adjustment

Control relays for damaged contacts, defective coils, and inadequate supply voltage

Any other condition that might inhibit proper functioning of the switch assembly

Lubrication

Operate each switch several times and check for simultaneous closing of all blades and for complete contact closing, and check the blade lock or latch in the fully closed position.

Inspect contacts for alignment, pressure, pitting and arcing, or corrosion.

Badly pitted or burned contacts should be replaced.

If pitting is of a minor nature, the surface should be left as it.

Inspect arcing horns for signs of excessive burning.

Perform a contact resistance test on each phase by using an ohmmeter capable of reading extremely low resistance values to measure the resistance between the line and load side of the closed switch. Using the same type of meter, perform a switchgear continuity test on each phase by measuring resistance between the line side of the closed switch and the load side of the fuse. Submit report to Engineer for evaluation.

Inspect insulation for breaks, cracks or burns and clean the insulators.

Check gear boxes, linkages, and contact pivots for proper lubricants per the manufacturer's recommendation.

Inspect flexible braids or slip ring contacts used for grounding the operating handle and braids showing signs of corrosion, wear, or broken strands shall be reported. Inspect, check and test all safety interlocks for proper operation.

Check all bulbs. Replace burned out bulbs.

Verify that fuses are good and making adequate contact with holder. Note the type, amperage, quantity and catalog number of all power, control and PT fuses.

Vacuuming and general cleaning and wiping down/inspection is to be performed in both front and rear of primary and secondary compartments (remove breakers and both front and rear covers as necessary for access). Do not clean insulating components of the switchgear with a cloth that has been used to clean metallic components. Use a solvent such as CRC Cableclean or Electro-clean. Do not use contact cleaning solvents on any insulating components.

Evidence of flashover or over heating between any bus and adjacent metal enclosure or between bus conductors or flashover or tracking across insulators is to be investigated, documented, and removed if possible. Broken, missing or damaged insulation shall be reported.

Check all accessible joints for proper torque per tables for the hardware involved with that joint.

Check all ground connections and ground bus for tightness and all ground conductors for damage or deterioration.

Exercise molded case circuit breakers. Observe flooding. Observe leaky drip shields. Verify presence & condition of maintenance tools, that is, breaker rackout crank.

Due to the presence of asbestos on the slabs of Westinghouse and GE power circuit breakers, use a HEPA filter & bag when vacuuming near slabs and properly dispose of the HEPA filter and bag as hazardous waste.

Report Discrepancies.

Not For Bidding Purposes

## **12. Indoor Manual Primary Selective Substation**

Gear shall be opened, cleaned and inspected. Inspection shall include general physical inspection, inspection of interior for evidence of moisture or animal intrusion, and inspection of bus and cable joints for looseness, burning or tracking. Partial disassembly to permit cleaning and/or wiping down of all interphase barriers and all insulating surfaces. Check insulators for evidence of tracking or cracked/chipped surfaces. Check all insulating surfaces for cleanliness, tracking, broken components, etc.

Operate the primary switches to ensure that the switches, their mechanism, and control features are functioning properly. The maintenance instructions of the particular manufacturer of each mechanism should be followed.

Check the following features:

Limit switch adjustment

Control relays for damaged contacts, defective coils, and inadequate supply voltage

Any other condition that might inhibit proper functioning of the switch assembly

Lubrication

Operate each switch several times and check for simultaneous closing of all blades and for complete contact closing, and check the blade lock or latch in the fully closed position.

Inspect contacts for alignment, pressure, pitting and arcing, or corrosion.

Badly pitted or burned contacts should be replaced.

If pitting is of a minor nature, the surface should be left as it.

Arcing horns should be inspected for signs of excessive burning.

Perform a contact resistance test on each phase by using an ohmmeter capable of reading extremely low resistance values to measure the resistance between the line and load side of the closed switch. Using the same type of meter, perform a switchgear continuity test on each phase by measuring resistance between the line side of the closed switch and the load side of the fuse. Submit report to Engineer for evaluation.

Inspect insulation for breaks, cracks or burns and clean the insulators.

Check gear boxes, linkages, and contact pivots for proper lubricants per the manufacturer's recommendation.

Inspect flexible braids or slip ring contacts used for grounding the operating handle and braids showing signs of corrosion, wear, or broken strands shall be reported.

Inspect, check and test all safety interlocks for proper operation.

Check all bulbs. Replace burned out bulbs.

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Verify that fuses are good and making adequate contact with holder. Note the type, amperage, quantity and catalog number of all power, control and PT fuses.

Vacuuming and general cleaning and wiping down/inspection is to be performed in both front and rear of primary and secondary compartments (remove breakers and both front and rear covers as necessary for access). Do not clean insulating components of the switchgear with a cloth that has been used to clean metallic components. Use a solvent such as CRC Cableclean or Electro-clean. Do not use contact cleaning solvents on any insulating components.

Evidence of flashover or over heating between any bus and adjacent metal enclosure or between bus conductors or flashover or tracking across insulators is to be investigated, documented, and removed if possible. Broken, missing or damaged insulation shall be reported.

Check all accessible joints for proper torque per tables for the hardware involved with that joint.

Check all ground connections and ground bus for tightness and all ground conductors for damage or deterioration.

Exercise molded case circuit breakers. Observe flooding. Observe leaky drip shields. Verify presence & condition of maintenance tools, that is, breaker rackout crank.

Due to the presence of asbestos on the stabs of Westinghouse and GE power circuit breakers, use a HEPA filter & bag when vacuuming near stabs and properly dispose of the HEPA filter and bag as hazardous waste.

Report Discrepancies.

Not For Bidding Purposes

### **13. 12KV to Low Voltage Indoor Substation**

Gear shall be opened, cleaned and inspected. Inspection shall include general physical inspection, inspection of interior for evidence of moisture or animal intrusion, partial disassembly to per unit cleaning and/or wiping down of all interphase barriers and all insulating surfaces, and inspection of bus and cable joints for looseness, burning or tracking. Check insulators for evidence of tracking or cracked/chipped surfaces. Check all insulating surfaces for cleanliness, tracking, broken components, etc.

Check all bulbs. Replace burned out bulbs.

Verify that fuses are good and making adequate contact with holder. Note the type, amperage, quantity and catalog number of all power, control and PT fuses.

Vacuumping and general cleaning and wiping down/inspection is to be performed in both front and rear of primary and secondary compartments (remove breakers and both front and rear covers as necessary for access). Do not clean insulating components of the switchgear with a cloth that has been used to clean metallic components. Use a solvent such as CRC Cableclean or Electro-clean. Do not use contact cleaning solvents on any insulating components.

Evidence of flashover or over heating between any bus and adjacent metal enclosure or between bus conductors or flashover or tracking across insulators is to be investigated, documented, and removed if possible. Broken, missing or damaged insulation is to be reported.

Check all accessible joints for proper torque per tables for the hardware involved with that joint.

Check all ground connections and ground bus for tightness and all ground conductors for damage or deterioration.

Exercise molded case circuit breakers. Observe flooding. Observe leaky drip shields. Verify presence & condition of maintenance tools, that is, breaker rackout crank.

Due to the presence of asbestos on the slabs of Westinghouse and GE power circuit breakers, use a HEPA filter & bag when vacuuming near slabs and properly dispose of the HEPA filter and bag as hazardous waste.

Report Discrepancies.

**14. UPS**

Visually inspect equipment for loose connections, burned insulation or any other signs of wear.

Visually check for liquid contamination from batteries and capacitors.

Clean and vacuum UPS equipment enclosures.

Provide a complete operational test of the system, including a monitored battery-rundown test to determine if any battery strings or cells are near the end of their useful lives.

Test UPS transfer switches, circuit breakers and maintenance bypasses.

Not For Bidding Purposes

**15. Pad Mounted Transformer**

Before equipment insulation is tested, the equipment shall be cleaned, inspected, and repaired as necessary to minimize leakage currents. All lightning arresters, neutral grounds, and leads from the load side of the primary switch shall be disconnected and then replaced after completion of testing.

Record primary voltage and floating-Y, grounded-Y or delta, kVA and impedance from pad mount nameplate.

Take Current and Voltage Readings on the transformer.

Record oil level and min-current-max Temperature Readings on the transformer.

If the pad is level and transformer fluid is low, add same fluid per manufacturer's instructions.

Note corrosion of the transformer, tank and cable enclosure, the condition of the pad, including cracks and whether foreign cables are present in the cable enclosure.

Note a high noise level or change in level which could indicate improper installation or loose windings or barriers.

Inspect/clean for the following problems (repair minor defects and furnish a price to mitigate major defects):

Grass or weeds intruding into the pad or compartment.

Shrubs close to the pad mount.

Levelness of the pad, levelness of the transformer and allow for a top-off of same fluid as in the pad mount, if required.

Discoloration caused by overheating.

Tracking and carbonization.

Cracked, contaminated or chipped insulators or bushings.

Bushings torqued by the weight of secondary's.

Inspect, on secondary's mechanical lugs bolted to the pad mount's secondary spades, that the bolts are of sufficient length to fully pass through the nuts and that all mounting holes in the mechanical lugs are bolted to the spades.

Report deficiencies.

Loose insulators, clamps, or coil spacers.

Bushing or insulator tracking.

Deterioration of barriers.

Cracked or leaking pressure relief device diaphragms. Report immediately to Engineer.

Corroded or loose electrical connections. Torque to proper values.

Leaking gaskets.

Leaking gasketed bushings or insulator bases.

Do not clean insulating components of the transformer with a cloth that has been used to clean metallic components. Use a solvent such as CRC Cableclean or Electro-clean. Do not use contact cleaning solvents on any insulating components.

Inspect the equipment ground bus and grounds for corrosion or loose connections. Perform a grounding-electrode resistance test with a ground resistance test set.

Vacuum dirt and dust from the tank and compartment with a vacuum cleaner. If vacuum cleaning is insufficient, compressed air should be used only if it is clean, dry, and applied at a low pressure to avoid damage to components. Use compressed air in compliance with OSHA regulations in 29 CFR 1910.242(b), "Hand and Portable Powered Tools and Other Hand Held Equipment," including limiting air pressure for such cleaning to less than a gauge pressure of 208.85 kPa (30 psi) and the provision of effective chip guarding and appropriate personal protective equipment.

## **16. Dry Type and Cast Coil Transformers**

Take min. current and max, Current and Voltage Readings on the transformer.

Take a load and Temperature Readings on the transformer.

Inspect the louvers in the enclosures of ventilated dry-type transformers to verify that they are not clogged with dirt or otherwise obstructed. Check the operation of integral ventilating fans. Any material or obstruction that might prevent the free circulation of air around a transformer should be noted. If the room or vault has power-driven ventilating fans, verify their correct operation and test overtemperature alarms, if provided.

Note corrosion of the transformer enclosure, the intrusion of dirt, and evidence of water leaks into the room or vault.

Note a high noise level or change in level which could indicate improper installation or loose windings or barriers.

Remove enclosure covers of ventilated dry-type transformers and inspect/clean for the following problems and furnish a price to mitigate major defects.

Accumulations of dirt on windings, insulators, and where cooling airflow might be restricted.

Discoloration caused by overheating.

Tracking and carbonization.

Cracked or chipped insulators.

Loose insulators, clamps, or coil spacers.

Deterioration of barriers.

Corroded or loose electrical connections. Torque to proper values.

Support or restraint of electrical control wiring that may have become loose.

Do not clean insulating components of the transformer with a cloth that has been used to clean metallic components. Use a solvent such as CRC Cableclean or Electro-clean. Do not use contact cleaning solvents on any insulating components.

Inspect the equipment ground bus and grounds for corrosion or loose connections. Perform a grounding-electrode resistance test with a ground resistance test set.

Vacuum dirt and dust from the windings with a vacuum cleaner. If vacuum cleaning is insufficient, compressed air should be used only if it is clean, dry, and applied at a low pressure to avoid damage to windings. Use compressed air in compliance with OSHA regulations in 29 CFR 1910.242(b), "Hand and Portable Powered Tools and Other Hand Held Equipment," including limiting air pressure for such cleaning to less than a gauge pressure of 208.85 kPa (30 psi) and the provision of effective chip guarding and appropriate personal protective equipment. In particular, ventilating ducts and the top and bottom of the windings should be cleaned.

Not For Bidding Purposes

**17. Secondary Voltage Power Circuit Breaker with Electronic Trip**

When vacuuming the stabs of GE and Westinghouse units, use a HEPA filter and bag and appropriately dispose of the filter and bag as hazardous waste because those stabs have asbestos in their vicinity. Inspection shall include general physical inspection and partial dis-assembly to permit cleaning and/or wiping down of all inter-phase barriers and all insulating surfaces, inspection of contacts for wear, alignment, pressure, and pitting, and inspection of arc chutes for internal burning or tracking. Rear finger clusters shall be inspected and cleaned. The closing motor or solenoid shunt trip auxiliary switches and bell alarm switch, if any, shall be inspected for correct operation insulation condition and tightness of connectors. On/off indicators, spring charge indicators, mechanical and electrical interlocks, and pad locking features shall be checked for proper operation and shall be lubricated where required. The positive interlock feature that prevents the insertion and withdraw of the circuit breaker shall be tested while it is in the closed position.

Do not clean insulating components of the breaker with a cloth that has been used to clean metallic components. A solvent such as CRC Cableclean or Electro-clean shall be used. Do not use contact cleaning solvents on any insulating components.

Old lubrication deposits shall be removed. The operating mechanism, contacts, and rear finger clusters shall be lubricated per manufacturer's recommendations. No visual deposits of grease or lubricants should be apparent at any location.

Not For Bidding Purposes

## **18. Utility/Generator ATS within Substation**

De-energize the switchgear (ATSs equipped with an isolation bypass feature do not need to be de-energized).

Remove the arc chutes and pole covers. Consult the manufacturer's information for proper procedure. This step will allow visual inspection of the main and arcing contacts.

Test and recalibrate all tri-sensing and time-delay functions in the switchgear. Depending on the manufacturer, the steps required here will vary. The focus here should be to verify and record what current settings are and to ensure the current adjustments meet the customer's needs and expectations. If adjustments are necessary, the means to make and verify those adjustments need to be examined. For example, a voltage pick-up or dropout adjustment may require the use of a variable source such as a variable ac transformer. The standby engine can be a source of variable frequency, etc. In any case, the manufacturer is your source for information concerning these adjustments.

Vacuum the accumulated dust from the switchgear and accessory panels. Never use air to blow out dirt. Subjecting the TS unit to compressed air may have a detrimental effect by forcing dirt and debris into the switch mechanism.

Inspect for moisture or signs of previous wetness or dripping.

Clean grime with an approved solvent. Consult the OEM for a recommendation.

Inspect all insulating parts for cracks or discoloration due to excessive heat. Part of any complete maintenance program is an infrared scan. This work is done prior to maintenance with normal loads applied to the gear being scanned. The resultant report will define problem areas. The use of this information will allow the maintenance provider to take a proactive approach.

Inspect all main arcing contacts for excessive erosion. Arcing contacts are intended to be sacrificial by nature. They take the brunt of the energy when making or breaking the load. Careful attention should be paid to these contacts.

Inspect all main current-carrying contacts for pitting and discoloration due to excessive heat.

Inspect all control relay contacts for excessive erosion and discoloration due to excessive heat.

Manually operate the main transfer movement to check proper contact alignment, deflection, gap, and wiping action.

Check all cable and control wire connections to the transfer switch control and sensing panel and other system components and tighten if necessary.

Re-energize the switchgear and conduct a test by simulating a normal source failure.

**19. 480-208Y/120V Power Dry Type Transformer Switchboard Unit considered part of the Substation**

Gear shall be opened, cleaned and inspected. Inspection shall include general physical inspection, inspection of interior for evidence of moisture or animal intrusion, and inspection of bus and cable joints for looseness, burning or tracking. Partial disassembly to permit cleaning and/or wiping down of all interphase barriers and all insulating surfaces. Check insulators for evidence of tracking or cracked/chipped surfaces. Check all insulating surfaces for cleanliness, tracking, broken components, etc. The 120/208V buses shall be meggered per industry standards.

Inspect insulation for breaks, cracks or burns and clean the insulators.

Inspect, check and test all safety interlocks for proper operation.

Check all bulbs. Replace burned out bulbs.

Evidence of flashover or over heating between any bus and adjacent metal enclosure or between bus conductors or flashover or tracking across insulators is to be investigated, documented, and removed if possible. Broken, missing or damaged insulation shall be reported, and provide a cost to repair.

Check all accessible joints for proper torque per tables for the hardware involved with that joint.

Exercise molded case circuit breakers.

The equipment, including 480V primary and 120/208V secondary bus work, shall be cleaned, inspected, and repaired as necessary to minimize leakage currents.

Take primary and secondary Current and Voltage Readings on the transformer.

Inspect the louvers in the enclosures of ventilated dry-type transformers to verify that they are not clogged with dirt or otherwise obstructed. Any material or obstruction that might prevent the free circulation of air around a transformer should be noted. If the room or vault has power-driven ventilating fans, verify their correct operation and test overtemperature alarms, if provided.

Note corrosion of the transformer enclosure, the intrusion of dirt, leaky drip shields and evidence of water leaks into the room or vault.

Note a high noise level or change in level which could indicate improper installation or loose windings or barriers.

Remove enclosure covers of ventilated dry-type transformers and inspect/clean for the following problems and furnish a price to mitigate major defects.

Accumulations of dirt on windings, insulators, and where cooling airflow might be restricted.

Discoloration caused by overheating.

Tracking and carbonization.

Cracked or chipped insulators.

Loose insulators, clamps, or coil spacers.

Deterioration of barriers.

Support or restraint of electrical control wiring that may have become loose.

Do not clean insulating components of the transformer with a cloth that has been used to clean metallic components. Use a solvent such as CRC Cableclean or Electro-clean. Do not use contact cleaning solvents on any insulating components.

Inspect the equipment ground bus and grounds for corrosion, damage or loose connections. Perform a grounding-electrode resistance test with a ground resistance test set.

Vacuum dirt and dust from the windings with a vacuum cleaner. If vacuum cleaning is insufficient, compressed air should be used only if it is clean, dry, and applied at a low pressure to avoid damage to windings. Use compressed air in compliance with OSHA regulations in 29 CFR 1910.242(b), "Hand and Portable Powered Tools and Other Hand Held Equipment," including limiting air pressure for such cleaning to less than a gauge pressure of 208.85 kPa (30 psi) and the provision of effective chip guarding and appropriate personal protective equipment. In particular, ventilating ducts and the top and bottom of the windings should be cleaned.

Not For Bidding Purposes

## **20. Manholes**

De-energize cables if they are to be touched or moved during maintenance.

**Check for dangerous gases using a properly calibrated test meter before entering a manhole.**  
Obtain any confined space permits as required by the State of Delaware, Department of Corrections.

Inspect cable for sharp bends, physical damage, excessive tension, pits, cable movement, soft spots, cracked jackets, damaged or missing firewrap, poor ground connections, cable identification tags, deteriorated or corroded or weakened cable supports. Inspect for cracked insulators. Inspect for wear at duct edges and at supports. Inspect manhole for spalled concrete, proper ventilation, and excessive moisture.

Examine the manhole and cable grounding system.

Report deficiencies.

### **Set of (3) Lightning Arresters**

Lightning arresters including load break elbow-type arresters shall be tested using the "Doble" Dissipation Factor method. The main criterion for evaluating the arresters is the magnitude of the milliwatt (or dielectric) loss. Ideally, similar units should exhibit approximately the same milliwatt loss. Evaluation is done by comparing these values to tabulated values for similar units.

Vacuum and wipe down/inspect arresters (remove covers and remove elbow arresters as necessary for access). Do not clean insulating components with a cloth that has been used to clean metallic components. Use a solvent such as CRC Cableclean or Electro-clean. Do not use contact cleaning solvents on any insulating components.

Check phase and ground connections, ground resistance between arresters, ground terminal and the ground system should be below 0.5 ohm. Torque as necessary to achieve proper torque magnitudes based on the size and type of hardware in use with the arrester.

Report all test results and discrepancies. Report nameplate data.

**James T. Vaughn Correctional Center Electrical System Maintenance Procedures**

**Procedure #1:  
Cable Testing (25KV Cables)**

<b>Feeder Number:</b>	
<b>Location:</b>	
<b>From:</b>	
<b>To:</b>	
<b>Date/Time:</b>	
<b>Description:</b>	
<b>Comments:</b>	

Not For Bidding Purposes

**James T. Vaughn Correctional Center Electrical System Maintenance Procedures**

**Procedure #2:  
25 KV Transformer with VFI**

<b>Name:</b>	
<b>Location:</b>	
<b>KVA:</b>	
<b>Primary Voltage:</b>	
<b>Secondary Voltage:</b>	
<b>Impedence:</b>	
<b>Transformer &amp; Pad Condition:</b>	
<b>Transformer Turns Ratio Test:</b>	
<b>Insulation Resistance Test:</b>	
<b>Calculate Polarization Index:</b>	
<b>Power Factor Test:</b>	
<b>Excitation Current Test:</b>	
<b>Winding Resistance Test:</b>	
<b>Record Oil Level:</b>	
<b>Inspect/Clean:</b>	

*Not For Bidding Purposes*

**James T. Vaughn Correctional Center Electrical System Maintenance Procedures**

**Procedure #2:  
25 KV Transformer with VFI**

<b>Grass or weeds intrusion:</b>	
<b>Shrubs close to pad:</b>	
<b>Inspect Secondary's mechanical lugs:</b>	
<b>Clean Insulating components with CRC solvent:</b>	
<b>Test Lightning Arresters:</b>	
<b>Inspect Equipment ground bus:</b>	
<b>Oil Sampling:</b>	
<b>VFI Unit Testing:</b>	
<b>High Potential Withstand Testing:</b>	
<b>Trip &amp; Control Testing:</b>	
<b>Comments:</b>	

*Not For Bidding Purposes*

**James T. Vaughn Correctional Center Electrical System Maintenance Procedures**

**Procedure #3:  
12KV Main Substation**

<b>Name:</b>	
<b>Location:</b>	
<b>Main Bus Amps:</b>	
<b>Physical Inspection:</b>	
<b>Contact Resistance:</b>	
<b>Transformer &amp; Pad Condition:</b>	
<b>Close and trip all breakers:</b>	
<b>Calibrate Relays:</b>	
<b>Check all bulbs:</b>	
<b>Open draw-out type potential &amp; control power xfmr. drawers:</b>	
<b>Evidence of flashover or heating:</b>	
<b>Check all ground connectors for tightness:</b>	
<b>Check ground conductors for damage or deterioration:</b>	
<b>Comments:</b>	

Not For Bidding Purposes

**James T. Vaughn Correctional Center Electrical System Maintenance Procedures**

**Procedure #4:  
Electronic trip 12KV Circuit Breaker**

<b>Name:</b>	
<b>Location:</b>	
<b>Clean insulating components with CRC solvent:</b>	
<b>Measure contact resistances:</b>	
<b>Open &amp; close each breaker:</b>	
<b>Remove old lubrication deposits:</b>	
<b>Comments:</b>	

Not For Bidding Purposes

**James T. Vaughn Correctional Center Electrical System Maintenance Procedures**

**Procedure #5:  
Pad Mounted Capacitor Bank**

<b>Name:</b>	
<b>Location:</b>	
<b>Capacitor size:</b>	
<b><u>Enclosure Exterior</u></b>	
<b>Adequate ventilation for Enclosure:</b>	
<b>Clean enclosure, doors, louvers as required:</b>	
<b>Inspect operation of key interlock systems:</b>	
<b>Examine Enclosure for Corrosion:</b>	
<b>Examine concrete pad:</b>	
<b><u>Enclosure Interior</u></b>	
<b>Remove dust and dirt from interior of enclosure:</b>	
<b><u>Bus Bar &amp; Wiring</u></b>	
<b>Inspect for loose bus bar connections:</b>	
<b>Inspect/Clean:</b>	
<b>Remove surface oxides from aluminum connectors:</b>	

Not For Bidding Purposes

**James T. Vaughn Correctional Center Electrical System Maintenance Procedures**

**Procedure #5:  
Pad Mounted Capacitor Bank**

Inspect control wire connections:	
Inspect wire insulation for cuts, breakdown, burns:	
<b><u>Capacitors</u></b>	
Clear capacitor case & insulation bushings of corrosion:	
Capacitive reactance for each capacitor:	
KVar:	
Voltage:	
BIL Rating:	
Verify internal discharge reactors working:	
<b><u>Fuses</u></b>	
Check all fuses, replace as required:	
Confirm fuse rating:	
Note type, amperage, quantity, cat#, of all fuses:	
Check function of neutral unbalance sensor:	
Clean fuses and fuse holders:	

Not For Bidding Purposes

**James T. Vaughn Correctional Center Electrical System Maintenance Procedures**

**Procedure #5:  
Pad Mounted Capacitor Bank**

<b><u>Controls</u></b>	
Perform manual switching operations:	
Check all indicator lights:	
Check ammeters and voltmeters:	
Check blown fuse detection system working:	
Check all alarms and indicators:	
<b><u>Oil Switches</u></b>	
Inspect external components:	
Clean bushings:	
Check for mechanical damage:	
Perform dielectric withstand test:	
Manually close and trip the switch:	
check dielectric strength of insulating oil:	
Measure insulation resistance on each pole:	
Measure the contact resistance across each pole:	

Not For Bidding Purposes

**James T. Vaughn Correctional Center Electrical System Maintenance Procedures**

**Procedure #5:  
Pad Mounted Capacitor Bank**

<b><u>Harmonic Filter Reactors</u></b>	
Confirm nameplate rating:	
Check for physical damage:	
Measure inductance of each reactor phase:	
<b><u>Lightning Arresters</u></b>	
Check for physical damage:	
Test arresters per spec:	
Comments:	

Not For Bidding Purposes

**James T. Vaughn Correctional Center Electrical System Maintenance Procedures**

**Procedure #7:  
Air Insulated Tap Boxes**

<b>Name:</b>	
<b>Location:</b>	
<b>From:</b>	
<b>Inspect Primary voltage cable tap boxes:</b>	
<b>Check ground wires and terminations for tightness:</b>	
<b>Clean insulation components with CRC solvent:</b>	
<b>Comments:</b>	

Not For Bidding Purposes

**James T. Vaughn Correctional Center Electrical System Maintenance Procedures**

**Procedure #8:  
Medium Voltage (MV) Power Fuses**

<b>Name:</b>	
<b>Location:</b>	
<b>Type:</b>	
<b>Amperage:</b>	
<b>Catalog number:</b>	
<b>Note any spare power fuse:</b>	
<b>Comments:</b>	

Not For Bidding Purposes

**James T. Vaughn Correctional Center Electrical System Maintenance Procedures**

**Procedure #9:**

**12KV PMH Switch with Auto-Transfer**

<b>Name:</b>	
<b>Location:</b>	
<b>Inspect switch:</b>	
<b>Check that enclosure is properly grounded:</b>	
<b>Clean compartments:</b>	
<b>Verify clearance from terminators to other energized parts:</b>	
<b>Exercise the mini-rupter switches:</b>	
<b>Clean and relubricate mini-rupter switches:</b>	
<b>Verify proper functioning of key interlocks:</b>	
<b>Comments:</b>	

Not For Bidding Purposes

**James T. Vaughn Correctional Center Electrical System Maintenance Procedures**

**Procedure #10:  
12KV Manual PMH Switch**

<b>Name:</b>	
<b>Location:</b>	
<b>Inspect switch:</b>	
<b>Check that enclosure is properly grounded:</b>	
<b>Clean compartments:</b>	
<b>Verify clearance from terminators to other energized parts:</b>	
<b>Exercise the mini-rupter switches:</b>	
<b>Clean and relubricate mini-rupter switches:</b>	
<b>Verify proper functioning of key interlocks:</b>	
<b>Comments:</b>	

Not For Bidding Purposes

**James T. Vaughn Correctional Center Electrical System Maintenance Procedures**

**Procedure #11:**

**12KV Indoor Substation with Auto Transfer**

<b>Name:</b>	
<b>Location:</b>	
<b>Inspect and clean gear:</b>	
<b>Test function of primary switches:</b>	
<b>Perform contact resistance test:</b>	
<b>Inspect flexible braids &amp; slip rings for corrosion or wear:</b>	
<b>Check all bulbs:</b>	
<b>Verify fuses are good:</b>	
<b>Exercise molded case circuit breakers:</b>	
<b>Comments:</b>	

*Not For Bidding Purposes*

**James T. Vaughn Correctional Center Electrical System Maintenance Procedures**

**Procedure #12:**

**Indoor Manual Primary Selective Substation**

<b>Name:</b>	
<b>Location:</b>	
<b>Inspect and clean gear:</b>	
<b>Perform contact resistance test:</b>	
<b>Inspect flexible braids &amp; slip rings for corrosion or wear:</b>	
<b>Test all safety interlocks:</b>	
<b>Check all bulbs:</b>	
<b>Verify fuses are good:</b>	
<b>Check all ground connections:</b>	
<b>Exercise molded case circuit breakers:</b>	
<b>Comments:</b>	

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**James T. Vaughn Correctional Center Electrical System Maintenance Procedures**

**Procedure #13:  
12KV to Low Voltage Substation**

<b>Name:</b>	
<b>Location:</b>	
<b>Clean and inspect gear:</b>	
<b>Check all bulbs:</b>	
<b>Verify fuse are good:</b>	
<b>Check all ground connections:</b>	
<b>Exercise molded case circuit breakers:</b>	
<b>Comments:</b>	

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**James T. Vaughn Correctional Center Electrical System Maintenance Procedures**

**Procedure #14:**  
**UPS**

<b>Name:</b>	
<b>Location:</b>	
<b>Visually inspect equipment for loose connections:</b>	
<b>Visually check for liquid contamination:</b>	
<b>Clean and vacuum UPS equipment enclosures:</b>	
<b>Perform operational test of system:</b>	
<b>Test UPS transfer switches, circuit breakers, maint. Bypasses</b>	
<b>Comments:</b>	

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**James T. Vaughn Correctional Center Electrical System Maintenance Procedures**

**Procedure #15:  
Pad Mounted Transformer**

<b>Name:</b>	
<b>Location:</b>	
<b>KVA:</b>	
<b>Primary Voltage:</b>	
<b>Secondary Voltage:</b>	
<b>Impedence:</b>	
<b>Transformer &amp; Pad Condition:</b>	
<b>Record Oil Level:</b>	
<b>Inspect/Clean:</b>	
<b>Grass or weeds Intrusion:</b>	
<b>Shrubs close to pad:</b>	
<b>Inspect Secondary's mechanical lugs:</b>	
<b>Clean Insulating components with CRC solvent:</b>	
<b>Inspect Equipment ground bus:</b>	

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**James T. Vaughn Correctional Center Electrical System Maintenance Procedures**

**Procedure #15:**  
**Pad Mounted Transformer**

Comments:

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**James T. Vaughn Correctional Center Electrical System Maintenance Procedures**

**Procedure #16:  
Dry Type and Cast Coil Transformers**

<b>Name:</b>	
<b>Location:</b>	
<b>KVA:</b>	
<b>Primary Voltage:</b>	
<b>Secondary Voltage:</b>	
<b>Impedence:</b>	
<b>Transformer &amp; Pad Condition:</b>	
<b>Inspect/Clean:</b>	
<b>Note any corrosion of transformer enclosure:</b>	
<b>Clean insulating components with CRC solvent:</b>	
<b>Inspect Equipment ground bus:</b>	
<b>Comments:</b>	

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**James T. Vaughn Correctional Center Electrical System Maintenance Procedures**

**Procedure #17:**

**Secondary Voltage Power Circuit Breaker with Electronic Trip**

<b>Name:</b>	
<b>Location:</b>	
<b>Inspect/clean secondary voltage power breakers:</b>	
<b>Clean insulating components with CRC solvent:</b>	
<b>Remove old lubrication deposits:</b>	
<b>Comments:</b>	

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**James T. Vaughn Correctional Center Electrical System Maintenance Procedures**

**Procedure #18:  
Utility/Generator ATS within Substation**

<b>Name:</b>	
<b>Location:</b>	
<b>De-energize the switchgear:</b>	
<b>Test and recalibrate all trisensing and time delay functions:</b>	
<b>Vacuum dust from switchgear:</b>	
<b>Inspect for moisture or previous wetness or dripping:</b>	
<b>Manually operate the main transfer:</b>	
<b>Test switchgear by simulating a normal source failure:</b>	
<b>Comments:</b>	

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**James T. Vaughn Correctional Center Electrical System Maintenance Procedures**

**Procedure #19:**

**480-208Y/120V Power Dry Type Transformer Switchboard Unit considered part of the Substation**

<b>Name:</b>	
<b>Location:</b>	
<b>Clean/Inspect gear:</b>	
<b>Inspect, check, and test all safety interlocks:</b>	
<b>Check all bulbs:</b>	
<b>Exercise molded case circuit breakers:</b>	
<b>Take primary and secondary voltage readings on transformer:</b>	
<b>Inspect equipment and ground bus and grounds for corrosion:</b>	
<b>Vacuum dust and dirt from windings:</b>	
<b>Comments:</b>	

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**James T. Vaughn Correctional Center Electrical System Maintenance Procedures**

**Procedure #20:**  
**Manholes**

<b>Name:</b>	
<b>Location:</b>	
<b>Check for dangerous gases using test meter:</b>	
<b>Inspect cable for sharp bends or damage:</b>	
<b>Examine the manhole and cable grounding system:</b>	
<b>Report deficiencies:</b>	
<b>Comments:</b>	

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**James T. Vaughn Correctional Center Electrical System Maintenance Procedures**

**Set of (3) Lightning Arresters or Load Break Elbow-Type Arresters**

<b>Name:</b>	
<b>Location:</b>	
<b>Test using "Doble" Dissipation factor method:</b>	
<b>Vacuum and wipe down/inspect arresters:</b>	
<b>Check phase and ground connections:</b>	
<b>Report test results, discrepancies, and nameplate data:</b>	
<b>Comments:</b>	

Not For Bidding Purposes

State of Delaware  
James T. Vaughn Correctional Center Hi Voltage Repairs  
OMB/DFM Project # MC3804000029

Appendix "B"  
**Building "G" PCB (polychlorinated biphenyl)  
Test Report**  
James. T. Vaughn Correctional Center  
Hi Voltage Repairs  
OMB/DFM# MC3804000029

Not For Bidding Purposes



760 Pulaski Highway  
Bear, Delaware 19701  
302-326-2333  
Fax: 302-326-2335

March 8, 2012

To: **Ms. Beverly Bartlett**  
**State of Delaware Division of Facilities Management**  
540 South DuPont Highway, Suite 1  
Dover, Delaware 19901

From: **Michael Sanders**  
**Operations Manager**  
Harvard Environmental, Inc.  
760 Pulaski Highway  
Bear, DE 19701

RE: PCBs (polychlorinated biphenyl) sampling Analysis report for Transformer oil at the James T. Vaughn Correctional Center (JTVCC) , Smyrna, DE – Harvard Project # 10829

Dear Ms. Bartlett,

Harvard Environmental Inc. was contracted by the State of Delaware, Division of Facilities Management to perform sampling of transformer insulating oil for PCBs at the JTVCC located at 1181 Paddock Road, Smyrna, DE 19977. This testing was performed by Harvard representatives, Jeffrey Hogate and Michael Sanders on February 15<sup>th</sup>, 2012. The unit is an 'old' Westinghouse Insuldur distribution transformer with 370 gallons of insulating mineral oil filling a Wescor core, Style G73F770P44. The unit's Serial Number is 82JC667150.

One sample was extracted from the outside transformer following protocols outlined in the ASTM d-923 Standard. Approximately ten (10) ml (milliliters) of oil was submitted to an independent laboratory, *Atlantic Coast Laboratories, Inc.*, 630 Churchmans Road, Newark, DE 19702. A dry glass bottle was used for sample collection. Approximately (1) gallon of fluid was flushed from the unit prior to sample collection.

The PCB results of the sample indicated <2 mg/Kg. The EPA action level for PCB quantities in oil is 500 PPM (Parts per million). The conversion ratio of mg/Kg to PPM is 1:1. No actions are required as the oil does not contain actionable levels of PCBs.

In the event you should have any questions, please feel free to contact me personally.

Respectfully,

**Michael Sanders**  
Operations Manager  
Harvard Environmental, Inc.

cc: Analytical Report; Sample Location Drawing

RECEIVED

MAR 13 2012

FACILITIES MANAGEMENT

Not For Bidding Purposes



**ATLANTIC COAST Laboratories**

A Division of QC Laboratories

630 Churchmans Road  
Newark, Delaware 19702  
302-266-9121 • 454-8720 (FAX)  
WWW.ATLANTICCOASTLABS.COM

**REPORT OF ANALYSIS**

Harvard Environmental  
760 Pulaski Hwy.  
Bear, DE 19701

Order Number: A12020893  
Project Name: State od DE JTVCC Transformer  
Receive Date: 2/16/2012  
Client Code: HARVARD

Attention: Wes Morrison

The reported results relate only to the samples as received by the laboratory. This report shall not be reproduced except in full without the written permission of the laboratory or client.

The following abbreviations may appear in this report: RL refers to Reporting Limit N/A refers to Not Applicable

Any organic compound containing (Surr) at the beginning of the compound name is a surrogate compound added to all samples to monitor the analytical process and is reported in % Recovery.

The following data qualifiers may be used in this report. The data qualifier(s) will appear in the qualifier column of this report.

- Data Qualifiers: B Analyte detected in laboratory blank. Result may be biased high.
- YL Laboratory Control Sample outside the acceptance criteria - biased low.
- YH Laboratory Control Sample outside the acceptance criteria - biased high.
- X Analyte hold time was exceeded.
- J Analyte present. Reported value may not be accurate or precise.
- SL Surrogate outside acceptance criteria - biased low.
- SH Surrogate outside acceptance criteria - biased high.
- E Analyte concentration exceeded the upper limit of calibration curve.

The following tests have a maximum hold time of 15 minutes. If the test is not performed in the field then the result may not be suitable for regulatory purposes. (pH, sulfite, chlorine free, and chlorine total)

Laboratory Accreditations:	State of Delaware - DE00011	State of Pennsylvania - 68-335
	State of Maryland - #138	State of New Jersey - DE568

Report comments applicable to this order number appear below:

Not For Bidding Purposes

Approved: *Keith A. Hansbrecht*  
General Manager/Technical Director

Reported: 2/29/2012 8:11:56 AM



**ATLANTIC COAST Laboratories**

A Division of QC Laboratories

630 Churchmans Road  
Newark, Delaware 19702  
302-266-9121 • 454-8720 (FAX)  
WWW.ATLANTICCOASTLABS.COM

**Harvard Environmental**

**Order Number: A12020893**

**Sample # A12020893-01**

**Sample Date: 2/15/2012 13:50**

Site:

Matrix: Solids/RCRA

Client Sample ID: JTVCC -outside transformer

Sample Comments: None

<u>Test</u>	<u>Result</u>	<u>Qualifier</u>	<u>RL</u>	<u>Units</u>	<u>Method</u>	<u>Analysis Date</u>	<u>Analyst</u>
PCB-1016	<2		2	mg/Kg	SW-846 8082	2/25/2012 9:16:00 AM	TArnao
PCB-1221	<2		2	mg/Kg	SW-846 8082	2/25/2012 9:16:00 AM	TArnao
PCB-1232	<2		2	mg/Kg	SW-846 8082	2/25/2012 9:16:00 AM	TArnao
PCB-1242	<2		2	mg/Kg	SW-846 8082	2/25/2012 9:16:00 AM	TArnao
PCB-1248	<2		2	mg/Kg	SW-846 8082	2/25/2012 9:16:00 AM	TArnao
PCB-1254	<2		2	mg/Kg	SW-846 8082	2/25/2012 9:16:00 AM	TArnao
PCB-1260	<2		2	mg/Kg	SW-846 8082	2/25/2012 9:16:00 AM	TArnao
PCB Preparation	2/20/12		N/A	Date Completed	SW-846 3580A		TTechentine

Not For Bidding Purposes

Approved:

*Keith A. Hamobrecht*

General Manager/Technical Director

Reported:

2/29/2012 8:11:56 AM

**CHAIN OF CUSTODY RECORD** *PK 10829*  
 PROJECT NAME *State of DE - JTKCC - Transformer*  
 COMPANY *Harvard Environmental Inc. Testing Lab*  
 ADDRESS *160 Palmetto Hwy Bear*  
 PHONE *(302) 326-2333 DE 19701*



6300 Churchmans Road  
 Newark, Delaware 19702  
 302-266-9121 • 454-8729 (FAX)  
 ACLK@atlanticcoastlabs.com  
 WWW.ATLANTICCOASTLABS.COM

SAMPLED BY *Michael Sanders*  
 SIGNATURE *[Signature]*  
 PRINT NAME *Michael Sanders*

893

SAMPLE NO.	DATE	TIME	SAMPLE LOCATION	CONTAINER			SAMPLER	PRESERVATIVE	COMMENTS
				SUB	SY	GRAB			
1	12/15/12	1350	JTKCC - outside 10mk Transformer				oil		
<p style="text-align: center;">Order ID: A12020893</p>									

Requisitioned by <i>Michael Sanders</i>	Date / Time 2/15/12 08:30	Received by	Date / Time
Requisitioned by	Date / Time	Received by	Date / Time

Method of Shipment	Received by Laboratory by <i>AP</i>
Samples Iced <i>198</i>	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
Samples Preserved	YES <input type="checkbox"/> NO <input type="checkbox"/>

Bidding Purpose

ORIGINAL

**HARVARD**  
760 Pleasant Highway  
Boston, MA 02118  
Tel: 617-495-3333

Site Plan  
PCBs Sampling Location  
Old Transformer

Drawn By: MFC  
3-15-12  
PF-10020  
DWG 1 of 1

JTVCC  
1181 Padock Road  
Smyrna, DE 19977



State of Delaware  
Division of Facilities Management

