

INVITATION FOR BID
BID DOCUMENTS AND SPECIFICATIONS
BID NUMBER # 20030
HAWTHORN WATER TOWER
REHABILITATION

PW# 2016.096

FOR
LAKE COUNTY PUBLIC WORKS DEPARTMENT



BID INFORMATION BY
LAKE COUNTY
PURCHASING DIVISION
18 NORTH COUNTY STREET, NINTH FLOOR
WAUKEGAN, ILLINOIS 60085-4350
(847) 377-2929

PROJECT MANUAL

PROJECT NAME: Hawthorn Water Tower Rehabilitation

PROJECT NUMBER: PW# 2016.096

LAKE COUNTY PUBLIC WORKS DEPARTMENT

LAKE COUNTY, ILLINOIS

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Lake County, Illinois

**INVITATION TO BID
BID NUMBER 20030**

Date: April 23, 2020

Project Name: Hawthorn Water Tower Rehabilitation

Project Description: Project consists of the repair and abrasive blasting and recoating of the exterior, wet interior and dry interior of the 500,000 gallon spheroid elevated tank.

GENERAL REQUIREMENTS: Contractors are to submit sealed bids.

PRE-BID CONFERENCE: April 7, 2020 at 10:00 AM at Project Site, 515 Hawthorn Parkway, Vernon Hills, IL 60061

BID LOCATION: Lake County Public Works
650 W. Winchester Road
Libertyville, IL 60048
847-377-7500

DUE DATE: April 23, 2020 10:00 AM

LAKE COUNTY - INVITATION FOR BIDS: TERMS AND CONDITIONS

1. **AUTHORITY.** This Invitation for Bids is issued pursuant to applicable provisions of the Lake County Purchasing Ordinance.
2. **BID OPENING.** Sealed bids will be received at the Lake County Department of Public Works until the date and time specified at which time they shall be opened in public. Late bids shall be rejected and returned unopened to the sender. Lake County does not prescribe the method by which bids are to be transmitted; therefore, it cannot be held responsible for any delay, regardless of the reason, in transmission of the bids.
3. **BID PREPARATION.** Bids must be submitted on this form and all information and certifications called for must be furnished. Bids submitted in any other manner, or which fail to furnish all information or certificates required, may be summarily rejected. Bids may be modified or withdrawn prior to the time specified for the opening of bids. Bids shall be filled out legibly in ink or typewritten with all erasures, strike overs and corrections initialed in ink by the person signing the bid. The bid shall include the legal name of the bidder, the complete mailing address, and be signed in ink by a person or persons legally authorized to bind the bidder to a contract. Name of person signing should be typed or printed below the signature.
4. **BID ENVELOPES.** Envelopes containing bids must be sealed and addressed to the County of Lake Purchasing Division. The name and address of the bidder and the Invitation Number must be shown in the upper left corner of the envelope.
5. **ERRORS IN BIDS.** Bidders are cautioned to verify their bids before submission. Negligence on the part of the bidder in preparing the bid confers no right for withdrawal or modification of the bid after it has been opened. In case of error in the extension of prices in the bid, the unit prices will govern.
6. **RESERVED RIGHTS.** The County of Lake reserves the right at any time and for any reason to cancel this Invitation for Bids, accept or reject any or all bids or any portion thereof, or to accept an alternate bid. The County reserves the right to waive any immaterial defect in any bid. Unless otherwise specified by the bidder or the County, the County has ninety (90) days to accept. The County may seek clarification from any bidder at any time and failure to respond promptly is cause for rejection.
7. **INCURRED COSTS.** The County will not be liable for any costs incurred by bidders in replying to this Invitation for Bids.
8. **AWARD.** It is the intent of the County to award a contract to the lowest responsive responsible bidder meeting specifications. The County reserves the right to determine the lowest responsible bidder on the basis of an individual item, groups of items, or in any way determined to be in the best interests of the County. Award will be based on the following factors (where applicable): (a) adherence to all conditions and requirements of the bid specifications; (b) price; (c) qualifications of the bidder, including past performance, financial responsibility, general reputation, experience, service capabilities, and facilities; (d) delivery or completion date; (e) product appearance, workmanship, finish, taste, feel, overall quality, and results of product testing; (f) maintenance costs and warranty provisions; and (g) repurchase or residual value.
9. **PRICING.** The price quoted for each item is the full purchase price, including delivery to destination, and includes all transportation and handling charges, premiums on bonds, material or service costs, patent royalties and all other overhead charges of every kind and nature. Unless otherwise specified, prices shall remain firm for the contract period.
10. **DISCOUNTS.** Prices quoted must be net after deducting all trade and quantity discounts. Where cash discounts for prompt payment are offered, the discount period shall begin with the date of receipt of a correct invoice or receipt or final acceptance of goods, whichever is later.
11. **TAXES.** Lake County is not subject to Federal Excise Tax. Per Illinois Compiled Statutes, 35 ILCS 120/2-5, Lake County is exempt from state and local taxes.
12. **SPECIFICATIONS.** Reference to brand names and numbers is descriptive, but not restrictive, unless otherwise specified. Bids on equivalent items will be considered, provided the bidder clearly states exactly what is proposed to be furnished, including complete specifications. Unless the bidder specified otherwise, it is understood the bidder is offering a referenced brand item as specified or is bidding as specified when no brand is referenced, and does not propose to furnish an "equal." The County reserves the right to determine whether a substitute offer is equivalent to and meets the standard of quality indicated by the brand name and number.
13. **SAMPLES.** Samples of items, when called for, must be furnished free of expense and, if not destroyed in the evaluation process, will, upon request, be returned at the bidder's expense. Request for the return of samples must accompany the sample and include UPS Pickup Slip, postage or other acceptable mode of return. Individual samples must be labeled with bidder's name, invitation number, item reference, manufacturer's brand name and number.
14. **INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS.** Bidders shall promptly notify the County of any ambiguity, inconsistency or error which they may discover upon examination of the bidding documents. Interpretations, corrections and changes will be made by addendum. Each bidder shall ascertain prior to submitting a bid that all addenda have been received and acknowledged in the bid.
15. **INDEMNIFICATION.** The Seller shall indemnify and hold harmless the County, its agents, officials, and employees from and against all injuries, losses, claims, suits, costs and expenses which may accrue against the County as a consequence of granting the Contract.
16. **DEFAULT.** Time is of the essence of this contract and if delivery of acceptable items or rendering of services is not completed by the time promised, the County reserves the right, without liability, in addition to its other rights and remedies, to terminate the contract by notice effective when received by Seller, as to stated items not yet shipped or services not yet rendered and to purchase substitute items or services elsewhere and charge the Seller with any or all losses incurred. The County shall be entitled to recover its attorney's fees and expenses in any successful action by the County to enforce this contract.
17. **INSPECTION.** Materials or equipment purchased are subject to inspection and approval at the County's destination. The County reserves the right to reject and refuse acceptance of items which are not in accordance with the instructions, specifications, drawings or data of Seller's warranty (express or implied). Rejected materials or equipment shall be removed by, or at the expense of, the Seller promptly after rejection.
18. **WARRANTY.** Seller warrants that all goods and services furnished hereunder will conform in all respects to the terms of this solicitation, including any drawings, specifications or standards incorporated herein, and that they will be free from latent and patent defects in materials, workmanship and title, and will be free from such defects in design. In addition, Seller warrants that said goods and services are suitable for, and will perform in accordance with, the purposes for which they are purchased, fabricated, manufactured and designed or for such other purposes as are expressly specified in this solicitation. The County may return any nonconforming or defective items to the Seller or require correction or replacement of the item at the time the defect is discovered, all at the Seller's risk and expense. Acceptance shall not relieve the Seller of its responsibility.
19. **REGULATORY COMPLIANCE.** Seller represents and warrants that the goods or services furnished hereunder (including all labels, packages and container for said goods) comply with all applicable standards, rules and regulations in effect under the requirements of all Federal, State and local laws, rules and regulations as applicable, including the Occupational Safety and Health Act as amended, with respect to design, construction, manufacture or use for their intended purpose of said goods or services. Seller shall furnish "Material Safety Data Sheets" in compliance with the Illinois Toxic Substances Disclosure to Employees Act.
20. **EQUAL EMPLOYMENT OPPORTUNITY.** Contractor shall comply with the Illinois Human Rights Act, 775 ILCS 5/1-101 et seq., as amended and any rules and regulations promulgated in accordance therewith, including, but not limited to the Equal Employment Opportunity Clause, Illinois Administrative Code, Title 44, Part 750 (Appendix A), which is incorporated herein by reference. Furthermore, the Contractor shall comply with the Public Works Employment Discrimination Act, 775 ILCS 10/0.01 et seq., as amended.
21. **ROYALTIES AND PATENTS.** Seller shall pay all royalties and license fees. Seller shall defend all suits or claims for infringement of any patent, copyright or trademark rights and shall hold the County harmless from loss on account thereof.
22. **LAW GOVERNING.** This contract shall be governed by and construed according to the laws of the State of Illinois. Jurisdiction and venue shall be found exclusively in the 19th Judicial Circuit Court, State of Illinois.

INSTRUCTIONS TO BIDDERS

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ARTICLE 1 – DEFINED TERMS

- 1.01 Terms used in these Instructions to Bidders will have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below which are applicable to both the singular and plural thereof:
- A. Bidder—The individual or entity who submits a Bid directly to OWNER.
 - B. Issuing Office—The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.
 - C. Successful Bidder—The lowest responsible Bidder submitting a responsive Bid to whom OWNER (on the basis of OWNER's evaluation as hereinafter provided) makes an award.
 - D. Agency—Illinois Environmental Protection Agency

ARTICLE 2 - COPIES OF BIDDING DOCUMENTS

- 2.01 Bid documents including plans and specifications for this project are available to be downloaded at the following website: <http://lakecountypurchasingportal.com>. Click on the appropriate bid number to register. After registering, bidders have access to all bid documents including specifications, plans and related files.
- 2.02 Complete sets of Bidding Documents must be used in preparing Bids; neither OWNER nor ENGINEER assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.03 OWNER and ENGINEER in making copies of the Bidding Documents available on the above terms do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

ARTICLE 3 – QUALIFICATIONS OF BIDDERS

- 3.01 To demonstrate Bidder's qualifications to perform the Work, within five days of OWNER's request Bidder shall submit written evidence such as financial data, previous experience, present commitments, and such other data as may be called for below.
- A. The number of years engaged in the contracting business under the present firm name, and the name of the state where incorporated.
 - B. A list of the property and equipment available to the Bidder to evaluate if the Bidder can complete the Work in accordance with the Bidding Documents.
 - C. A financial statement of the Bidder showing that the Bidder has the financial resources to meet all obligations incidental to the Work.
 - D. The Bidder's performance record giving the description, location and telephone numbers of similar projects constructed in a satisfactory manner by the Bidder.
 - E. A list of projects presently under contract, the approximate contract amount, and the percentage of completion for each.
 - F. A list of contracts which resulted in lawsuits.
 - G. A list of contracts defaulted.

- H. A statement of the Bidder indicating whether or not the Bidder has ever filed bankruptcy while performing Work of like nature or magnitude.
- I. A list of officers of the firm who, while in the employ of the firm or the employ of previous firms, were associated with contracts which resulted in lawsuits, contracts defaulted or filed for bankruptcy.
- J. The technical experience of personnel guaranteed to be employed in the responsible charge of the Work stating whether the personnel have or have not performed satisfactorily on other contracts of like nature and magnitude or comparable difficulty at similar rate of progress.
- K. Such additional information as will assist OWNER in determining whether the Bidder is adequately prepared to fulfill the contract.

ARTICLE 4 – EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA, AND SITE

4.01 Subsurface and Physical Conditions

A. The Supplementary Conditions identify:

- 1. Those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Bidding Documents.
- 2. Those drawings of physical conditions in or relating to existing surface and subsurface structures at or contiguous to the Site (except Underground Facilities) that ENGINEER has used in preparing the Bidding Documents.

B. Copies of reports and drawings referenced in paragraph 5.03.A will be made available by OWNER to any Bidder on request. Those reports and drawings are not part of the Contract Document, but the "technical data" contained therein upon which Bidder is entitled to rely as provided in paragraph 5.03.B of the General Conditions has been identified and established in paragraph 5.03 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any "technical data" or any other data, interpretations, opinions or information contained in such reports or shown or indicated in such drawings.

4.02 Underground Facilities

A. Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site is based upon information and data furnished to OWNER and ENGINEER by owners of such Underground Facilities, including OWNER, or others.

4.03 Hazardous Environmental Condition

A. The Supplementary Conditions identify those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that ENGINEER has used in preparing the Bidding Documents.

B. Copies of reports and drawings referenced in paragraph 5.03.A will be made available by OWNER to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which Bidder is entitled to rely as provided in paragraph 5.03.B of the General Conditions has been identified and established in paragraph 5.03 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any "technical data" or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

- 4.04 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated conditions appear in paragraphs 5.03 and 5.04 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work appear in paragraph 5.06 of the General Conditions.
- 4.05 On request, OWNER will provide Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies as Bidder deems necessary for submission of a Bid. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.
- 4.06 Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work, if any, that is to be performed at the Site by OWNER or others (such as utilities and other prime contractors) that related to the Work for which a Bid is to be submitted. On request, OWNER will provide to each Bidder for examination access to or copies of Contract Documents (other than portions thereof related to price) for such other work.
- 4.07 It is the responsibility of each Bidder before submitting a Bid to:
- A. Examine and carefully study the Bidding Documents, including any Addenda and the other related data identified in the Bidding Documents;
 - B. Visit the Site and become familiar with and satisfy Bidder as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
 - C. Become familiar with and satisfy Bidder as to all federal, state, and local Laws and Regulations that may affect cost, progress, or performance of the Work;
 - D. Carefully study all reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 5.03.A of the General Conditions, and carefully study all reports and drawings if a Hazardous Environmental Condition, if any, at the Site which have been identified in the Supplementary Conditions as provided in paragraph 5.06 of the General Conditions.
 - E. Obtain and carefully study (or assume responsibility for doing so) all additional or supplemental examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Document, and safety precautions and programs incident thereto;
 - F. Agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times and in accordance with the other terms and conditions of the Bidding Documents;
 - G. Become aware of the general nature of the work to be performed by OWNER and others at the Site that relates to the Work as indicated in the Bidding Documents;
 - H. Correlate the information known to Bidder, information and observations obtained from visits to the site, reports and drawings identified in the Bidding Documents, and all additional

examinations, investigations, explorations, tests, studies, and data with the Bidding Documents;

- I. Promptly give ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by ENGINEER is acceptable to Bidder; and
- J. Determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

4.08 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying any specific means, methods, techniques, sequences, and procedures of construction that may be shown or indicated or expressly required by the Bidding Documents, that Bidder has given ENGINEER written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents and the written resolutions thereof by ENGINEER are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

ARTICLE 5 – PRE-BID CONFERENCE

5.01 A non-mandatory pre-bid conference will be held as noted in the Invitation to Bid at the Project Site, 515 Hawthorn Parkway, Vernon Hills, Illinois unless subsequent notice is given to plan-holders.

ARTICLE 6 – SITE AND OTHER AREAS

6.01 The Site is identified in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by OWNER unless otherwise provided in the Bidding Documents.

ARTICLE 7 – INTERPRETATIONS AND ADDENDA

7.01 Should the bidder require additional information about this bid, please submit questions on our website at <http://lakecountypurchasingportal.com> by selecting the bid number and addendum link. Questions may also be submitted via email to purchasing@lakecountyil.gov. All questions shall be submitted no less than seven (7) days prior to the bid opening date.

7.02 ANY and ALL changes to these specifications are valid only if included in an addendum issued by Lake County Purchasing. No interpretation of the meaning of the plans, specifications or other contract documents will be made orally. Failure of any bidder to receive any such addendum or interpretation shall not relieve the bidder from obligation under this bid as submitted. All addenda as issued shall become part of the bid documents. Failure to request an interpretation constitutes a waiver to later claim that ambiguities or misunderstandings caused a bidder to improperly submit a bid.

7.03 Addenda may be issued to clarify, correct, or change the Bidding Documents as deemed advisable by OWNER or ENGINEER.

ARTICLE 8 – BID SECURITY

- 8.01 A bid must be accompanied by a Bid security in the amount of 10% of Bidder's maximum bid price and in the form of a certified or bank check or a Bid Bond [on the form attached] issued by a surety meeting the requirements of paragraphs 6.01 and 6.02 of the General Conditions.
- 8.02 The Bid security shall guarantee the Successful Bidder will execute the Agreement, furnish the required contract security, and meet the other conditions of the Notice of Award. If the Successful Bidder fails to execute and deliver the Agreement and furnish the required contract security within 10 days after the Notice of Award, OWNER may annul the Notice of Award and the Bid security of that Bidder will be forfeited.

ARTICLE 9 – CONTRACT TIMES

- 9.01 The number of days within which, or the dates by which, the Work is to be (a) Substantially Completed and (b) also completed and ready for final payment are set forth in the Agreement.

ARTICLE 10 – LIQUIDATED DAMAGES

- 10.01 Provisions for liquidated damages, if any, are set forth in the Agreement.

ARTICLE 11 – SUBSTITUTE AND "OR-EQUAL" ITEMS

- 11.01 Materials and equipment described in the Contract Documents by using the name of a proprietary item or name of a particular supplier is intended to establish type, function, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, a substitute or "or-equal" item of material or equipment may be furnished or used by CONTRACTOR if acceptable to ENGINEER. Application for acceptance of substitutes and "or-equal" items will not be considered by ENGINEER until after the Effective Date of Agreement. The procedure for submission of any such application by CONTRACTOR and consideration by ENGINEER is set forth in Paragraph 7.04 and 7.05 of the General Conditions and may be supplemented in the Supplementary Conditions or General Requirements.

ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- 12.01 If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, individuals, or entities to be submitted to OWNER in advance of a specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within five days after the Bid opening, submit to OWNER a list of all such Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, individual, or entity if requested by OWNER. If OWNER or ENGINEER, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, OWNER may, before the Notice of Award is given, request apparent Successful Bidder to submit a substitute, without an increase in the Bid.

ARTICLE 13 – PREPARATION OF BID

- 13.01 Only the Bid form included with the Bidding Documents shall be used to submit a Bid. Additional copies may be obtained from the issuing office.
- 13.02 All blanks on the Bid form shall be completed by printing in ink or by typewriter and the Bid signed. A Bid price shall be indicated for each Bid Item listed therein, or the words "No Bid," "No Change," or "Not Applicable" entered.
- 13.03 A Bid by a corporation shall be executed in the corporate name by the president or a vice-president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown below the signature.
- 13.04 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be shown below the signature.
- 13.05 A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown below the signature.
- 13.06 A Bid by an individual shall show the Bidder's name and official address.
- 13.07 A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid form. The official address of the joint venture must be shown below the signature.
- 13.08 All names shall be typed or printed in ink below the signatures.
- 13.09 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid form.
- 13.10 The address and telephone number for communications regarding the Bid shall be shown.
- 13.11 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state of Illinois or covenant to obtain such qualification prior to award of the Contract. Bidder's state contractor license number for the state of the Project, if any, shall also be shown on the Bid form.
- 13.12 Bids which are signed by an attorney-in-fact for individuals, firms, partnerships or joint ventures shall have attached thereto a power-of-attorney evidencing authority to sign the Bid.
- 13.13 It is the responsibility of the Bidder to submit a neat, accurate, and complete Bid.
- 13.14 The Bid shall contain a Contractor Qualification Form which provides experience information that meets the following criteria. Failure to meet these experience requirements or failure to provide the required information at bid time will result in bid rejection. Failure to provide crews or Quality Control Inspectors with the requisite experience will result in termination of the services of the Contractor for cause by the Owner in accordance with Section 14.06 of the General Conditions.

- 13.15 Any and all changes to the specifications and terms and conditions of this Bid are valid only if they are included by addendum issued by Lake County Purchasing. Bidders shall acknowledge addenda by signing the enclosed Addendum Acknowledgement form. It is the vendor's responsibility to check for addendums, posted on the website at <http://lakecountypurchasingportal.com> prior to the submittal due date. No notification will be sent when addendums are posted unless there is an addendum issued within three business days of the submittal due date.

ARTICLE 14 – SUBMITTAL OF BID

- 14.01 Each prospective Bidder is furnished one copy of the Bidding Documents with one copy each of the Bid form, and, if required, the Bid Bond.
- 14.02 A Bid shall be submitted no later than the date and time prescribed and at the place indicated in the advertisement or invitation to Bid and shall be enclosed in an opaque sealed envelope plainly marked with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate envelope plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid shall be addressed to:

PURCHASING AGENT
LAKE COUNTY PUBLIC WORKS
650 W. WINCHESTER ROAD
LIBERTYVILLE, IL 60048

ARTICLE 15 – MODIFICATION AND WITHDRAWAL OF BID

- 15.01 A Bid may be modified or withdrawn by an appropriate document duly executed in the manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids.
- 15.02 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with OWNER and promptly thereafter demonstrates to the reasonable satisfaction of OWNER that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its bid, and the Bid security will be returned, if written authorization to withdraw the bid is provided by the Lake County Purchasing agent.

ARTICLE 16 – OPENING OF BIDS

- 16.01 Bids will be opened at the time and place indicated in the advertisement or invitation to Bid and read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 17 – BASIS OF BID; EVALUATION OF BIDS

- 17.01 In evaluating Bids, OWNER will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.
- 17.02 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.
- 17.03 Unit Price
- A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the Bid schedule
 - B. The total of all estimated prices will be determined as the sum of the products of the estimated quantity of each item and the unit price Bid for the item. The final quantities and Contract price will be determined in accordance with paragraph 13.03 of the General Conditions.
 - C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Where words and figures are used in the Bid Form, any discrepancies between words and figures will be resolved in favor of the words.
- 17.04 The Bid price shall include such amounts as the Bidder deems proper for overhead and profit on account of cash allowances, if any, named in the Contract Documents as provided in paragraph 13.02 of the General Conditions.
- 17.05 OWNER shall have the right to reject any unit prices for additions to or deductions from the Work as given in the Bid, if the prices are considered excessive or unreasonable, or to accept any unit prices which may be considered fair and reasonable.
- 17.06 OWNER shall have the right to accept alternates in any order or combination or to not accept any, unless specifically otherwise provided. Acceptance of alternates will not be used to determine low bidder.
- 17.07 A Bid which does not contain a unit price which is both adequate and reasonable for each item named in the Bid may be considered irregular and subject to rejection.
- 17.08 OWNER may consider the qualifications and experience of Bidders, and the qualifications and experience of Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the Work as to which the identity of Subcontractors, Suppliers, and other persons and organizations must be submitted as provided in the Supplementary Conditions. OWNER may also consider the operating costs, maintenance requirements, performance data and guarantees of major items of materials and equipment proposed for incorporation in the Work when such data is required to be submitted prior to the Notice of Award.
- 17.09 OWNER may conduct such investigations as OWNER deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities to perform the Work in accordance with the Contract Documents.

17.10 OWNER also reserves the right to waive all informalities not involving price, time, or changes in the Work.

ARTICLE 18 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE

18.01 All Bids will remain subject to acceptance for the period of time stated in the Bid form, but OWNER may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 19 – AWARD OF CONTRACT

19.01 OWNER reserves the right to reject any or all Bids, including without limitation, nonconforming, non-responsive, unbalanced, or conditional Bids. OWNER further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to be non-responsible. OWNER may also reject the Bid of any Bidder if OWNER believes that it would not be in the best interest of the Project to make an award to that Bidder.

19.02 If the contract is to be awarded, it will be awarded to the lowest responsive, responsible Bidder(s).

19.03 If the contract is to be awarded, OWNER will give Successful Bidder notification within a reasonable time.

ARTICLE 20 – CONTRACT SECURITY AND INSURANCE

20.01 The successful Contractor shall deliver within ten (10) calendar days after the date of the Owner's Notice of Award all performance and payment bonds and insurance along with the signed counterparts of the Agreement. Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth OWNER's requirements as to performance and payment Bonds and insurance. These requirements include but are not necessarily limited to:

- A performance bond satisfactory to the County, executed by a surety company authorized to do business in the State of Illinois, in an amount equal to 100 percent (100%) of the contract price as security for the faithful performance of the contract; and
- A payment bond satisfactory to the County, executed by a surety company authorized to do business in the State of Illinois, for the protection of all persons supplying labor and materials to the Contractor or Subcontractors for the performance of work provided for in the contract, in an amount equal to 100 percent (100%) of the contract price; and
- A Certificate of Insurance with all required endorsements.

ARTICLE 21 – SIGNING OF AGREEMENT

21.01 When OWNER gives a Notice of Award to the Successful Bidder, it shall be accompanied by the required number of unsigned counterparts of the Agreement with the other Contract Documents which are identified in the Agreement as attached thereto. Within 10 days thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to OWNER. Within ten days thereafter, OWNER shall deliver one fully signed counterpart to Successful Bidder with a complete set of Drawings with appropriate identification.

ARTICLE 22 – WAGE RATES

- 22.01 This project is subject to the Wage of Employees on Public Works (Prevailing Wage) Act (Illinois Revised Statutes, Chapter 48, Section 39s, et. seq.). Not less than the minimum wage rates as established by OWNER or State of Illinois Department of Labor shall be paid.
- 22.02 The wage rates are on file at the office of OWNER and incorporated in the Contract Documents.
- 22.03 The wage rates will be incorporated into and made a part of the Contract Documents when the Contract Documents are prepared for execution.

ARTICLE 23 – TAX

- 23.01 OWNER is exempt from the Illinois State and municipal or county Retailers Occupation Tax, Service Occupation Tax, Use Tax, Service Use Tax, as described in Illinois Revised Statute Chapter 120. Bid prices shall not include the cost of such taxes.
- 23.02 Federal excise tax does not apply to materials or services purchased by OWNER. Should the federal excise tax be applicable to this transaction, OWNER will furnish a federal exemption certificate. The Bid prices quoted herein by Bidder shall include all other direct or indirect federal, state, and local taxes which apply.
- 23.03 CONTRACTOR(S) shall forward this information to their Suppliers in order that the sale of such materials and equipment be properly recorded as a tax-exempt sale.

WAGE RATE REQUIREMENTS

1.01 General

- A. CONTRACTOR and Subcontractors shall pay wages not less than the prevailing hourly wage rate for each classification of employee engaged on the Work as determined by the State of Illinois Department of Labor. In case of conflict, the wages paid by CONTRACTOR shall be not less than the higher of the prevailing wage determination.
- B. CONTRACTOR shall comply with the provisions of Wages of Employees on Public Works (Prevailing Wage) Act (Illinois Revised Statutes, Chapter 48, Section 39S-1 through 39S-12 and 820 ILCS 130/5).
- C. The prevailing wage law does not prohibit payment of more than the prevailing rate of wages nor does it limit the hours of Work which may be performed by any employee in any particular period of time.
- D. A copy of the wage determination shall be posted by CONTRACTOR in a prominent place at the site of the Work where it can be easily seen by the employees.
- E. The Contractor shall submit monthly, in person, by mail, or electronically a certified payroll for all laborers, mechanics, and other workers employed by them and their subcontractors in connection with this project. The records shall include the name, address, telephone number when available, social security number, classification or classifications, and occupation of all laborers, workers and mechanics.

The records shall also show the actual hourly wages paid in each pay period to each employee, and the number of hours worked each day and in each work week by each employee. Each contractor's payroll records shall include the starting and ending times of work each day while participating on this project.

The certified payroll(s) shall be accompanied by a statement signed by the contractor or subcontractor which avers that: (i) such records are true and accurate; (ii) the hourly rate paid to each worker is not less than the general prevailing rate of hourly wages required by the IDOL Prevailing Wage Act 820 ILCS 130 and (iii) the contractor or subcontractor is aware that filing a certified payroll that he or she knows to be false is a Class B misdemeanor.

2.01 WAGE DETERMINATIONS

- A. The following wage rate schedule(s) are the prevailing rate(s) of hourly wage applicable to this Contract.
- B. If the Department of Labor revises the prevailing rate of hourly wages to be paid by the public body, the revised rate as provided by the public body shall apply to this Contract.

Note: Current wage rates can be found at:

<http://www.illinois.gov/idol/Laws-Rules/CONMED/Pages/Rates.aspx>



Addendum Acknowledgement

The undersigned acknowledges receipt of the following addendum(s):

ADDENDUM #	SIGNATURE

I have examined and carefully prepared the submittal documentation in detail before submitting my response to Lake County.

Bid Number: _____

Company Name: _____

Authorized Representative: _____
Signature

Authorized Representative: _____
Print

Date: _____

It is the vendor's responsibility to check for addendums, posted on the website at <http://lakecountypurchasingportal.com> prior to the submittal due date. No notification will be sent when addendums are posted unless there is an addendum within three business days of the submittal due date.

If the submittal has already been received by Lake County, vendors are required to acknowledge receipt of addendum via email to purchasing@lakecountyil.gov prior to the due date.

Submittals that do not acknowledge addendums may be rejected.

All responses are to be submitted in a sealed envelope. Envelopes are to be clearly marked with required submittal information.

BID FORM

BID NUMBER: 20030

PROJECT NAME: Hawthorn Water Tower Rehabilitation

Project Number: PW#2016.096

for the Lake County Public Works Department
Lake County, Illinois

THIS BID IS SUBMITTED TO:

Lake County Public Works Department
650 West Winchester Road
Libertyville, IL 60048

(hereinafter called OWNER)

- 1) The undersigned Bidder proposes and agrees, if this bid is accepted, to enter into an Agreement with OWNER in the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents for the Bid Price and within the Bid Times indicated in this Bid and in accordance with the other terms and conditions of the Contract Documents.
- 2) Bidder accepts all of the terms and conditions of the Official Notice to Bidders and Instructions to Bidders, including without limitation those dealing with the disposition of the Bid Security. This Bid will remain open for the period of time specified in the Official Notice to Bidders after the day of Bid opening. Bidder will sign and deliver the required number of counterparts of the Agreement with the Bonds, evidence of insurance coverage, and other documents required by the Bidding Requirements within 10 days after the date of OWNER's Notice of Award.
- 3) In submitting this Bid, Bidder represents, as more fully set forth in the Agreement, that:
 - a) Bidder has examined and carefully studied all the Bidding Documents and Addenda, receipt of all which is acknowledged.
 - b) Bidder has visited the site and become familiar with and satisfied itself as to the general, local, and site conditions that may affect cost, progress, performance and furnishing of the Work;
 - c) Bidder is familiar with and has satisfied itself as to all federal, state, and local laws and regulations that may affect cost, progress, performance, and finishing of the Work.

- d) Bidder acknowledges that OWNER and ENGINEER do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Bidding Documents with respect to Underground Facilities at or contiguous to the site. Bidder has obtained and carefully studied (or assumes responsibility for having done so) all such examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance or furnishing of the Work or which relates to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder and safety precautions and programs incident thereto. Bidder does not consider that any additional examinations, investigations, explorations, tests, studies or data are necessary for the determination of this Bid for performance and furnishing of the Work in accordance with the time, price, and other items and conditions of the Contract Documents.
 - e) Bidder is aware of the general nature of the Work to be performed by OWNER and others at the site that relates to Work for which the Bid is submitted as indicated in the Contract Documents.
 - f) Bidder has correlated the information known to Bidder from information and observation obtained from visits to the site, reports, and drawings identified in the Contract Documents and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.
 - g) Bidder has given ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to Bidder, and the Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which the Bid is submitted.
 - h) This Bid is genuine and not made in the interest or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association, or organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any person, firm or a corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over OWNER.
 - i) Bidder certifies that Bidder is not barred from bidding on this Contract as a result of a conviction for either bid-rigging or bid-rotating under the provisions contained in chapter 38, Paragraphs 33E-3 and 33E-4 of the Illinois Revised Statutes.
- 4) Bidder will complete the work in accordance with the Contract Documents for the following unit price(s)

BID # 20030

BID FORM

4/23/2020

**HAWTHORN WATER TOWER REHABILITATION
LCPW Project #2016.096**

BASE BID

ITEM	DESCRIPTION	Unit	Quantity	Unit Price		Total Price
1	Exterior Tank Repaint with Full Containment	LS	1		\$	
2	Wet Interior Repaint	LS	1		\$	
3	Interior Wet Roof Hatch Replacement	LS	1		\$	
4	Frost Free Roof Vent	LS	1		\$	
5	Install Roof Railing	LS	1		\$	
6	Concrete Foundation Crack Repair	LS	1		\$	
7	Concrete Foundation Coating Application	LS	1		\$	
8	Overflow Flap Gate	LS	1		\$	
9	Install Handholds	LS	1		\$	
10	Seam Seal Roof Plate Lap Joints	LS	1		\$	
11	Replace Expansion Joint	LS	1		\$	
12	Cathodic Protection System Upgrade	EA	1		\$	
13	Weld Cathodic Covers	EA	1		\$	
14	Install Mud Valve	EA	1		\$	
15	Full Pipe Insulation and Jacket	EA	1		\$	
16	Interior Dry Touch-Up and Paint	EA	1		\$	
17	Pit Piping Repaint	LS	1		\$	
18	Tank Lettering and Logo Allowance	LS	1		\$	
TOTAL BASE BID AMOUNT ITEMS 1 TO 18						\$

POSSIBLE ADDITIONAL WORK ITEM

ITEM	DESCRIPTION	Unit	Quantity	Unit Price		Total Price
1	Tank Mixer and Appurtenances	LS	1		\$	
Total Possible Additional Work Item						\$

NOTES – APPLICABLE TO ALL SECTIONS

Note 1) LOWEST BID DETERMINED ON BASE BID.

Note 2) SEE SPECIAL PROVISIONS FOR WORK, MATERIALS, ETC. INCLUDED IN EACH BID ITEM.

Note 3) THE OWNER RESERVES THE RIGHT TO REMOVE ANY PAY ITEM FROM THE CONTRACT AWARD FOLLOWING DETERMINATION OF THE LOW BIDDER BASED UPON THE BASE BID.

Note 4) TO BE CONSIDERED RESPONSIVE, BIDDER MUST SUPPLY PRICING INFORMATION FOR EVERY PAY ITEM OF THIS CONTRACT.

Summary

Total Base Bid \$ _____

TOTAL BID AMOUNT FOR THE DETERMINATION OF THE LOWEST BID

(written) _____

(\$ _____ (figures))

- 5) Bidder agrees that the work will be substantially completed and ready for final payment in accordance with Paragraph 15.06B1 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 6) Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the work within the times specified in the Agreement.
- 7) The following document is attached and made a condition of this Bid:

Required Bid Security in the form of _____
(Certified Check or Bid Bond)

in the amount of _____
(Dollars or Percent)

8) Communications concerning this Bid shall be addressed to the Bidder as indicated below:

Name: _____

Address: _____

State: _____

Telephone No.: _____

8) The terms used in this Bid are defined in the General Conditions of the Construction Contract or the Instructions to Bidders.

I hereby certify that as Bidder I/we have examined and carefully prepared this Bid from the Bidding Documents and have checked the Bidding Documents in detail before submitting this Bid, and that all statements herein are made on behalf of:

An Individual: By (Written) _____
(Typed) (Individual's Name)

doing business as _____

Business address: _____

Phone No.: _____

A Partnership: By _____ (Firm Name)

By (Written) _____

(Typed) (General Partner)

Business Address: _____

Phone No.: _____

A Corporation: By _____ (Corporation Name)
_____ (State of Incorporation)

By (Written) _____
(Typed) _____ (Name of Person Authorized to Sign)
(Title) _____ (Corporate Seal)

Attest (Written) _____
(Typed) _____ (Secretary)

Business address: _____

Phone No.: _____

A Joint Venture: By (Written) _____
(Typed) _____ (Name)
_____ (Address)

By (Written) _____
(Typed) _____ (Name)
_____ (Address)

Phone number and address for receipt of official communications:

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above).

Sworn and subscribed to before me this

_____ day of _____, 20_____ .

Notary or other officer authorized to administer oaths

My commission expires: _____

Bidders shall not add any conditions or qualifying statements to this Bid as otherwise the Bid may be declared irregular as being not responsive to the advertisement. BIDDERS SHALL USE THIS BID FORM IN SUBMITTING THEIR BIDS.



Purchasing Division
18 North County Street - 9th Floor
Waukegan, Illinois 60085-4350
Phone 847-377-2929

CONTRACTOR QUALIFICATION FORM

Please return this form with all Bid Documents by the date and time shown on the Invitation to Bid.

If you have submitted one of these forms within the last twelve (12) calendar months, complete Pages 1 and 4 only. Review Pages 2 and 3 and make any changes or corrections from your previous submittal.

Pursuant to applicable sections of the Lake County Purchasing Ordinance, the Lake County Purchasing Division is required to determine whether or not a bidder is responsible. A responsible bidder is defined as "an entity (business) who has the capability in all respects to perform fully the contract requirements, and the tenacity, perseverance, experience, integrity, reliability, capacity, facilities, equipment, and credit which will assure good faith performance." Information furnished by a bidder will be reviewed by the Lake County Purchasing Division, Public Works department, and the project architect /engineer. Said information shall not be otherwise disclosed without prior written consent by the bidder. Failure to submit this form by the date and time specified shall be cause for rejection of your bid.

Contractor Name: _____

Project Name: _____

1. For the current proposed project, list work to be performed by your own forces:

2. List Proposed Major Subcontractors for this Project:

Name & Address	Trade	Amount
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

3. Business Organization:

 Sole Proprietor: An individual. whose signature is a fixed to this bid.

 Partnership: State full names, titles and addresses of all responsible principals and/or partners:

 Corporation: State of incorporation: _____

How long in present business: _____

4. Number of personnel in organization: Administrative _____

Engineering _____ Office _____

Shop _____ Field _____

5. Bank Reference: _____

Address: _____

Contact Person: _____

6. Bonding Company: _____

Agency Name: _____

Agency Address: _____

Contact Person: _____

7. Insurance Company:

Agency Name: _____

Agency Address: _____

Contact Person: _____

8. Trade References (List Four):

Name: _____ Name: _____

Address: _____ Address: _____

Contact Person: _____ Contact Person: _____

Telephone #: _____ Telephone #: _____

Name: _____

Name: _____

Address: _____

Address: _____

Contact Person: _____

Contact Person: _____

Telephone #: _____

Telephone #: _____

9. A. Have you within the last five years failed to complete a contract?

Yes _____ No _____

B. Are there any judgements, claims or suits pending or outstanding against you? Yes _____ No _____

If answer to either question is Yes, submit details on a separate sheet.

C. List all claims that have been filed by or against your firm due to construction contracts in the last five years, including arbitration:

10. Financial Statement:

Current Assets	\$ _____	
Fixed Assets (Depreciated)	\$ _____	
Other Assets	\$ _____	
Total Assets		\$ _____
Current Liabilities:	\$ _____	
Long Term Liabilities	\$ _____	
Total Liabilities		\$ _____
Net Worth		\$ _____

Date of Latest Balance Sheet: _____

Accounting Firm: _____

(Lake County reserves the right to request a copy of financial statement.)

11. Similar Contracts Completed During Last Five Years:

Year	Name of Project	Architect/Engineer	Contract Amount
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

12. Average Annual Billing for Last Five Years: \$ _____

13. Total Work in Progress and Under Contract: \$ _____

14. List All Major Work Under Contract:

<u>% Completed</u>	<u>Name of Project</u>	<u>Architect/Engineer</u>	<u>Contract Amount</u>

15. List Minority and Women Owned Sub-Contractor's Participation in this project:

<u>Name of Contractor/Supplier</u>	<u>Work to be Performed</u>	<u>\$ Amount</u>	<u>Indicate MBE, WBE, SBE, DBE</u>

16. List the name and construction experience of the proposed superintendent(s) for this project:

The undersigned hereby certifies that answers to the foregoing questions and all statements therein contained are true and correct. Surety, bank, subcontractor, supplier, or any other persons, firms or corporations with whom we have done business, or who have extended any credit to us are hereby authorized to furnish you with any information you may request concerning our organization including, but not limited to, information concerning performance on previous work or credit standing with any of them. We hereby release any and all such parties from any legal responsibility whatsoever of having furnished such information to you.

Name of Organization: _____

By: _____

Title: _____

Date: _____



VENDOR DISCLOSURE STATEMENT

Vendor Name:			
Address:			
Contact Person:		Contact Phone #:	
Bid/RFP/SOI/Contract/Renewal:			

Vendors wishing to contract with Lake County for goods and services in an amount greater than \$30,000 shall submit this form in advance of award. This disclosure statement is not required for utility companies regulated by the Illinois Commerce Commission or local units of government. Vendors shall disclose:

- A familial relationship between a Lake County elected official, department director, deputy director and manager and owners, principals, executives, officers, account managers or other similar managerial positions of the vendor's company. Familial relationship is defined as a spouse (including civil partner), child, stepchild, parent, stepparent, grandparent, in-laws (including parent, grandparent, sibling, or child), relatives and non-relatives living in the same residence, and offspring born to any aforementioned person.
- All political campaign contributions made by the vendor or an owner, principal, executive, officer, account manager, or other similar managerial position of the vendor to any county board member, county board chair, or countywide elected official within the last five years.

If there is nothing to report in a section, please state none in the appropriate space.

FAMILIAL RELATIONSHIPS

List names and departments/agencies of Lake County employees or public officials with whom owners, principals, or officers of the vendor's company have a familial relationship and the nature of the relationship. Attach additional pages as necessary. (Provide all names or state none in the space below. Do not leave blank.)

Name and Department/Agency of Lake County Employee/Public Official	Familial Relationship

CAMPAIGN CONTRIBUTIONS

List campaign contributions that have been made within the last five years that exceed \$150 annually. Attach additional pages as necessary. (Provide all names or state none in the space below. Do not leave blank.)

Recipient	Donor	Description (e.g., cash, type of item, in-kind service, etc.)	Amount/Value	Date Made

Continuing disclosure is required if information changes. This Vendor Disclosure Statement form is available at www.lakecountyil.gov.

The full text of the County's Ethics and Procurement policies and ordinances are available at www.lakecountyil.gov.

I hereby acknowledge that the information above is accurate and complete, that I am an authorized signer on behalf of the vendor, that I have read and understand these disclosure requirements, and that I agree to update this information if there are any related changes by submitting a new Vendor Disclosure Statement.

Authorized Signature:		Title:	
Printed Name:		Date:	

Vendors must insert "x" in the following box indicating exception and provide a brief narrative for exception.



RESPONSIBLE BIDDER AFFIDAVIT

Vendor Name:		Federal Employer Tax Identification #:	
Address:			
Contact Person:		Contact Phone #:	

- That the bidder agrees to and shall comply with the Equal Opportunity Employer provisions of Section 2000e of Chapter 21, Title 42 of the United States Code and Federal Executive Order Number 11246, as amended, by Executive Order 11375, and has and shall comply with the Chapter 33 (Purchasing) of Title III of the Lake County Code of Ordinances, be amended to modify the definition of "Responsible Bidder or Offeror".
- That bidder has Certificates of insurance in accordance with general terms and condition of the invitation for bid.
- That bidder hereby certifies that it shall comply with the provisions of the Illinois Prevailing Wage Act (820 ILCS 130/0.01 *et seq.*, as amended). All contractors and sub-contractors are required to turn in certified payrolls as specified in Illinois Public Act 94-0515, and follow all provisions of the Employee Classification Act, 820 ILCS 185/1 *et seq.*
- That the bidder hereby certifies: [check all that apply]

_____ bidder has not received any notices of violations of the Illinois Prevailing Wage Act (820 ILCS 130/0.01 *et seq.*); **or**

_____ in the event any such notice has been received by bidder, a copy of any such notice is attached hereto; **or**

_____ in the event that bidder has received such a notice, any documentation demonstrating the resolution of any such notice is attached hereto (attach additional pages to explain how the matter has been resolved)

- All bidders must provide three (3) projects as detailed on the invitation for bid reference form.
- Disclosure of the name and address of each subcontractor from whom the contractor has accepted a bid and/or intends to hire on any part of the project prior to the subcontractor commencing work on the project.
- The bidder and all bidder's sub-contractors must participate in active apprenticeship and training programs approved and registered with the U.S. Department of Labor's Office of Apprenticeship for each of the trades of work contemplated under the awarded contract.

I hereby acknowledge that the information above is accurate and complete, that I am an authorized signer on behalf of the vendor, that I have read and understand these requirements, and that I agree to update this information if there are any related changes by submitting a new Responsible Bidder Affidavit.

Authorized Signature:		Title:	
Printed Name:		Date:	

Vendors must insert "x" in the following box indicating exception and provide a brief narrative for exception.

BID BOND

Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

BIDDER (*Name and Address*):

SURETY (*Name, and Address of Principal Place of Business*):

OWNER (*Name and Address*):

BID

Bid Due Date:

Description (*Project Name— Include Location*):

BOND

Bond Number:

Date:

Penal sum

\$

(Words)

(Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER

SURETY

(Seal)

(Seal)

Bidder's Name and Corporate Seal

Surety's Name and Corporate Seal

By:

Signature

By:

Signature (Attach Power of Attorney)

Print Name

Print Name

Title

Title

Attest:

Signature

Attest:

Signature

Title

Title

Note: Addresses are to be used for giving any required notice.

Provide execution by any additional parties, such as joint venturers, if necessary.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation shall be null and void if:
 - 3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
 - 3.2 All Bids are rejected by Owner, or
 - 3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

AGREEMENT

THIS AGREEMENT is by and between Lake County Public Works Department

(hereinafter called OWNER) and _____
(hereinafter called CONTRACTOR).

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

ARTICLE 1 – WORK

- 1.01 CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:
Repair and abrasive blasting and recoating of the exterior, wet interior and dry interior of the 500,000 gallon spheroid elevated tank.

ARTICLE 2 – THE PROJECT

- 2.01 The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

Project Name: Hawthorn Water Tower Rehabilitation

ARTICLE 3 – ENGINEER

- 3.01 The ENGINEER for this project is Lake County Public Works. The Engineer's Consultant shall be any licensed professional architect or engineer, or working under the supervision of a licensed professional architect or engineer, who has been designated as an Engineer's Consultant.

ARTICLE 4 – CONTRACT TIMES

- 4.01 Time of the Essence
- A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

- 4.02 Days to Achieve Substantial Completion and payment.
- A. The Work will be substantially completed within 75 (seventy-five) days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions within 105 (one hundred five) days after the date when the Contract Times commence to run.
- 4.03 Liquidated Damages
- A. OWNER and CONTRACTOR recognize that time is of the essence of this Agreement and the OWNER will suffer financial consequences if the Project is not completed within the time specified in Paragraph 4.02.A. above, plus any extensions thereof allowed in accordance with Article 11 of the General Conditions. They also recognize the delays, expense and difficulties involved in proving in a legal or arbitration proceeding the actual loss (including special, indirect, consequential, incidental and any other losses or damages) suffered by OWNER if the Project is not completed on time. Accordingly, instead of requiring any such proof of losses or damages, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty) CONTRACTOR shall pay OWNER \$250 (two hundred fifty) for each day that expires after the time specified in Paragraph 4.02.A for Substantial Completion until the Work is Substantially Complete. After Substantial Completion if CONTRACTOR shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by OWNER, CONTRACTOR shall pay OWNER \$500 (five hundred) for each day that expires after the time specified above for completion and readiness for final payment.
- B. Permitting CONTRACTOR or Surety to continue and finish the Work or any part of the Work after the times specified for completion, or after the date to which the times for completion may have been extended, shall in no way operate as a waiver on the part of OWNER of its rights under the Contract.

ARTICLE 5 – CONTRACT PRICE

- 5.1 OWNER shall pay CONTRACTOR for the completion of the Work in accordance with the Contract Documents in current funds as shown in the Unit Price Schedule and any Supplementary Price Schedules as completed in the Bid Form, hereto attached as Exhibit "A" as accepted by OWNER, in the amount of \$_____.

ARTICLE 6 – PAYMENT PROCEDURES

- 6.1 CONTRACTOR shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by ENGINEER as provided in the General Conditions.

Progress Payments:

- 6.2 OWNER will make monthly progress payments on account of the Contract Price on the basis of CONTRACTOR's Applications for Payment as recommended by ENGINEER

each month during construction as provided below. All progress payments will be on the basis of the progress of Work measured by the schedule of values established in Paragraph 2.03 of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements.

Retainage:

- 6.2.1 After each Application for Payment has been found acceptable by OWNER, OWNER will pay 90% of the estimated value less any previous payments to CONTRACTOR until the Project is 50% complete. At 50% completion, further progress payments will be made in full to CONTRACTOR and no additional amounts will be retained unless ENGINEER determines that the character and progress of the Work is not proceeding satisfactorily. Amounts previously retained shall not be paid to CONTRACTOR. At 50% completion or any time thereafter when the character and progress of the Work is not satisfactory, additional amounts may be retained but in no event shall the total retainage be more than 10% of the value of the work completed.
- 6.2.2 Upon Substantial Completion of the Work, the amount retained may be reduced. When the Work has been Substantially Completed, except for Work which cannot be completed because of weather conditions, lack of materials or other reasons which, in the judgment of OWNER are valid reasons for non-completion, OWNER may make additional payments, retaining at all times an amount sufficient to cover the estimated cost of the work still to be completed or corrected.

Final Payment:

- 6.3 Upon final completion and acceptance of the Work in accordance with Paragraph 15.06 of the General Conditions, OWNER shall pay the remainder of the Contract Price as recommended by ENGINEER as provided in said Paragraph 15.06.

ARTICLE 7 – PAYMENTS

- 7.1 Payments shall be made in accordance with the Local Government Prompt Payment Act.

ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

- 8.01 In order to induce OWNER to enter into this agreement CONTRACTOR makes the following representations:

CONTRACTOR has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.

CONTRACTOR has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

CONTRACTOR is familiar with and is satisfied as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.

CONTRACTOR has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in Paragraph 5.03 of the General Conditions and (2) reports and drawings of a Hazardous Environmental Condition, if any, at the Site which has been identified in the Supplementary Conditions as provided in Paragraph 5.06 of the General Conditions.

CONTRACTOR has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by CONTRACTOR, including applying the specific means, methods, techniques, sequences, and procedures of construction, if any, expressly required by the Contract Documents to be employed by CONTRACTOR, and safety precautions and programs incident thereto.

CONTRACTOR does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.

CONTRACTOR is aware of the general nature of the work to be performed by OWNER and others at the Site that relates to the Work indicated in the Contract Documents.

CONTRACTOR has correlated the information known to CONTRACTOR, information and observations obtained from visits to the Site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Contract Documents.

CONTRACTOR has given OWNER written notice of all conflicts, errors, ambiguities, or discrepancies that CONTRACTOR has discovered in the Contract Documents, and the written resolution thereof by OWNER is acceptable to CONTRACTOR.

The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

CONTRACTOR certifies that CONTRACTOR was not barred from bidding on this contract as a result of a conviction for the violation of State laws prohibiting bid-rigging or bid-rotating.

ARTICLE 9 – CONTRACT DOCUMENTS

9.1 The Contract Documents which comprise the entire Agreement between OWNER and CONTRACTOR concerning the Work consist of the following:

1. This Agreement.
2. Performance Bond
3. Payment Bond.
4. General Conditions (Pages 1 to 66, inclusive).
5. Notice to Proceed, not attached hereto.
6. Supplementary Conditions (Pages SC-1 to SC-12, inclusive).
7. Wage Rates
8. Appendix Forms and Drawings
9. Special Provisions consisting of 51 pages.
10. Project Drawings contained within the Special Provisions.
11. All Addendum inclusive.
12. Exhibits to this Agreement (enumerated as follows):
 - a. Contractor's Bid
 - b. Documentation submitted by CONTRACTOR prior to Notice of Award (Pages _____ to _____, inclusive), Exhibit "B".
13. The following which may be delivered or issued after the Effective Date of the Agreement and are not attached hereto:
 - a. Notice to Proceed
 - b. Written Amendments
 - c. Work Change Directives
 - d. Change Orders

9.2 The documents listed in Paragraphs 9.1 et seq. above are attached to this Agreement (except as expressly noted otherwise above.). There are no Contract Documents other than those listed above in this Article 9. The Contract Documents may only be amended, modified or supplemented as provided in Paragraph 11.01 of the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 Terms

Terms used in this Agreement will have the meanings indicated in the General Conditions.

10.02 Assignment of Contract

No assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any

written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 Successors and Assigns

OWNER and CONTRACTOR each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

10.04 Severability

Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon OWNER and CONTRACTOR, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

10.05 Other Provisions

In the event of CONTRACTOR's and/or vendor's noncompliance with any provision of this Equal Employment Opportunity Clause, the Illinois Fair Employment Practices Act or the Fair Employment Practices Commission's Rules and Regulations for Public Contracts, the CONTRACTOR and/or vendor may be declared non-responsible and therefore ineligible for future contracts or subcontracts with the State of Illinois or any of its political subdivisions or municipal corporations, and the Contract may be cancelled or voided in whole or in part, and such other sanctions or penalties may be imposed or remedies invoked as provided by statute or regulation.

During the performance of this Contract, CONTRACTOR and/or vendor agree as follows:

1. That it will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin or ancestry; and further that it will examine all job classifications to determine if minority persons or women are underutilized and will take appropriate affirmative action to rectify any such underutilization. The Contractor shall carry out applicable requirements of 40 CFR Part 33 in the award and administration of contracts awarded under EPA financial assistance agreements. Failure by the Contractor to carry out these requirements is a material breach of this contract which may result in the termination of the contract or other legally available remedies.
2. That, if it hires additional employees in order to perform this Contract, or any portion thereof, it will determine the availability (in accordance with the Commission's Rules and Regulations for Public Contracts) of minorities and women in the area(s) from which it may reasonably recruit and it will hire for each job classification for which employees are hired in such a way that minorities and women are not underutilized.
3. That, in all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without

3. That, in all solicitations or advertisements for employees placed by it or on its behalf, it will state that all applicants will be afforded equal opportunity without discrimination because of race, color, religion, sex, national origin, ancestry, age marital status, physical or mental handicap unrelated to ability, or an unfavorable discharge from military service.
4. That it will send to each labor organization or representative of workers with which it has or is bound by a collective bargaining or other agreement or understanding, a notice advising such labor organization or representative of the CONTRACTOR's obligations under the Illinois Fair Employment Practices Act and the Commission's Rules and Regulations for Public Contracts. If any such labor organization or representative fails or refuses to cooperate with CONTRACTOR in its efforts to comply with such Act and Rules and Regulations, CONTRACTOR will promptly so notify the Illinois Fair Employment Practices Commission and the contracting agency and will recruit employees from other sources when necessary to fulfill its obligations thereunder.
5. That it will submit reports as required by the Illinois Fair Employment Practices Commission's Rules and Regulations for Public Contracts, furnish all relevant information as may from time to time be requested by the Commission or the contracting agency, and in all respects comply with the Illinois Fair Employment Practices Act and the Commission's Rules and Regulations for Public Contracts.
6. That it will permit access to all relevant books, records, accounts and work sites by personnel of the contracting agency and the Illinois Fair Employment Practices Commission for purposes of investigation to ascertain compliance with the Illinois Fair Employment Practices Act and the Commission's Rules and Regulations for Public Contracts.
7. That it will abide by "The Veterans Preference Act, 330 ILCS 55/1" which in part provides: "In the employment and appointment to fill positions in the construction, addition to, or alteration of all public works undertaken or contracted for by the State, or any of its political subdivisions thereof, preference shall be given to persons who have been members of the Armed Forces of the United States...in times of hostilities with a foreign country..." and the Servicemen's Employment Tenure Act, as amended, 330 ILCS 60/2, "safeguarding the employment and the rights and privileges inhering in the employment contract, of servicemen."
8. That it will include verbatim or by reference the provisions of Paragraphs 1 through 8 of this clause in every performance subcontract as defined in Section 2.10(b) of the Commission's Rules and Regulations for Public Contracts so that such provisions will be binding upon every such Subcontractor; and that it will also include the provisions of Paragraphs 1,5,6, and 7 in every supply subcontract as defined in Section 2.10(a) of the Commission's Rules and Regulations for Public Contracts so that such provisions will be binding upon every such subcontractor. In the same manner as with other provisions of this Contract, CONTRACTOR will be liable for such compliance with applicable provisions of this clause by all its subcontractors; and further it will promptly notify the contracting agency and the Illinois Fair Employment Practices Commission in the event that any Subcontractor fails or refuses to comply therewith. In addition, no CONTRACTOR will utilize any Subcontractor declared by the Commission to be

non-responsible and therefore ineligible for Contracts or subcontracts with the State of Illinois or any of its political subdivision or municipal corporations.

IN WITNESS WHEREOF, OWNER and CONTRACTOR have signed this Agreement in triplicate. One counterpart each has been delivered to OWNER, CONTRACTOR, and ENGINEER. All portions of the Contract Document have been signed, initialed or identified by OWNER and CONTRACTOR or identified by ENGINEER on their behalf.

This Agreement will be effective on _____, 20_____, (which is the effective Date of the Agreement).

Attest:

(CONTRACTOR)

(Signature)

(Signature)

Address for giving notices:

(Typed Name and Title)

(If CONTRACTOR is a corporation, attach evidence of authority to sign.)

CONTRACTOR's License No. _____
(If required by state or municipal law)

Attest:

Lake County, IL

(OWNER)

(Signature)

(Signature)

Address for giving notices:

Yvette Albarran
Purchasing Agent

(If OWNER is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of Agreement.)

PERFORMANCE BOND

CONTRACTOR *(name and address):*

SURETY *(name and address of principal place of business):*

OWNER *(name and address):*

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location):*

BOND

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract):*

Amount:

Modifications to this Bond Form: None See Paragraph 16

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal *(seal)*

Surety's Name and Corporate Seal *(seal)*

By: _____
Signature

By: _____
Signature *(attach power of attorney)*

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after:

3.1 The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;

3.2 The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

3.3 The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

5.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

5.2 Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

5.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract,

arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

5.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

7.1 the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

7.2 additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

7.3 liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced

EJCDC® C-610, Performance Bond

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or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted here from and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

14. Definitions

14.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after

all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

14.2 Construction Contract: The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

14.3 Contractor Default: Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

14.4 Owner Default: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

14.5 Contract Documents: All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

16. Modifications to this Bond are as follows:

PAYMENT BOND

CONTRACTOR *(name and address)*:

SURETY *(name and address of principal place of business)*:

OWNER *(name and address)*:

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location)*:

BOND

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract)*:

Amount:

Modifications to this Bond Form: None See Paragraph 18

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal *(seal)*

Surety's Name and Corporate Seal *(seal)*

By: _____
Signature

By: _____
Signature *(attach power of attorney)*

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond shall arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond shall arise after the following:
 - 5.1 Claimants who do not have a direct contract with the Contractor,
 - 5.1.1 have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
 - 5.1.2 have sent a Claim to the Surety (at the address described in Paragraph 13).
 - 5.2 Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
 - 7.1 Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
 - 7.2 Pay or arrange for payment of any undisputed amounts.
 - 7.3 The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 shall not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.
8. The Surety's total obligation shall not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.

11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
 12. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
 13. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall be sufficient compliance as of the date received.
 14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
 15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.
16. **Definitions**
- 16.1 **Claim:** A written statement by the Claimant including at a minimum:
 1. The name of the Claimant;
 2. The name of the person for whom the labor was done, or materials or equipment furnished;
 3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
 4. A brief description of the labor, materials, or equipment furnished;
 5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
 - 16.2 **Claimant:** An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond shall be to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.
 - 16.3 **Construction Contract:** The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.
 - 16.4 **Owner Default:** Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
 - 16.5 **Contract Documents:** All the documents that comprise the agreement between the Owner and Contractor.
6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
 7. The total amount of previous payments received by the Claimant; and
 8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.
17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.
 18. Modifications to this Bond are as follows:

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by



Issued and Published Jointly by



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CONSTRUCTION CONTRACT**

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
 3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 5. *Bidder*—An individual or entity that submits a Bid to Owner.
 6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
 7. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
 8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
 9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
 10. *Claim*—(a) A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein: seeking an adjustment of Contract Price or Contract Times, or both; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract; or (b) a demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision

regarding a Change Proposal; or seeking resolution of a contractual issue that Engineer has declined to address. A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. (“CERCLA”); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5501 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. (“RCRA”); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
12. *Contract*—The entire and integrated written contract between the Owner and Contractor concerning the Work.
13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents. .
15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
17. *Cost of the Work*—See Paragraph 13.01 for definition.
18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
20. *Engineer*—The individual or entity named as such in the Agreement.
21. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
22. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, does not establish a Hazardous Environmental Condition.

23. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
24. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
25. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date or by a time prior to Substantial Completion of all the Work.
26. *Notice of Award*—The written notice by Owner to a Bidder of Owner’s acceptance of the Bid.
27. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
28. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
29. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor’s plan to accomplish the Work within the Contract Times.
30. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.
31. *Project Manual*—The written documents prepared for, or made available for, procuring and constructing the Work, including but not limited to the Bidding Documents or other construction procurement documents, geotechnical and existing conditions information, the Agreement, bond forms, General Conditions, Supplementary Conditions, and Specifications. The contents of the Project Manual may be bound in one or more volumes.
32. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative or “RPR” includes any assistants or field staff of Resident Project Representative.
33. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
34. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals and the performance of related construction activities.
35. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor’s Applications for Payment.
36. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and

submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.

37. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands furnished by Owner which are designated for the use of Contractor.
38. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
39. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
40. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
41. *Successful Bidder*—The Bidder whose Bid the Owner accepts, and to which the Owner makes an award of contract, subject to stated conditions.
42. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
43. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
44. *Technical Data*—Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (a) subsurface conditions at the Site, or physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) or (b) Hazardous Environmental Conditions at the Site. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then the data contained in boring logs, recorded measurements of subsurface water levels, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical or environmental report prepared for the Project and made available to Contractor are hereby defined as Technical Data with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06.
45. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including but not limited to those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, fiber optic transmissions, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
46. *Unit Price Work*—Work to be paid for on the basis of unit prices.
47. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the

result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.

48. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

1.02 Terminology

- A. The words and terms discussed in the following paragraphs are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:*
1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:*
1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:*
1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - c. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or 15.04).
- E. *Furnish, Install, Perform, Provide:*
1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
 3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.
- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

- A. *Bonds:* When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Contractor’s Insurance:* When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract), the certificates and other evidence of insurance required to be provided by Contractor in accordance with Article 6.
- C. *Evidence of Owner’s Insurance:* After receipt of the executed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or otherwise), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

- A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully executed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

- A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Contract (or as otherwise specifically required by the Contract Documents), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
2. a preliminary Schedule of Submittals; and
3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.03.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may transmit, and shall accept, Project-related correspondence, text, data, documents, drawings, information, and graphics, including but not limited to Shop Drawings and other submittals, in electronic media or digital format, either directly, or through access to a secure Project website.

- B. If the Contract does not establish protocols for electronic or digital transmittals, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the items, or from those established in applicable transmittal protocols.

ARTICLE 3 – DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic or digital versions of the Contract Documents (including any printed copies derived from such electronic or digital versions) and the printed record version, the printed record version shall govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

3.02 *Reference Standards*

- A. Standards Specifications, Codes, Laws and Regulations
 - 1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 - 2. No provision of any such standard specification, manual, reference standard, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies:*

1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.
2. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
 - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work thereunder.
- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract

Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.

- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly give written notice to Owner and Contractor that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
 - 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
 - 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to such date.

4.03 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be

responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Times and Contract Price. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
 - 1. severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 - 2. abnormal weather conditions;
 - 3. acts or failures to act of utility owners (other than those performing other work at or adjacent to the Site by arrangement with the Owner, as contemplated in Article 8); and
 - 4. acts of war or terrorism.
- D. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated

with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5.

- E. Paragraph 8.03 governs delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.
- F. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor.
- G. Contractor must submit any Change Proposal seeking an adjustment in Contract Price or Contract Times under this paragraph within 30 days of the commencement of the delaying, disrupting, or interfering event.

ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

- A. *Limitation on Use of Site and Other Areas:*
 - 1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
 - 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.12, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with

such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or at law; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.
- C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.
- D. *Loading of Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
 - 1. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site;
 - 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities); and
 - 3. Technical Data contained in such reports and drawings.
- B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
 - 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

- A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site either:
1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate; or
 2. is of such a nature as to require a change in the Drawings or Specifications; or
 3. differs materially from that shown or indicated in the Contract Documents; or
 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine the necessity of Owner's obtaining additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A above; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Possible Price and Times Adjustments:*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
 - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
 - c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
 - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise; or
 - b. the existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice as required by Paragraph 5.04.A.
 3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
 4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or adjacent to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:
 1. Owner and Engineer do not warrant or guarantee the accuracy or completeness of any such information or data provided by others; and
 2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents as being at the Site;
 - c. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and

- d. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer.
 - C. *Engineer's Review:* Engineer will promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the Underground Facility in question; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and advise Owner in writing of Engineer's findings, conclusions, and recommendations. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
 - D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question, addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
 - E. *Possible Price and Times Adjustments:*
 1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, or both, to the extent that any existing Underground Facility at the Site that was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated the existence or actual location of the Underground Facility in question;
 - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
 - c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times; and
 - d. Contractor gave the notice required in Paragraph 5.05.B.
 2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.

3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

5.06 *Hazardous Environmental Conditions at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
 1. those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
 2. Technical Data contained in such reports and drawings.
- B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take

corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off.
- H. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.
- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.H shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6 – BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of all of Contractor's obligations under the Contract. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the Supplementary Conditions, or other specific provisions of the Contract. Contractor shall also furnish such other bonds as are required by the Supplementary Conditions or other specific provisions of the Contract.
- B. All bonds shall be in the form prescribed by the Contract except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (as amended and supplemented) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.
- C. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds in the required amounts.
- D. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or its right to do business is terminated in any state or jurisdiction where any part of the Project is located, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the bond and surety requirements above.
- E. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.
- F. Upon request, Owner shall provide a copy of the payment bond to any Subcontractor, Supplier, or other person or entity claiming to have furnished labor or materials used in the performance of the Work.

6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this Article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the

Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.

- C. Contractor shall deliver to Owner, with copies to each named insured and additional insured (as identified in this Article, in the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Contractor has obtained and is maintaining the policies, coverages, and endorsements required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- D. Owner shall deliver to Contractor, with copies to each named insured and additional insured (as identified in this Article, the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Owner has obtained and is maintaining the policies, coverages, and endorsements required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- E. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, shall not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- F. If either party does not purchase or maintain all of the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- G. If Contractor has failed to obtain and maintain required insurance, Owner may exclude the Contractor from the Site, impose an appropriate set-off against payment, and exercise Owner's termination rights under Article 16.
- H. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price shall be adjusted accordingly.
- I. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests.
- J. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner and other individuals and entities in the Contract.

6.03 Contractor's Insurance

- A. *Workers' Compensation*: Contractor shall purchase and maintain workers' compensation and employer's liability insurance for:
1. claims under workers' compensation, disability benefits, and other similar employee benefit acts.
 2. United States Longshoreman and Harbor Workers' Compensation Act and Jones Act coverage (if applicable).
 3. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees (by stop-gap endorsement in monopolist worker's compensation states).
 4. Foreign voluntary worker compensation (if applicable).
- B. *Commercial General Liability—Claims Covered*: Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against:
1. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees.
 2. claims for damages insured by reasonably available personal injury liability coverage.
 3. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- C. *Commercial General Liability—Form and Content*: Contractor's commercial liability policy shall be written on a 1996 (or later) ISO commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Products and completed operations coverage:
 - a. Such insurance shall be maintained for three years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
 2. Blanket contractual liability coverage, to the extent permitted by law, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
 3. Broad form property damage coverage.
 4. Severability of interest.
 5. Underground, explosion, and collapse coverage.
 6. Personal injury coverage.
 7. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together); or CG 20 10 07 04 and CG 20 37 07 04 (together); or their equivalent.

8. For design professional additional insureds, ISO Endorsement CG 20 32 07 04, "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.
- D. *Automobile liability*: Contractor shall purchase and maintain automobile liability insurance against claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy shall be written on an occurrence basis.
- E. *Umbrella or excess liability*: Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the paragraphs above. Subject to industry-standard exclusions, the coverage afforded shall follow form as to each and every one of the underlying policies.
- F. *Contractor's pollution liability insurance*: Contractor shall purchase and maintain a policy covering third-party injury and property damage claims, including clean-up costs, as a result of pollution conditions arising from Contractor's operations and completed operations. This insurance shall be maintained for no less than three years after final completion.
- G. *Additional insureds*: The Contractor's commercial general liability, automobile liability, umbrella or excess, and pollution liability policies shall include and list as additional insureds Owner and Engineer, and any individuals or entities identified in the Supplementary Conditions; include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds; and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby (including as applicable those arising from both ongoing and completed operations) on a non-contributory basis. Contractor shall obtain all necessary endorsements to support these requirements.
- H. *Contractor's professional liability insurance*: If Contractor will provide or furnish professional services under this Contract, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance shall provide protection against claims arising out of performance of professional design or related services, and caused by a negligent error, omission, or act for which the insured party is legally liable. It shall be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. If such professional design services are performed by a Subcontractor, and not by Contractor itself, then the requirements of this paragraph may be satisfied through the purchasing and maintenance of such insurance by such Subcontractor.
- I. *General provisions*: The policies of insurance required by this Paragraph 6.03 shall:
1. include at least the specific coverages provided in this Article.
 2. be written for not less than the limits of liability provided in this Article and in the Supplementary Conditions, or required by Laws or Regulations, whichever is greater.
 3. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least 10 days prior written notice has been given to Contractor. Within three days of receipt of any such written notice, Contractor shall provide a copy of the notice to Owner, Engineer, and each other insured under the policy.

4. remain in effect at least until final payment (and longer if expressly required in this Article) and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract Documents.
 5. be appropriate for the Work being performed and provide protection from claims that may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable.
- J. The coverage requirements for specific policies of insurance must be met by such policies, and not by reference to excess or umbrella insurance provided in other policies.

6.04 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 6.03, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.
- B. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

6.05 *Property Insurance*

- A. ***Builder's Risk:*** Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the full insurable replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
 1. include the Owner and Contractor as named insureds, and all Subcontractors, and any individuals or entities required by the Supplementary Conditions to be insured under such builder's risk policy, as insureds or named insureds. For purposes of the remainder of this Paragraph 6.05, Paragraphs 6.06 and 6.07, and any corresponding Supplementary Conditions, the parties required to be insured shall collectively be referred to as "insureds."
 2. be written on a builder's risk "all risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire; lightning; windstorm; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; flood; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; water damage (other than that caused by flood); and such other perils or causes of loss as may be specifically required by the Supplementary Conditions. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; or flood, are not commercially available

under builder's risk policies, by endorsement or otherwise, such insurance may be provided through other insurance policies acceptable to Owner and Contractor.

3. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.
 4. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects).
 5. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).
 6. extend to cover damage or loss to insured property while in transit.
 7. allow for partial occupation or use of the Work by Owner, such that those portions of the Work that are not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
 8. allow for the waiver of the insurer's subrogation rights, as set forth below.
 9. provide primary coverage for all losses and damages caused by the perils or causes of loss covered.
 10. not include a co-insurance clause.
 11. include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions.
 12. include performance/hot testing and start-up.
 13. be maintained in effect, subject to the provisions herein regarding Substantial Completion and partial occupancy or use of the Work by Owner, until the Work is complete.
- B. *Notice of Cancellation or Change:* All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 6.05 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured.
- C. *Deductibles:* The purchaser of any required builder's risk or property insurance shall pay for costs not covered because of the application of a policy deductible.
- D. *Partial Occupancy or Use by Owner:* If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will

provide notice of such occupancy or use to the builder's risk insurer. The builder's risk insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy; rather, those portions of the Work that are occupied or used by Owner may come off the builder's risk policy, while those portions of the Work not yet occupied or used by Owner shall remain covered by the builder's risk insurance.

- E. *Additional Insurance*: If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.05, it may do so at Contractor's expense.
- F. *Insurance of Other Property*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, such as tools, construction equipment, or other personal property owned by Contractor, a Subcontractor, or an employee of Contractor or a Subcontractor, then the entity or individual owning such property item will be responsible for deciding whether to insure it, and if so in what amount.

6.06 *Waiver of Rights*

- A. All policies purchased in accordance with Paragraph 6.05, expressly including the builder's risk policy, shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all Subcontractors, all individuals or entities identified in the Supplementary Conditions as insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for:
 - 1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 - 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 6.06.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of

recovery against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them.

- D. Contractor shall be responsible for assuring that the agreement under which a Subcontractor performs a portion of the Work contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by builder's risk insurance and any other property insurance applicable to the Work.

6.07 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of insurance required by Paragraph 6.05 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.05 shall distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the money so received applied on account thereof, and the Work and the cost thereof covered by Change Order, if needed.

ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

7.01 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.02 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.

- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.03 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.04 *"Or Equals"*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment, or items from other proposed suppliers under the circumstances described below.
 - 1. If Engineer in its sole discretion determines that an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer shall deem it an "or equal" item. For the purposes of this paragraph, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;

- 3) it has a proven record of performance and availability of responsive service; and
 - 4) it is not objectionable to Owner.
- b. Contractor certifies that, if approved and incorporated into the Work:
- 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense:* Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal", which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. *Effect of Engineer's Determination:* Neither approval nor denial of an "or-equal" request shall result in any change in Contract Price. The Engineer's denial of an "or-equal" request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents.
- E. *Treatment as a Substitution Request:* If Engineer determines that an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer considered the proposed item as a substitute pursuant to Paragraph 7.05.

7.05 *Substitutes*

- A. Unless the specification or description of an item of material or equipment required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment under the circumstances described below. To the extent possible such requests shall be made before commencement of related construction at the Site.
1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of material or equipment from anyone other than Contractor.
 2. The requirements for review by Engineer will be as set forth in Paragraph 7.05.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.
 3. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:

- a. shall certify that the proposed substitute item will:
 - 1) perform adequately the functions and achieve the results called for by the general design,
 - 2) be similar in substance to that specified, and
 - 3) be suited to the same use as that specified.
 - b. will state:
 - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times,
 - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and
 - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
 - c. will identify:
 - 1) all variations of the proposed substitute item from that specified, and
 - 2) available engineering, sales, maintenance, repair, and replacement services.
 - d. shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
- C. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
- E. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute at Contractor's expense.

- F. *Effect of Engineer's Determination:* If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.05.D, by timely submittal of a Change Proposal.

7.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner.
- B. Contractor shall retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable, during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within five days.
- E. Owner may require the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors, Suppliers, or other individuals or entities for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor, Supplier, or other individual or entity so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity.
- F. If Owner requires the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, or both, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.
- H. On a monthly basis Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions.

- J. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors, Suppliers, and all other individuals or entities performing or furnishing any of the Work.
- K. Contractor shall restrict all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed herein.
- L. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- M. All Work performed for Contractor by a Subcontractor or Supplier shall be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer.
- N. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by the particular Subcontractor or Supplier.
- O. Nothing in the Contract Documents:
 - 1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier, or other individual or entity; nor
 - 2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

7.07 Patent Fees and Royalties

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

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

7.08 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work

7.09 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.10 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It shall not be Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Owner or Contractor may give notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.11 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

7.12 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. all persons on the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify Owner; the owners of adjacent property, Underground Facilities, and other utilities; and other contractors and utility owners performing work at or adjacent to the Site, when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
- D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- E. All damage, injury, or loss to any property referred to in Paragraph 7.12.A.2 or 7.12.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of

Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

- F. Contractor's duties and responsibilities for safety and protection shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 15.06.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).
- G. Contractor's duties and responsibilities for safety and protection shall resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.13 *Safety Representative*

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

7.14 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

7.16 *Shop Drawings, Samples, and Other Submittals*

A. *Shop Drawing and Sample Submittal Requirements:*

1. Before submitting a Shop Drawing or Sample, Contractor shall have:
 - a. reviewed and coordinated the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - c. determined and verified the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.

2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that submittal, and that Contractor approves the submittal.
 3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be set forth in a written communication separate from the Shop Drawings or Sample submittal; and, in addition, in the case of Shop Drawings by a specific notation made on each Shop Drawing submitted to Engineer for review and approval of each such variation.
- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals. Each submittal will be identified as Engineer may require.
1. *Shop Drawings:*
 - a. Contractor shall submit the number of copies required in the Specifications.
 - b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.D.
 2. *Samples:*
 - a. Contractor shall submit the number of Samples required in the Specifications.
 - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 7.16.D.
 3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Other Submittals:* Contractor shall submit other submittals to Engineer in accordance with the accepted Schedule of Submittals, and pursuant to the applicable terms of the Specifications.
- D. *Engineer's Review:*
1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
 2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions or programs incident thereto.

3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
 4. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order.
 5. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 7.16.A and B.
 6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, shall not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
 7. Neither Engineer's receipt, review, acceptance or approval of a Shop Drawing, Sample, or other submittal shall result in such item becoming a Contract Document.
 8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.D.4.
- E. *Resubmittal Procedures:*
1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.
 2. Contractor shall furnish required submittals with sufficient information and accuracy to obtain required approval of an item with no more than three submittals. Engineer will record Engineer's time for reviewing a fourth or subsequent submittal of a Shop Drawings, sample, or other item requiring approval, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges.
 3. If Contractor requests a change of a previously approved submittal item, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

7.17 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on Contractor's warranty and guarantee.

- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 - 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 - 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 - 1. observations by Engineer;
 - 2. recommendation by Engineer or payment by Owner of any progress or final payment;
 - 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 - 4. use or occupancy of the Work or any part thereof by Owner;
 - 5. any review and approval of a Shop Drawing or Sample submittal;
 - 6. the issuance of a notice of acceptability by Engineer;
 - 7. any inspection, test, or approval by others; or
 - 8. any correction of defective Work by Owner.
- D. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract shall govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for

Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

- C. The indemnification obligations of Contractor under Paragraph 7.18.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
 - 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 - 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

7.19 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable Laws and Regulations.
- B. If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, 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 Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this paragraph, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 7.16.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria specified by Owner or Engineer.

ARTICLE 8 – OTHER WORK AT THE SITE

8.01 *Other Work*

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.

- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any utility work at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford each other contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.
- D. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 8, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
 - 1. the identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
 - 2. an itemization of the specific matters to be covered by such authority and responsibility; and
 - 3. the extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

- A. If, in the course of performing other work at or adjacent to the Site for Owner, the Owner's employees, any other contractor working for Owner, or any utility owner causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment shall take into account

information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract. When applicable, any such equitable adjustment in Contract Price shall be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.

- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due to Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this paragraph.
- C. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due to Contractor.
- D. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9 – OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents shall be that of the former Engineer.

- 9.03 *Furnish Data*
- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.
- 9.04 *Pay When Due*
- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.
- 9.05 *Lands and Easements; Reports, Tests, and Drawings*
- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
- B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
- C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.
- 9.06 *Insurance*
- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.
- 9.07 *Change Orders*
- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.
- 9.08 *Inspections, Tests, and Approvals*
- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.
- 9.09 *Limitations on Owner's Responsibilities*
- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- 9.10 *Undisclosed Hazardous Environmental Condition*
- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.
- 9.11 *Evidence of Financial Arrangements*
- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents (including obligations under proposed changes in the Work).
- 9.12 *Safety Programs*
- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.

- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10 – ENGINEER’S STATUS DURING CONSTRUCTION

10.01 *Owner’s Representative*

- A. Engineer will be Owner’s representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner’s representative during construction are set forth in the Contract.

10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor’s executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer’s efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer’s visits and observations are subject to all the limitations on Engineer’s authority and responsibility set forth in Paragraph 10.08. Particularly, but without limitation, during or as a result of Engineer’s visits or observations of Contractor’s Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor’s means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 10.08. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer’s consultant, agent, or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

10.04 *Rejecting Defective Work*

- A. Engineer has the authority to reject Work in accordance with Article 14.

10.05 *Shop Drawings, Change Orders and Payments*

- A. Engineer’s authority, and limitations thereof, as to Shop Drawings and Samples, are set forth in Paragraph 7.16.

- B. Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, are set forth in Paragraph 7.19.
- C. Engineer's authority as to Change Orders is set forth in Article 11.
- D. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.06 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.07 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.08 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 15.06.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 10.08 shall also apply to the Resident Project Representative, if any.

10.09 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs (if any) of which Engineer has been informed.

ARTICLE 11 – AMENDING THE CONTRACT DOCUMENTS; CHANGES IN THE WORK

11.01 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.

- 1. *Change Orders:*

- a. If an amendment or supplement to the Contract Documents includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order. A Change Order also may be used to establish amendments and supplements of the Contract Documents that do not affect the Contract Price or Contract Times.
- b. Owner and Contractor may amend those terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, without the recommendation of the Engineer. Such an amendment shall be set forth in a Change Order.

- 2. *Work Change Directives:* A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.04 regarding change of Contract Price. Contractor must submit any Change Proposal seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 30 days after the completion of the Work set out in the Work Change Directive. Owner must submit any Claim seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 60 days after issuance of the Work Change Directive.

- 3. *Field Orders:* Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.02 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Such changes shall be supported by Engineer's recommendation, to the extent the change

involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters. Such changes may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work shall be performed under the applicable conditions of the Contract Documents. Nothing in this paragraph shall obligate Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.03 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.

11.04 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment of Contract Price shall comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:
 - 1. where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03); or
 - 2. where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.04.C.2); or
 - 3. where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.04.C).
- C. *Contractor's Fee:* When applicable, the Contractor's fee for overhead and profit shall be determined as follows:
 - 1. a mutually acceptable fixed fee; or
 - 2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 13.01.B.3, the Contractor's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.01.C.2.a and

11.01.C.2.b is that the Contractor's fee shall be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.A.1 and 13.01.A.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of five percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted work the maximum total fee to be paid by Owner shall be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the work;

- d. no fee shall be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
- e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
- f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 11.04.C.2.a through 11.04.C.2.e, inclusive.

11.05 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment in the Contract Times shall comply with the provisions of Article 12.
- B. An adjustment of the Contract Times shall be subject to the limitations set forth in Paragraph 4.05, concerning delays in Contractor's progress.

11.06 *Change Proposals*

- A. Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; appeal an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; contest a set-off against payment due; or seek other relief under the Contract. The Change Proposal shall specify any proposed change in Contract Times or Contract Price, or both, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents.
 - 1. *Procedures:* Contractor shall submit each Change Proposal to Engineer promptly (but in no event later than 30 days) after the start of the event giving rise thereto, or after such initial decision. The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal. The supporting data shall be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event. Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal.
 - 2. *Engineer's Action:* Engineer will review each Change Proposal and, within 30 days after receipt of the Contractor's supporting data, either deny the Change Proposal in whole,

approve it in whole, or deny it in part and approve it in part. Such actions shall be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

3. *Binding Decision*: Engineer's decision will be final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- B. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice shall be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

11.07 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
1. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 2. changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
 3. changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.02, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters; and
 4. changes in the Contract Price or Contract Times, or other changes, which embody the substance of any final and binding results under Paragraph 11.06, or Article 12.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of this Paragraph 11.07, it shall be deemed to be of full force and effect, as if fully executed.

11.08 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12 – CLAIMS

12.01 *Claims*

- A. *Claims Process:* The following disputes between Owner and Contractor shall be submitted to the Claims process set forth in this Article:
1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents; and
 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters.
- B. *Submittal of Claim:* The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim shall rest with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, or both, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.
- C. *Review and Resolution:* The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim shall be stated in writing and submitted to the other party, with a copy to Engineer.
- D. *Mediation:*
1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate shall stay the Claim submittal and response process.
 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process shall resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process shall resume as of the date of the conclusion of the mediation, as determined by the mediator.
 3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval:* If the party receiving a Claim approves the Claim in part and denies it in part, such action shall be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim:* If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction,

the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim shall be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.

- G. *Final and Binding Results:* If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim shall be incorporated in a Change Order to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 Cost of the Work

- A. *Purposes for Determination of Cost of the Work:* The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or
 2. To determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included:* Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 13.01.C, and shall include only the following items:
1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.
 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
 - c. Rentals of all construction equipment and machinery, and the parts thereof, whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
 - d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
 - e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
 - f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 6.05), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.
 - g. The cost of utilities, fuel, and sanitary facilities at the Site.
 - h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.

- i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.
- C. *Costs Excluded*: The term Cost of the Work shall not include any of the following items:
 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.
- D. *Contractor's Fee*: When the Work as a whole is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 11.04.C.
- E. *Documentation*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances*: Contractor agrees that:
 1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

- C. *Contingency Allowance*: Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

13.03 *Unit Price Work*

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of the following paragraph.
- E. Within 30 days of Engineer's written decision under the preceding paragraph, Contractor may submit a Change Proposal, or Owner may file a Claim, seeking an adjustment in the Contract Price if:
 - 1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement;
 - 2. there is no corresponding adjustment with respect to any other item of Work; and
 - 3. Contractor believes that it is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price, and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 14 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

14.01 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

14.02 *Tests, Inspections, and Approvals*

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work shall be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
 - 1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
 - 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
 - 3. by manufacturers of equipment furnished under the Contract Documents;
 - 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
 - 5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests shall be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering shall be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

- A. *Contractor's Obligation:* It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority:* Engineer has the authority to determine whether Work is defective, and to reject defective Work.

- C. *Notice of Defects*: Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement*: Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties*: When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. *Costs and Damages*: In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work shall be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

- A. Engineer has the authority to require special inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.

1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, then Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15 – PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 *Progress Payments*

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments:*
1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens, and evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
 2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
 3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.
- C. *Review of Applications:*
1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
 2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for

- Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
- c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
 4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
 5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
 6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
 - e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due:*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. *Reductions in Payment by Owner:*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
 - a. claims have been made against Owner on account of Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages on account of Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;
 - b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
 - c. Contractor has failed to provide and maintain required bonds or insurance;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
 - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
 - f. the Work is defective, requiring correction or replacement;
 - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - h. the Contract Price has been reduced by Change Orders;
 - i. an event that would constitute a default by Contractor and therefore justify a termination for cause has occurred;
 - j. liquidated damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
 - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - l. there are other items entitling Owner to a set off against the amount recommended.
2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction

imposed shall be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 15.01.C.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than seven days after the time of payment by Owner.

15.03 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which shall fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor

may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.

- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
 1. At any time Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through E for that part of the Work.
 2. At any time Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
 4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.05 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

- A. *Application for Payment:*
 1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of

inspection, annotated record documents (as provided in Paragraph 7.11), and other documents, Contractor may make application for final payment.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;
 - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.
 - d. a list of all disputes that Contractor believes are unsettled; and
 - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
 3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.
- B. *Engineer's Review of Application and Acceptance:*
1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the Application for Payment to Owner for payment. Such recommendation shall account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to the provisions of Paragraph 15.07. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.
- C. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment.
- D. *Payment Becomes Due:* Thirty days after the presentation to Owner of the final Application for Payment and accompanying documentation, the amount recommended by Engineer

(less any further sum Owner is entitled to set off against Engineer's recommendation, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions above with respect to progress payments) will become due and shall be paid by Owner to Contractor.

15.07 *Waiver of Claims*

- A. The making of final payment will not constitute a waiver by Owner of claims or rights against Contractor. Owner expressly reserves claims and rights arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 15.05, from Contractor's failure to comply with the Contract Documents or the terms of any special guarantees specified therein, from outstanding Claims by Owner, or from Contractor's continuing obligations under the Contract Documents.
- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted or appealed under the provisions of Article 17.

15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents, or by any specific provision of the Contract Documents), any Work is found to be defective, or if the repair of any damages to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. correct the defective repairs to the Site or such other adjacent areas;
 - 2. correct such defective Work;
 - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others).
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with

respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

- E. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16 – SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension. Any Change Proposal seeking such adjustments shall be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
 - 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule);
 - 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 - 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 - 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) ten days written notice that Owner is considering a declaration that Contractor is in default and termination of the contract, Owner may proceed to:
 - 1. declare Contractor to be in default, and give Contractor (and any surety) notice that the Contract is terminated; and
 - 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within seven days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs,

losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond shall govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid on account of loss of anticipated overhead, profits, or revenue, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the

Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17 – FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this Article:
1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full; and
 2. Disputes between Owner and Contractor concerning the Work or obligations under the Contract Documents, and arising after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this Article, Owner or Contractor may:
1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions; or
 2. agree with the other party to submit the dispute to another dispute resolution process; or
 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18 – MISCELLANEOUS

18.01 *Giving Notice*

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
1. delivered in person, by a commercial courier service or otherwise, to the individual or to a member of the firm or to an officer of the corporation for which it is intended; or
 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the sender of the notice.

18.02 *Computation of Times*

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

18.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of

them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

- A. A party's non-enforcement of any provision shall not constitute a waiver of that provision, nor shall it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

18.07 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

SUPPLEMENTARY CONDITIONS

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SUPPLEMENTARY CONDITIONS

GENERAL

The Supplementary Conditions amend or supplement the "Standard General Conditions of the Construction Contract" (EJCDC C-700, 2013 Edition) and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

ARTICLE 1 – DEFINITIONS

SC 1.01.A.20.

Add the following language at the end of the definition entitled "ENGINEER":

Whenever the word ARCHITECT is used in the Specifications, it shall have the same meaning as the word ENGINEER.

ARTICLE 2 – PRELIMINARY MATTERS

SC 2.02.A.

Amend the first sentence of Paragraph 2.02.A. of the General Conditions to indicate the number of copies of Contract Documents as follows:

0 printed copies of the Contract Documents shall be furnished.

SC 2.03.A.3.

Amend the first sentence of Paragraph 2.03.A.3 of the General Conditions by inserting the words "Except for Unit Price Work," at the beginning of the sentence.

SC 2.04.

Add new paragraphs immediately after Paragraph 2.04.B of the General Conditions, which are to read as follows:

2.04.C. The conference will be held at a location selected by OWNER. The conference shall be attended by:

1. CONTRACTOR's Office Representative.
2. CONTRACTOR's Resident Superintendent.
3. CONTRACTOR's Safety Representative.
4. Any Subcontractors' or Suppliers' representatives whom CONTRACTOR may desire to invite or ENGINEER may request.
5. OWNER's Representatives.
6. ENGINEER's Representatives and any ENGINEER's Consultants ENGINEER may invite.
7. Local Utilities Representatives.

2.04.D A suggested format would include, but not be limited to, the following subjects:

1. Project safety.

2. Presentation of the preliminary progress schedule.
3. Liquidated damages.
4. Procedures for handling submittals such as Shop Drawings and other submittals.
5. Direction of correspondence, and coordinating responsibility between CONTRACTORS.
6. Project meetings.
7. Equal opportunity requirements.
8. Laboratory testing of material requirements.
9. Procedures for inventory of material and equipment stored on-site or off-site if off-site storage is authorized.
10. Review schedule of values, application for progress payment, and progress payment procedures.
11. Change Order procedures.

ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK

SC 4.01.

Delete the last sentence of Paragraph 4.01.A. of the General Conditions in its entirety and insert the following in its place:

Other work at the site and tower (SCADA, new concrete floor, interior equipment, etc.) is scheduled to be completed in July, 2020. Thus, it is anticipated that this contract to commence work will occur in July or August, 2020. In no event will the Contract Times commence to run later than the 150th day after the day of Bid opening or the 120th day after the Effective Date of the Agreement, whichever date is earlier.

SC 4.04

Add a new subparagraph immediately following Paragraph 4.04.B. of the General Conditions:

4.04.C. The Contractor shall submit no later than Thursday a detailed schedule for the following week's Work activities, and notify the ENGINEER immediately of any changes to that schedule.

ARTICLE 6 – BONDS AND INSURANCE

SC 6.01.D

Add the following language at the end of Paragraph 6.01.D of the General Conditions:

In addition, no further progress payments under the Agreement will be made by OWNER until CONTRACTOR complies with the provisions of this paragraph.

Add the following Paragraph 6.01 G after Paragraph 6.01F

SC6.01.G The CONTRACTOR shall supply in addition to other bonds required in the Contract Documents. No other additional bonds required.

SC 6.03. - CONTRACTOR'S INSURANCE

Entirely delete Paragraphs 6.03.A through 6.03.J and substitute the following:

A. The CONTRACTOR shall maintain for the duration of the contract, including warranty period, insurance purchased from a company or companies lawfully authorized to do business in the state of Illinois such insurance as will protect the CONTRACTOR from claims set forth below which may arise out of or result from the CONTRACTOR'S 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. **Workmen's Compensation Insurance** covering all liability of the CONTRACTOR arising under the Workmen's Compensation Act and Workmen's Occupational Disease Act; limits of liability not less than statutory requirements.
2. **Comprehensive General Liability (CGL)** in a broad form on an occurrence basis, to include but not limited to, coverage for the following where exposure exists; Premises/Operations, Contractual Liability, Products/Completed Operations, Independent Contractor's coverage to respond to claims for damages because of bodily injury, sickness or disease, or death of any person other than the CONTRACTOR'S employees as well as claims for damages insured by usual personal injury liability coverage which are sustained (1) by a person as a result of an offense directly or indirectly related to employment of such person by the CONTRACTOR, or (2) by another person and claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use therefrom.

General Aggregate Limit	\$4,000,000
Each Occurrence	\$2,000,000

3. **Automobile Liability Insurance** shall be maintained to respond to 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. This policy shall be written to cover any auto whether owned, leased, hired, or borrowed.

Each Occurrence Limit	\$1,000,000
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B. CONTRACTOR agrees that with respect to the above required insurance:

1. The CGL policy shall be endorsed for the general aggregate to apply on a "per Project" basis;
2. To provide separate endorsements and to name as additional insureds:
 - a. Lake County, its officers, agents and employees, all members of Boards, Commissions, Committees, Trustees and Organizations of the County, all volunteers and members of volunteer organizations and other non-paid personnel, including college and high school interns, while acting on behalf of the County
 - b. Lake County's Consulting Engineer: Robinson Engineering

c. Consulting Engineer's sub Consultants : Not applicable

3. To provide thirty (30) days notice, in writing, of cancellation or material change to the required insurance.
4. The Contractor's insurance shall be primary in the event of a claim.
5. Lake County shall be provided with Certificates of Insurance and endorsements evidencing the above required insurance, prior to commencement of this Contract and thereafter with certificates evidencing renewals or replacements of said policies of insurance at least thirty (30) days prior to the expiration of cancellation of any such policies. Said Notices and Certificates of Insurance shall be provided to Lake County Purchasing, 18 N County Street, Waukegan, IL 60085-4350.

C. **Failure to Comply:** In the event the CONTRACTOR fails to obtain or maintain any insurance coverage required under this agreement, Lake County may purchase such insurance coverage and charge the expense thereof to the CONTRACTOR.

SC 6.05. - PROPERTY INSURANCE

Entirely delete paragraphs 6.05.A through 6.05.F and substitute the following:

6.05.A. CONTRACTOR shall purchase and maintain property insurance upon the Work at the site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in these Supplementary Conditions or required by Laws and Regulations). The insurance shall:

1. Include the interests of OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER's Consultant, and any other persons or entities indicated below, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;
2. Be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss and damage to the Work, temporary buildings, falsework, and Work in transit and shall insure against at least the following perils: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, and other such perils or causes of loss as may be specifically required by these Supplementary Conditions. The form of policy for this coverage shall be //Completed Value// //Reporting//;
3. Include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
4. Cover materials and equipment in transit for incorporation in the Work or stored at the site or at another location that was agreed to in writing by OWNER prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by ENGINEER; and
5. Be maintained in effect until final payment is made unless otherwise agreed to in writing by OWNER, CONTRACTOR, and ENGINEER with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

The policies of insurance required to be purchased and maintained by CONTRACTOR in accordance with this Paragraph 6.05 shall comply with the requirements of GC 6.07.

ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

SC 7.02

Amend Paragraph 7.02.B of the General Conditions as follows:

‘...during regular working hours, Monday through Friday 7 AM – 7 PM, and CONTRACTOR will not permit the performance of Work...’

Add the following paragraph immediately after Paragraph 7.06O:

7.06P Contractor shall perform with its own forces at least 30% of the work, unless written consent to subcontract a greater percentage of the work is obtained from OWNER.

SC 7.08.

Revise Paragraph 7.08.A to read as follows:

7.08.A Unless otherwise specified in the Contract Documents, the Owner will obtain and pay for all construction permits and licenses. The Owner has (or will) obtain permits from the Village of Vernon Hills and applicable permits from the IEPA. The Owner will pay all charges of utility owners for connections for providing permanent service to the Work. Contractor shall comply with Building permit requirements

SC 7.15.

Add the following paragraphs immediately after Paragraph 7.15.A of the General Conditions, which are to read as follows:

7.15.B In emergencies affecting the safety or protection of persons or property or maintenance of temporary construction at the site or adjacent thereto, and CONTRACTOR cannot be reached, OWNER may act to attempt to prevent threatened damage, injury, or loss. OWNER will give CONTRACTOR and ENGINEER prompt written notice of such action and the cost of correction or remedy shall be charged against CONTRACTOR. A Change Order will be issued to document the change in Contract Price.

7.15.C Accidents occurring on the job which damage public or private property, or result in injury to workers or other persons, shall be promptly reported to the OWNER.

SC 7.16.

Revise paragraph 7.16.B.1.a. of the General Conditions to read as follows:

Unless otherwise directed in the Technical Specifications, four (4) complete sets of Shop Drawings shall be submitted for review by the ENGINEER. Each submittal shall be identified by both a unique submittal number and the specification section and/or paragraph number most clearly describing the equipment to be reviewed. Unrelated equipment shall not be submitted under any one submittal number.

Add a new subparagraph immediately after Paragraph 7.16.D.8 of the General Conditions, which shall read as follows:

- 7.16.D.9. After ENGINEER has reviewed and approved a Shop Drawing or Sample, CONTRACTOR shall provide the material or equipment approved. ENGINEER will not review subsequent submittals of a different manufacturer or Supplier unless CONTRACTOR provides sufficient information to ENGINEER that the approved material or equipment is unavailable, time of delivery will delay the construction progress, or OWNER requests a different manufacturer or Supplier.

ARTICLE 9 – OWNER'S RESPONSIBILITIES

SC 9.13.

Add a new paragraph immediately after Paragraph 9.12 of the General Conditions, which is to read as follows:

9.13.A OWNER will furnish a Site Representative, assistants, and other field staff to observe performance of the Work.

A. The duties and responsibilities of OWNER's Site Representative are described as follows:

1. Become familiar with the Contract Documents to observe the progress and quality of the executed Work, and to determine, in general, if the Work is proceeding in accordance with the Contract Documents.
2. Promptly forward to ENGINEER, reports from CONTRACTOR indicating conflict, error or discrepancy in the Contract Documents to enable ENGINEER to issue a written clarification or interpretation as provided for in Paragraph 10.07 of the General Conditions.
3. Provide ENGINEER with copy of Site Representatives' daily log.

ARTICLE 10 – ENGINEER'S STATUS DURING CONSTRUCTION

SC 10.01.

Add a new paragraph immediately after Paragraph 10.01.A of the General Conditions:

10.01.B When ENGINEER, ENGINEER'S CONSULTANT and/or OWNER (THEY) are on the project site to perform the duties and responsibilities as set forth in the General Documents, THEY will comply with CONTRACTOR'S safety plans, programs, and procedures. In the event THEY determine that CONTRACTOR's safety plans, programs, and procedures do not provide adequate protection for THEY, THEY may direct their employees to leave the Project site or implement additional safeguards for THEY's protection. If taken, these actions will be in furtherance of THEY's responsibility to their own employees only, and THEY will not assume any responsibility for protection of any other persons affected by the Work. In the event THEY observe situations which appear to have potential for immediate and serious injury to persons, THEY may warn the persons who appear to be affected by such situations. Such warnings, if issued, shall be given based on general humanitarian

concerns, and THEY will not, by the issuance of any such warning, assume any responsibility to issue future warnings or any general responsibility for protection of persons affected by the Work.

SC 10.03.

Add the following sentence to the end of Paragraph 10.03 A of the General Conditions:

10.03 OWNER will provide a Site Representative whose responsibilities and duties are described in SC 9.13 and limitations set forth

ARTICLE 11 – AMENDING THE CONTRACT DOCUMENTS; CHANGES IN THE WORK

SC 11.01.

Add the following sentence at the end of Paragraph 11.01.A.2 of the General Conditions:

Notice of the amount or extent of the claim shall include the following certification:

CONTRACTOR certifies that this claim is made in good faith, that the supporting data are accurate and complete to the best of the CONTRACTOR's knowledge and belief, and that the amount or time requested accurately reflects the Contract adjustment for which CONTRACTOR believes OWNER is liable.

SC-11.04

Add the following after Paragraph 11.04.A:

For each change order the Contractor shall submit to the Owner for review sufficient cost and pricing data to enable the Owner to ascertain the necessity and reasonableness of costs and amounts proposed, and the allowability and eligibility of costs proposed.

SC 11.05.

Add a new paragraph immediately after Paragraph 11.05.B of the General Conditions:

11.05.C. Time extensions provided under Paragraph 11.05 of the General Conditions will be only allowed for controlling items of Work (critical path). Except as provided for in Paragraph 14.06, CONTRACTOR shall make no claim for damages for delay in performance of the Work occasioned by acts or neglect by OWNER or any of its representatives, including ENGINEER or ENGINEER's Consultant, and agrees that any such claim will be fully compensated for by an extension of the time in an amount equal to the time lost due to such delay, and that such time extension shall be CONTRACTOR's sole and exclusive remedy for such delay.

SC 11.06.

Amend Paragraph 11.06.A.1. of the General Conditions by deleting the words "thirty days" in the 2nd line and inserting the words "ten days" in their place

SC 11.07.

Add the following subparagraph immediately after Paragraph 11.07.B of the General Conditions, which is to read as follows:

11.07.C Change Orders will be prepared on the form included in the Appendix of this Project Manual.

ARTICLE 13 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

SC 13.03.

Amend the first sentence of paragraph 13.03.C of the General Conditions by inserting the words, “the Cost of the Work in addition to” following the word “include”.

Delete Paragraph 13.03.E.1 of the General Conditions in its entirety and insert the following in its place:

13.03.E.1 The total cost of a particular item of Unit Price Work amounts to 5% or more of the Contract Price and the variation in the quantity of that particular item of Unit Price Work performed by CONTRACTOR differs by more than 25% from the estimated quantity of such item indicated in the Agreement;

ARTICLE 14 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

SC 14.02.

14.02.C. At the end of Paragraph 14.02.C, add the following:

“Such inspections, testings, and approvals to be arranged, obtained, and paid for by the Contractor shall include, but not be limited to, all those required for compliance with Illinois Public Act 096-1416 regarding Clean Construction or Demolition Debris (CCDD).”

Add a new subparagraph following Subparagraph 14.02.F of the General Conditions, which is to read as follows:

14.02.G. It is not the intent of this paragraph to require CONTRACTOR to be responsible for the cost of OWNER or ENGINEER to witness inspections or tests unless otherwise set forth in the Specifications.

ARTICLE 15 – PAYMENTS TO CONTRACTORS; SET-OFFS; COMPLETION; CORRECTION PERIOD

SC 15.01.

Amend the first sentence of Paragraph 15.01.B.1 by striking out the words "20 days" and inserting the words "thirty days" in their place.

Delete Paragraph 15.01.D. of the General Conditions in its entirety and insert the following in its place:

1. Payment shall be made by the OWNER to the CONTRACTOR in accordance with the Local Government Prompt Payment Act following presentation of the Application for Payment to OWNER with ENGINEER's recommendations (subject to the provisions of paragraph 15.01.E.).

SC 15.06.

Add a new paragraph immediately after Paragraph 15.06.D. of the General Conditions, which is to read as follows:

- 15.06.E In addition to the actual damages set forth in the Agreement, CONTRACTOR shall be liable for all additional costs for ENGINEER's services beyond the ENGINEER's review of the CONTRACTOR's first Application for Final Payment. OWNER will deduct these costs from any monies due or that may become due CONTRACTOR or Surety and pay ENGINEER for said services.

ARTICLE 16 – SUSPENSION OF WORK AND TERMINATION

SC 16.04.

Amend Paragraphs 16.04.A. and 16.04.B. of the General Conditions by striking out the words "30 days" in four places and inserting the following words in their place, "sixty days", and by striking out the words "seven days" in two places and inserting the following words in their place, "ten days."

ARTICLE 18 – MISCELLANEOUS

SC 18.01

Insert the following in the first sentence of Paragraph 18.01.A following the words "written notice":

“or the delivery of any Bond, Agreement, Certificate of Insurance or any other item,”

SC 18.09.

Add a new paragraph immediately after Paragraph 18.08 of the General Conditions, which is to read as follows:

18.09 Lien Waivers:

OWNER may at any time require CONTRACTOR to furnish lien waivers for labor and materials covered by Applications for Payment.

SC 18.10

Add a new paragraph immediately after Paragraph 18.09 of the General Conditions, which is to read as follows:

18.10 Notice to Residents

- A. The CONTRACTOR shall distribute notices to all residents directly affected by the proposed construction and as otherwise directed by the OWNER. The notices shall inform the resident as to when and where construction is to occur, the Work being performed, the hours which the Work will be performed, if and when any driveways, streets, water or sanitary services will be closed or otherwise interrupted.

The notices shall be submitted and approved by the OWNER and ENGINEER. Notices shall be distributed at least three days, but no more than ten days, prior to construction. In the case of water or sanitary service disruption, a second notice shall be given approximately 24 hours prior to the interruption of service.

SC 18.11

Add a new paragraph following Paragraph 18.10 of the General Conditions, which is to read as follows:

18.11 PREVAILING WAGE REQUIREMENTS

- A. This Project is subject to the requirements of the "Wages of Employees on Public Works (Prevailing Wage) Act (Illinois Revised Statutes, Chapter 48, Section 395-1 through 395-120." The Contractor shall comply with these requirements of the Act.
- B. In accordance with the Wage Determination of the Secretary of Labor, the Owner has adopted rates for various classifications of workmen on the Project. A copy of the wage rate is attached.
- C. The prevailing wage law does not prohibit payment of more than the prevailing rate of wages nor does it limit the hours of Work which may be performed by an employee in any particular period of time.
- D. A copy of the wage determination shall be posted by the CONTRACTOR in a prominent place at the site of the Work where it can be easily seen by the employees.
- E. The Contractor and each subcontractor shall submit monthly, in person, by mail, or electronically a certified payroll to the Owner. The certified payroll shall consist of records of all laborers, mechanics, and other workers employed by them on the project. The records shall include each worker's name, address, telephone number when available, social security number, classification or classifications, the hourly wages paid in each period, the number of hours worked each day, and the starting and ending times of work each day. The certified payroll shall be accompanied by a statement signed by the Contractor or subcontractor which asserts that:
 - 1. Such records are true and accurate,
 - 2. The hourly rate paid to each worker is not less than the general prevailing rate of hourly wages required, and

3. The Contractor and each subcontractor are aware that filing a certified payroll that he or she knows to be false is a Class B misdemeanor.
- F. The Owner is required to keep the certification records submitted for a period of not less than three years. Furthermore, these records, except an employee's address, telephone number, and social security number, shall be made available in accordance with the Freedom of Information Act.

SC 18.12

Add a new paragraph following Paragraph 18.11 of the General Conditions, which is to read as follows:

18.12 EMPLOYEE CLASSIFICATION ACT

- A. This project is subject to the requirements of the Illinois "Employee Classification Act," (820 ILCS 185 1-999). The Contractor shall comply with the requirements of the Act.

*** * * END OF SUPPLEMENTARY CONDITIONS * * ***

CHANGE ORDER NO. _____

Owner: Lake County Public Works Department

Date _____

Project _____

Owner's Contract No. PW# _____ Contractor _____

Date of Contract Start _____ \$ _____

You are directed to make the following changes in the Contract Documents. Description:

Reason for Change Order:

CONTRACT PRICE		CONTRACT TIMES (Calendar Days)	
		To substantial completion	To final completion
Original:	\$ _____	Original:	_____
Previous Change Orders:	\$ _____	Previous Change Orders:	_____
This Change Order:	\$ _____	This Change Order:	_____
Contract Price with all approved Change Orders:	\$ _____	Total of all approved Change Orders:	_____
		Original Completion Date:	_____
		Revised Completion Date:	_____

The Contractor agrees that this Change Order includes any and all costs associated with or resulting from the change(s) ordered herein, including all impact, delays, and acceleration costs. Other than the dollar amount and time allowance listed above, there shall be no further time or dollar compensation as a result of this Change Order.

THIS DOCUMENT SHALL BECOME AN AMENDMENT TO THE CONTRACT AND ALL STIPULATIONS AND COVENANTS OF THE CONTRACT SHALL APPLY HERETO.

PROPOSED:

By: _____
Contractor (Authorized Signature) Date _____

RECOMMENDED:

By: _____
Engineer (Authorized Signature) Date _____

APPROVED:

By: _____
Owner (Authorized Signature) Date _____

NOTE: OWNER is required to complete a Change Order Authorization form if change decrease or increase is for \$10,000 or more, or time of completion is 30 days or more.

CHANGE ORDER

INSTRUCTIONS

A. GENERAL INFORMATION

This document was developed to provide a uniform format for handling contract changes that affect Contract Price or Contract Times. Changes that have been initiated by a Work Change Directive must be incorporated into a subsequent Change Order if they affect Price or Times.

Changes that affect Contract Price or Contract Times should be promptly covered by a Change Order. The practice of accumulating Change Orders to reduce the administrative burden may lead to unnecessary disputes.

If Milestones have been listed in the Agreement, any effect of a Change Order thereon should be addressed.

For supplemental instructions and minor changes not involving a change in the Contract Price or Contract Times, a Field Order should be used.

B. COMPLETING THE CHANGE ORDER FORM

Engineer normally initiates the form, including a description of the changes involved and attachments based upon documents and proposals submitted by Contractor, or requests from Owner, or both.

Once Engineer has completed and signed the form, all copies should be sent to Owner or Contractor for approval, depending on whether the Change Order is a true order to the Contractor or the formalization of a negotiated agreement for a previously performed change. After approval by one contracting party, all copies should be sent to the other party for approval. Engineer should make distribution of executed copies after approval by both parties.

If a change only applies to price or to times, cross out the part of the tabulation that does not apply.

CHANGE ORDER AUTHORIZATION

for

Illinois Public Projects

Contract Number _____ Date: _____

Project _____

This Change Order authorizes: (check one)

(a) an increase/decrease in the cost of the contract by \$10,000 or more
(\$ _____)
amount

(b) an increase/decrease in the time of completion by 30 days or more
(_____)
amount

OWNER (or its designee _____) has determined that the
circumstances said to necessitate the change in performance, which are See Attached Change Order Summary
(give circumstances requiring change)

_____:

(check one)

- (a) were not reasonably foreseeable at the time the contract was signed.
- (b) were not within the contemplation of the contract as signed.
- (c) are in the best interest of the district or region and authorized by law.

Prepared by (ENGINEER) _____ Date _____

Authorized by (OWNER) _____ Date _____

OWNER shall preserve a copy of this authorization in a permanent contract file that is open to the public in accordance with P.A. 85-1295, Ill. Rev. Stat. ch. 38, par. 33E-9.

CHANGE ORDER #
SUMMARY

1. This Change Order provides:

End of Change Order Summary

Work Change Directive No.

Date of Issuance:	Effective Date:
Owner:	Owner's Contract No.:
Contractor:	Contractor's Project No.:
Engineer:	Engineer's Project No.:
Project:	Contract Name:

Contractor is directed to proceed promptly with the following change(s):

Description:

Attachments: *[List documents supporting change]*

Purpose for Work Change Directive:

Directive to proceed promptly with the Work described herein, prior to agreeing to changes on Contract Price and Contract Time, is issued due to: *[check one or both of the following]*

- Non-agreement on pricing of proposed change.
- Necessity to proceed for schedule or other Project reasons.

Estimated Change in Contract Price and Contract Times (non-binding, preliminary):

Contract Price	\$	[increase] [decrease].
Contract Time	days	[increase] [decrease].

Basis of estimated change in Contract Price:

- | | |
|---|-------------------------------------|
| <input type="checkbox"/> Lump Sum | <input type="checkbox"/> Unit Price |
| <input type="checkbox"/> Cost of the Work | <input type="checkbox"/> Other |

RECOMMENDED:	AUTHORIZED BY:	RECEIVED:
By: _____	By: _____	By: _____
Engineer (Authorized Signature)	Owner (Authorized Signature)	Contractor (Authorized Signature)
Title: _____	Title: _____	Title: _____
Date: _____	Date: _____	Date: _____

Approved by Funding Agency (if applicable)

By: _____	Date: _____
Title: _____	

CONTRACTOR'S CERTIFICATE FOR PARTIAL PAYMENT #1

PW# 2016.096
Boss# 103967

STATE OF _____) SS
 Illinois)
COUNTY OF _____ Lake)

The Affiant _____ being first duly sworn, on oath deposes and says that (s)he is the _____ of _____ who is the contractor engaged by the Lake County, Illinois, Public Works Department, for the construction of the Hawthorn Water Tower Rehabilitation; that to the best of their knowledge and belief, all items, units, quantities, and prices of work and material shown on the attached sheet(s) of the Estimate for Partial Payment are correct and that all work has been performed and materials supplied in full accordance with the terms and conditions of the construction contract between the Contractor and the Owner, and all authorized changes, thereto; that the following is a full, true, and correct statement of the contract account up to and including the last day of the period covered by this estimate; that Waivers of Lien for all materials will be furnished upon demand.

(1) Total Amount Earned.....	_____	(6) Amount of Original Contract.....	_____
(2) Less 10% Retained.....	\$ -	(7) Authorized Change Orders.....	_____
(3) Net Amount Earned.....	\$ -	(8) Credits to Contract.....	\$ -
(4) Total Previous Payments.....	\$ -	(9) Net Contract Amount.....	\$ -
(5) Amount Due This Payment.....	\$ -	(10) Balance to Complete.....	\$ -

Signed: _____ Date: _____
Subscribed and Sworn before me this _____ day of _____, 20__

SEAL _____ Notary Public

<p>CERTIFICATE OF PROJECT ENGINEER</p> <p>I certify that I have verified the Estimate and to the best of my knowledge and belief it is a full, true, and correct statement of work performed and materials supplied; that all have been performed in full accordance with the terms and conditions of the Construction Contract and any authorized changes, thereto.</p> <p>Signed: _____ Date: _____ Name: _____</p>	<p>CERTIFICATE OF ENGINEERING SUPERVISOR</p> <p>I certify that I have verified the Estimate and to the best of my knowledge and belief it is a full, true, and correct statement of work performed and materials supplied; that all have been performed in full accordance with the terms and conditions of the Construction Contract and any authorized changes, thereto.</p> <p>Signed: _____ Date: _____ Name: <u>Brittany Sloan</u></p>	<p>OWNER'S APPROVAL</p> <p>_____ Date: _____ Rodney Worden - Director</p>
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CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner: Lake County Public Works
Contractor:

Owner's Project No.:
Owner's Bid No.:
Contractor's Project No.:

Project:

This [preliminary] [final] Certificate of Substantial Completion applies to:

- All Work The following specified portions of the Work:

Date of Substantial Completion

The Work to which this Certificate applies has been inspected by authorized representatives of the Owner, Contractor and found to be substantially complete. The Date of Substantial Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion. The date of Substantial Completion marks the commencement of the contractual correction period and applicable warranties required by the Contract only for the specific portions noted above.

A [preliminary] [final] list of items to be completed or corrected is attached to this Certificate. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work shall be as provided in the Contract, except as amended as follows: *[Note: Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.]*

Amendments to Owner's responsibilities: None
 As follows

Amendments to Contractor's responsibilities: None
 As follows:

The following documents are attached to and made a part of this Certificate: *[preliminary list; final punch list]*

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents, nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract.

EXECUTED BY:	ACCEPTED BY:	AUTHORIZED BY:
By: _____ LCPW Representative	By: _____ Contractor	By: _____ LCPW Representative
Title: LCPW Project Manager	Title: _____	Title: LCPW Engineering Supervisor
Date: _____	Date: _____	Date: _____

CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner: Lake County Public Works

Owner's Project No.:

Contractor:

Owner's Bid No.:

Contractor's Project No.:

Project:

This [preliminary] [final] Certificate of Substantial Completion applies to

All Work

The following specified portions of the Work:

Items to be completed by _____ as part of the Substantial Completion acceptance and authorization:

1)

2)

3)

4)

5)

6)

7)

This certificate does not constitute a final acceptance of Work not in accordance with the Contract Documents, nor is it a release of CONTRACTOR's obligation to complete the Work in accordance with the Contract Documents.

SPECIAL PROVISIONS

SCOPE OF WORK

This project shall consist of the repair and abrasive blasting and recoating of the exterior, wet interior, and dry interior of the 500,000-gallon spheroid elevated tank located at Butterfield Rd. and Hawthorn Parkway in the Village of Vernon Hills, in the County of Lake, Illinois.

MATERIAL INSPECTION REPORTS

The Contractor shall be responsible for material inspection required for various items incorporated in this project. Also, all documentation is to be submitted to the Engineer, immediately following completion of this project. Five percent (5%) of the final contract amount due the Contractor will be withheld pending receipt of said documentation.

VIDEO CONSTRUCTION SITE

Prior to the start of any construction, the Contractor shall video the existing conditions of all areas of the site to be utilized during the construction. The video recording shall be done on Digital Video Format (i.e. mpeg or avi). The Contractor shall supply the Engineer with two thumb drives prior to starting construction. The recording shall include all physical structures around the site. The recordings shall also supply a continuous audio record of the location, all anticipated problem areas, items, and features for the complete area to be affected by the construction.

The recording shall be made on a thumb drive or other approved equal. The format of recording shall remain the same throughout the project.

Thumb drives shall be tagged to clearly indicate the date the video recording was taken, "LAKE COUNTY PUBLIC WORKS HAWTHORN ELEVATED TANK PAINTING, REL Project 19-R0952". Two (2) copies of the thumb drive shall be delivered to the Engineer prior to starting construction.

The surface condition of the site shall be the same or better than the pre-construction site conditions as shown in the video recording. The cost of video recording and log preparation shall not be compensated for separately but shall be considered incidental to the contract.

PROPERTY RESTORATION

It is anticipated that no public and/or private property shall be disturbed by this work. The Contractor shall take all precautions to avoid such damage and shall restore any public and/or private property, including landscaping, damaged and/or disturbed by the proposed work, to the satisfaction of the Owner, at no additional compensation. If the Contractor encounters a situation due to which some private property or a public facility/infrastructure will suffer unavoidable damage or disturbance, the Contractor shall bring it to the Owner's attention for a specific authorization to proceed with such work, before the task in question is performed.

PART 1 - GENERAL

1.01 DESCRIPTION

A. Scope of Work:

The Contractor shall furnish all materials, tools, equipment, and labor necessary for the painting of a steel potable water storage tank. All painting shall be done in accordance with the manufacturer's recommendations and shall be performed in a manner satisfactory to the Engineer.

B. Project Overview:

1. The County of Lake owns and operates a .50MG waterspheroid tank located on Hawthorn Parkway (**See attached Limits of Project Site**). The height to the high water is 106 feet. The existing coating on the tank exterior is beyond its design life and as a consequence the tank exhibits areas of local and general corrosion. The interior wet coating is also beyond its useful life and shows areas of local corrosion. The work will include full containment of the tank, abrasive blasting of tank exterior to SSPC-SP 6 followed by application of a three-coat zinc primer, epoxy intermediate, polyurethane topcoat paint system. Tank wet interior work will include abrasive blast to SSPC-SP10 followed by a zinc primer, 100% solids, low VOC epoxy paint system. Interior dry areas will be abrasive blasted to SSPC-SP6 followed by applications of a zinc primer and epoxy topcoat paint system.

2. Repairs/Replacements:

- Install weighted overflow flap gate
- Install a 42-inch-high railing, 20-feet in diameter on the tank roof.
- Install frost free pressure/vacuum roof vent
- Coat foundation of tank with a two-coat epoxy system.
- Replace wet interior roof hatch with a 30-inch diameter hatch.
- Install CP clips and pressure fitting for submerged CP system.
- Remove and replace the cathodic protection system with a submerged type CP system.
- Install mud valve.
- Repair/replace fall prevention device on interior wet access ladder.
- Install handholds at platform and roof openings for entering and exiting safety.
- Weld plates over cathodic protection access holes in tank roof.
- Seam seal roof plate lap joints on interior wet following coating application.
- Replace fill pipe insulation and jacket.
- Tank mixer and Appurtenances.
- Replace access tube manway gasket.

1.02 DEFINITIONS

- A. Contractor: Successful bidder awarded the project
- B. Owner: Lake County Public Works Department

- C. Engineer: Robinson Engineering
- D. Exterior: External surfaces of the tank roof, shell, pedestal, and other appurtenances that are exposed to the outside atmosphere
- E. Sidewall: Vertical walls of tank up to bottom of the tank knuckle
- F. Access Tube: Cylindrical tube extending from top of the riser upper platform to the roof through the tank
- G. Cone: Cone surfaces supporting stem
- H. Roof: Very top of tank, including top seam of sidewall
- I. Bowl: Area on bottom of the tank proper shaped like a bowl or cone. It extends from the stem out to the sidewall
- J. Stem: Center pipe whether wet or dry
- K. OSHA: Occupational Health and Safety Administration
- L. SSPC: The Society for Protective Coatings
- M. NACE: National Association of Corrosion Engineers
- N. ASTM D-454: Standard test method for pull off strength of coatings using portable adhesion testers
- O. ASTM-D4417: Standard test method for field measurement of surface profile of blast cleaned steel
- P. AWWA-C652: Standards for disinfection of water storage facilities
- Q. AWWA-D100: Standard for welded carbon steel tanks for water storage
- R. AWWA-D102: Coating steel water storage tanks
- S. SSPC-Guide 6: Guide for containing surface preparation debris generated during paint removal operations
- T. SSPC-Guide 7: Guide to the disposal of lead contaminated surface preparation debris

1.03 OMISSIONS/HIDDEN CONDITIONS

It is the intent of the specifications to detail all work and materials necessary for completion of the work specified herein. Any small or incidental items not specifically detailed in the specifications, but obviously a part of the work, are to be included in the work at no additional cost to the Owner.

1.04 PROTECTION OF PROPERTY

The Contractor is to take care to prevent damage to structures, utility services, storm and sanitary drainage systems, lawns, trees, plant material, fences, walks, drives, roadways, and other improvements in and adjacent to the area of work under the contract. Any damage to property resulting from the Contractor's operations shall be repaired or replaced by the Contractor without additional cost. Contractor shall furnish and install a minimum 6-foot-high temporary chain link fencing around perimeter of the work area with a lockable gate. Provide a key for Engineer and the Owner.

1.05 SCHEDULING

- A. The Contractor shall submit a construction schedule to the Engineer for review at the preconstruction meeting. The Contractor shall perform painting work according to the contract construction schedule.
- B. Scheduling shall not supersede temperature, humidity or other environmental requirements for coatings application included in these specifications.
- C. Coordinate work of other trades and provide conditions for neat, clean, dust-free work.
- D. Working hours shall be Monday thru Friday, 7AM till 7PM, Saturday 8:30AM till 5PM. No work is allowed on Sunday, or holidays without 48-hour prior approval in writing from the Owner.
- E. Hold point inspection requests shall be directed to the inspector. All inspection requests shall have a 48-hour notice.

1.06 SUBMITTALS

Submittals for materials and/or systems proposed for use on this project shall be provided to the Engineer for review.

- A. Paint and Protective Coatings:
 - 1. Manufacturer Technical Data Sheets for all paints, coatings, solvents, detergents and degreasers proposed as required by law.
 - 2. Manufacturer Material Safety Data Sheets (MSDS) for all paints, coating and thinners proposed as required by law.
 - 3. Color name and/or number with color chart for each specific coating product. Exterior color shall be chosen by the Owner.

4. Manufacturer's specific ventilation requirements for products used on interior surfaces. Ventilation requirements shall be provided to ensure adequate evacuation of solvents to prevent solvent entrapment, worker exposure to solvents above the OSHA PEL and provide for timely coating system cure.

B. Abrasive Blast Products

Abrasive blast products shall conform to SSPC Abrasive Specification No. 1. "Mineral and Slag Abrasives", except that copper slag will not be permitted. Abrasive blast product submittals shall include, but not be limited to, the following:

1. Manufacturer's certification or laboratory analysis that the product proposed contains less than 1% Free crystalline silica.
2. Laboratory analysis of blast material presenting results of blast material testing as required in SSPC-AB 1, Table 1 requirements for Chemical and Physical Properties of Abrasives, except that the conductivity test for water soluble contaminants in accordance with ASTM D-4940 shall not exceed 500 microsiemens (micromhos).
3. Material Safety Data Sheets.
4. Composition, mesh size, and bulk density.
5. Recommended application nozzle, air requirements, and pressure.

C. Containment System

The Contractor shall include in his submittal manufacturer technical data sheets for the proposed containment system. In addition, the following shall be included with the Contractor's submittal:

1. Outrigger/containment structural support system layout and details.
- a. For elevated storage tanks, submit proposed layout of outrigger system, containment hoisting system, details of proposed method of connection to tank shell, list of structural members including, but not limited to, size of member, maximum allowable wind velocity before system must be lowered to prevent structural damage to the system and/or tank, method of determining wind velocity and proposed location of wind velocity measuring device.
2. Manufacturer technical data sheets for the proposed containment system.
 3. Manufacturer's certification that proposed containment materials are fire resistant.
 4. Minimum shade factor for proposed containment materials shall be 95% except that a minimum shade factor of containment materials used with chemical stripping agents shall be 85%.

D. Dehumidification Equipment

1. Manufacturer and Supplier
2. Support Equipment (i.e. generator)
3. Equipment capacity, sized per NACE Publication 6A192

E. Various repair items

1. Shop drawings shall be submitted for various repair/replacement items such as pipe insulation and jacket, frost free vent, railing, etc.

1.07 PRODUCT HANDLING

A. Delivery and Storage

1. All paints, coatings and related materials shall be delivered to the job site in original unopened containers with the product name, type and batch number, color, and manufacturer date clearly marked on each container.
2. All materials used on the job by the Contractor shall be stored in a single place provided by the Contractor or designated by the Engineer at the job site. On site and fabrication shop storage shall comply with OSHA requirements, recommendations of the National Fire Protection Association, Municipal Fire Codes, and manufacturer recommendations.
3. Oily or solvent-soaked rags and all waste shall be removed from the job site every night, and all necessary precautions shall be taken to reduce fire hazards to a minimum.

1.08 OWNER RESPONSIBILITY

- A. The Owner shall drain the tank within seven (7) days' after notice has been provided by Contractor, unless unforeseen circumstances do not allow the action, such as drought conditions or system shortages.
- B. Upon notification by the Contractor that the tank is ready to be returned to service, the Owner shall draw samples and test after chlorination. The responsibility of passing results remains with the Contractor. If retesting is required, all costs associated with additional water, re-chlorination, sample taking, and lab testing will be borne by the Contractor, plus possible liquidated damages.

1.09 WARRANTY

- A. Approximately one (1) year from the date of completion, the tank will be inspected by the Owner and/or his representative.
- B. The inspection will be performed in accordance with the applicable portions of AWWA D-102-11 Standard for Painting Steel Water Storage Tanks and industry standards.
- C. The Owner will establish a date of inspection and shall notify the Contractor ten (10) days in advance. The Contractor's attendance will not be required.
- D. Failure to schedule this inspection within thirteen (13) months after completion of the painting will be considered a waiver of this inspection.
- E. Any failed work will be documented, and the Contractor will be notified of necessary repair (method and extent). The Owner reserves the right to require inspection of the repair work and possibly a second warranty inspection, dependent on degree of failure.
- F. Cost for one (1) year warranty inspection will be the responsibility of the Owner.
- G. Cost for a second warranty inspection will be the responsibility of the Contractor.

1.10 PROJECT MEETINGS

- A. Preconstruction Meetings:
 - 1. A preconstruction conference shall be scheduled by the Engineer and is to be attended by Owner, Engineer, and Contractor. Prior to beginning any work, the Contractor shall provide the Owner and Engineer with work schedule for the project in a Gantt chart format. Once the project has begun, the Contractor shall carry it to completion as specified in the construction schedule.
- B. Additional Meetings:
 - 1. Additional meetings may be scheduled by the Engineer and/or requested by the Contractor to address disputes, clarify tasks, etc.

1.11 SANITARY FACILITIES

- A. Temporary sanitary toilet facilities shall be provided by the Contractor that conform to state and local health and sanitation regulations for the specified number of Contractor's employees that will be onsite. These sanitary toilet facilities shall be maintained on a weekly basis to prevent nuisance conditions to the surrounding properties and/or residents.

1.12 SECURITY

- A. The Contractor is responsible for security of the work site.
- B. The Contractor shall be responsible for loss or injury to persons or property where work is involved and shall provide security and take precautionary measures to protect Contractor's and Owner's interests.
- C. The work site shall be secured by the Contractor following daily completion of work, as described in Section 1.04.

1.13 TEMPORARY PARKING – STAGING AREA

- A. Parking/staging areas are shown in attached "Limits of Project Site" drawing attached.
- B. Contractor to limit parking to project site, no street parking will be allowed.

1.14 REMOVAL OF TEMPORARY MATERIALS AND EQUIPMENT

- A. When no longer required the Contractor shall completely remove temporary material and equipment.
- B. Any damage caused by the temporary installation or use of temporary facilities shall be cleaned/repared by the Contractor.
- C. Any existing or permanent facilities used for temporary services shall be restored by the Contractor to specified, or original condition.

1.15 BULLETIN BOARD DISPLAYS

- A. It is the responsibility of the Contractor to secure all permits and meet the requirements of local, state, and federal agencies. This includes building, electrical, labor, OSHA, etc. The only permits not included are environmental air quality and permits from health agencies for interior painting.
- B. The Contractor shall display all permits and wage requirements on a temporary board.
- C. Copies of other permits that do not require display shall be attached to the foreman's copy of the specifications and onsite at all times.

1.16 EXISTING CATHODIC PROTECTION EQUIPMENT

- A. The cathodic protection equipment currently installed in the Hawthorn Tank is to be removed prior to tank coating operations and a new submerged CP system installed following completion of the painting process.
- B. Removal and re-install are to be through an experienced cathodic protection company.

1.17 CREW SIZE/COMMUNICATION

- A. The Contractor shall provide the minimum crew size for completion of painting operations as defined in the project scope. The Contractor's resident superintendent shall be fluent in English to the level of competency to complete responsibilities of the Contractor. The superintendent shall also be fluent in or have access to a translator for the primary language of the majority of workers. Degree of fluency to be sufficient so that superintendent can adequately complete his duties.

1.18 HAND WASHING FACILITIES

- A. The Contractor shall provide an OSHA approved hand wash facility with running water. Hot water is not required.
- B. The facility shall be stocked with soap and towels and replenished as needed.
- C. The Contractor shall properly dispose of water after the project is completed.

1.19 CONTRACTOR STAFF

The Contractor shall supply documentation that a member of the paint crew for this project is CAS certified based on the requirements of SSPC ACS-1/NACE 13. A CAS certified crew member shall be present on the job site during all coating operations. Work will not proceed, until proper documentation of this requirement is met.

1.20 SAFETY PLAN

A.1 Corporate Safety Program:

Implement and maintain programs and procedures that comply with the requirements of this Specification. Comply with all applicable regulations even if the regulation is not specifically referenced herein. If a state or local regulation is more restrictive than the requirements of this Specification, follow the more restrictive requirements.

A.2 Identification of the items in this Specification which are of specific interest to the facility owner in no way relieves the Contractor of the responsibility to comply with all regulatory requirements, nor should it be constructed that the facility owner, the EPA, OSHA, or state and local regulators are only interested in these items.

A.3 Acceptance Criteria:

Establish minimum standards for the content of programs, plans, procedures, and designs required by this Specification for the performance of the Contract. Acceptance criteria will be the basis for judging the responsiveness of Contractor's programs and will also be used as a basis for suspending work, if necessary.

A.4 Submittal Schedule:

Submit the following plans and programs to the Engineer for review and acceptance a minimum of twenty (20) days prior to mobilization to the project site.

A.5 Worker Protection Program:

Provide a project specific compliance program, prepared under the direction of, and signed by, a Certified Safety Professional (CSP) or Certified Industrial Hygienist (CIH), for the protection of Contractor and any subcontractor workers from all recognized and foreseeable hazards on the job in accordance with 29 CFR 1926 and 29 CFR 1910, as applicable, as well as the requirements of this Specification. Update the plan at least annually, or as conditions warrant.

A.6 Worker Protection Program Acceptance Criteria:

To be acceptable, the contractor's Worker Protection Program must provide procedures addressing each applicable element of the following, at a minimum:

- General Safety and Health Provisions – in accordance with applicable sections of Subpart C of 29 CFR 1926 including safety training and education, first aid and medical attention, housekeeping and control of site access at a minimum.
- Occupational Health – in accordance with applicable sections of Subparts D and Z of 29 CFR 1926 including occupational noise; gases, fumes, dusts and mists; hazard communication; lead, cadmium, arsenic, chromium and other toxic metals.
- Fire Protection and Prevention, and Emergency Response – in accordance with the requirements of 29 CFR 1926.24 and 1926.150 for the control, storage and handling of flammable and combustible materials, including a site-specific Emergency Response Plan in accordance with the requirements of 1926.65(q) at a minimum.
- Electrical Safety – in accordance with 29 CFR 1926.400, 1926.403 and all applicable provisions of 29 CFR 1926, Subpart K.
- Lock-out/Tag-out Plan – in accordance with 29 CFR 1910.147 and 1910.333 that will be followed for lock-out/tag-out of existing electrical utilities within containment or other work areas as appropriate. Include provisions for coordinating lock-out/tag-out activities with the facility owner.

- Scaffolds, Work Platforms and Fall Protection – in accordance with applicable sections of Subparts L and M of 29 CFR 1926.
- Confined Space Entry - in accordance with 29 CFR 1929.21(b)(6) and 1910.146.

A.7 Do not construe facility owner acceptance of Contractor submittals to imply approval of any particular method or sequence for conducting the work, or for addressing health and safety. Acceptance of the programs does not relieve the Contractor from the responsibility to conduct the work in strict accordance with the requirements of this Specification, or to adequately protect the health and safety of all workers involved in the project including any members of the public who may be affected by the project.

A.8 The facility owner has the right to examine the site of any accident and to question any person having knowledge of any such accidents. The facility owner has the right, but not a duty, to inspect the site to ensure that the safety and health requirements under this contract are being implemented and fulfilled. If inspections reveal deficiencies, immediately take action as may be required to correct the deficiencies, If Contractor fails or refuses to correct an unsafe or unhealthful condition, the facility owner has the right to stop all or part of work performed until satisfactory corrective action has been taken. The facility owner will not be subject to claims by Contractor, its employees or its subcontractors as a result of this stop work order. The facility owner maintains the right, but not the obligation, to remove any person(s) from the site if, in the opinion of the facility owner, the person(s) endangers the safety or health of others.

A.9 Reference Material:

Adley, D.P., "Safety and Health in the Protective coatings Industry" Chapter 8 of Good Painting Practice, SSPC Painting Manual, Vol. 1. 4th edition. Pittsburgh, PA: SSPC, 2002.

AIHA Guideline No. 4, "Health and Safety Requirements in Construction Contract Documents," Fairfax, VA: American Industrial Hygiene Association, 2005.

Compliance Directive CPL 2.0-124, Multi-Employer Citation Policy, US Dept. of Labor, Occupational Safety and Health Administration, December 10, 1999.

SSPC Guide 17 (latest edition) "Guide to Developing a Corporate Safety Program for Industrial Painting and Coating Contractors," Pittsburgh, PA: SSPC.

U.S. Code of Federal Regulations, Title 29, Part 1910 (latest revision), "Occupational Safety and Health Standards." (All CFRs are available online at <http://www.gpoaccess.gov/cfr/index.html>.)

U.S. Code of Federal Regulations, Title 29 Part 1915 (latest revision), "Occupational Safety and Health Standards for Shipyard Employment."

U.S. Code of Federal Regulations, Title 29, Part 1926 (latest revision), "Safety and Health Standards for Construction."

1.21 ENVIRONMENTAL COMPLIANCE

- A. Contractor shall be aware of and in compliance with all environmental regulations, including those concerning contamination of soil, air and water in the immediate project area.
- B. Contractor must prepare a plan for compliance with all environmental conditions, including air quality monitoring of the site perimeter during surface preparation and painting operations in accordance with SSPC-Guide 6, SSPC-Technology Guide 7 and SSPC-TU7.

1.22 TEMPORARY ELECTRIC AND LIGHTING

- A. Contractor shall supply temporary lighting sufficient to enable workers to safely access and perform work in all areas. Lighting shall be in conformance with SSPC-Guide 12 Guide to Illumination of Industrial Coating Projects.

1.23 DAMAGE TO EXISTING PROPERTY

- A. Contractor is responsible for replacing or repairing damage to existing buildings, sidewalks, roads, parking lot surfacing, and other existing assets.
- B. Owner has the option of contracting for such work and having cost deducted from contract amount if the Contractor is not qualified to complete repairs or fails to act in a timely manner.

1.24 TEMPORARY FIRE PROTECTION

- A. Provide and maintain in working order a minimum of two (2) fire extinguishers and such other fire protective equipment and devices as would be reasonably effective in extinguishing fires.

1.25 PROTECTION OF SEWERS

- A. Take adequate measures to prevent impairment of operation of existing storm sewer system. Prevent construction material, pavement, concrete, earth, or other debris from entering storm sewer or storm sewer structure. Contractor to provide a basket insert to manholes that may receive contaminants.

1.26 PROTECTION OF WATERWAYS

- A. Observe rules and regulations of local and state agencies, and agencies of U.S. government prohibiting pollution of any lake, stream, river or wetland by dumping of refuse, rubbish, dredge material, or debris therein.
- B. Provide containment that will divert flows, including storm flows and flows created by construction activity, to prevent loss of residues and excessive silting of waterways or flooding damage to property.
- C. Comply with procedures outlined in U.S. EPA manuals entitled "Guidelines for Erosion and Sedimentation Control Planning and Implementation," Manual EPA-72-015 and "Process, Procedures, and Methods to Control Pollution Resulting from all Construction Activity," Manual EPA 43019-73-007.
- D. Contractor shall prepare a Stormwater Pollution Prevention Plan (SWPPP) and submit to Owner and Engineer 7 days prior to construction start.

1.27 DISPOSAL OF EXCESS EXCAVATED AND OTHER WASTE MATERIALS

- A. Dispose waste material in accordance with federal and state codes, and local zoning ordinances. Copies of waste disposal manifests are to be supplied to Owner and Engineer prior to final payment.
- B. Unacceptable disposal sites include, but are not limited to, sites within wetland or critical habitat, and sites where disposal will have detrimental effect on surface water or groundwater quality.
- C. Make arrangements for disposal subject to submission of proof to Engineer that owner(s) of proposed site(s) has valid fill permit issued by appropriate government agency and submission of haul route plan, including map of proposed route(s).
- D. Provide watertight conveyance for liquid, semi-liquid, or saturated solids, whether being delivered to construction site or hauled away for disposal. Fluid materials hauled for disposal must be specifically acceptable at selected disposal site.
- E. Waste generated by abrasive blast cleaning is detailed in SSPC-GUIDE 6.

1.28 PROTECTION OF AIR QUALITY

- A. Contain paint aerosols and VOCs by acceptable work practices.
- B. Minimize air pollution by requiring use of properly operating combustion emission control devices on construction vehicles and equipment used by contractor and encouraging shutdown of motorized equipment not actually in use.
- C. Trash burning not permitted on construction site.
- D. If temporary heating devices are necessary for protection of work, they shall not cause air pollution.

1.29 PROTECTION FROM FUEL AND SOLVENTS

- A. Submit plans and photos, or drawings of all containment structures, planned paint storage procedures, planned paint mixing (as it relates to possible spillage), and paint waste disposal.
- B. All required material must be submitted prior to the preconstruction meeting. No equipment may be delivered to the site without approval of submittals.
- C. The Owner reserves the right to restrict equipment location.
- D. Protect the ground from spills of fuel, oils, petroleum distillates, or solvents by use of containment systems.
 - 1. Total paint, thinner, oils, and fuel delivered to and stored on-site cannot exceed supplied capacity of spill containment provided (i.e. fuel in compressor must have secondary containment to catch both fuel and oil to be sized to exceed possible spill).
 - 2. Do not leave nozzle while fueling.
 - 3. Provide a different containment unit under fuel and tank and oil reservoirs for all equipment and fuel storage tanks.
 - 4. Barrels of solvents, even for cleaning, are prohibited. Do not deliver paint thinners in containers greater than five (5) gallons.
- E. Disposal of waste fluids shall be in conformance with federal, state, and local laws and regulations.

1.30 USE OF CHEMICALS

- A. Chemicals used during project construction or furnished for project operations, whether herbicide, pesticide, disinfectant, polymer, reactant, or of other classification must show approval of U.S. EPA, U.S. Department of Agriculture, state or another applicable regulatory agency.
- B. Use of such chemicals and disposal of residues shall be in conformance with manufacturer's written instructions and applicable regulatory requirements.

1.31 NOISE CONTROL

- A. Conduct operations to cause least annoyance to residents in vicinity of work and comply with applicable local ordinances.
- B. Equip compressors, hoists and other apparatus with mechanical devices necessary to minimize noise and dust. Equip compressors with silencers on intake lines.
- C. Equip gasoline or oil operated equipment with silencers or mufflers on intake and exhaust lines.
- D. Route vehicles carrying material over such streets as will cause least annoyance to public and do not operate on public streets on weekdays between hours of 6:00 p.m. and 7:00 a.m., or on Saturdays, Sundays, or legal holidays unless approved by Owner.

1.32 HAZARDOUS MATERIALS

- A. Applicable Regulations
 - 1. RCRA, 1976 – Resource Conservation and Recovery Act: This federal statute regulates generation, transportation, treatment, storage, and disposal of hazardous waste nationally.
- B. To use an off-site hazardous waste disposal facility, the Contractor must use the Uniform Hazardous Waste Manifest (shipping paper).
- C. Federal, state, and local laws and regulations may apply to the storage, handling, and disposal of hazardous materials and waste.

1.33 BARRIERS AND ENCLOSURES

- A. The Contractor shall furnish, install, and maintain as long as necessary, and remove no longer required adequate barriers, warning signs or lights at all dangerous points throughout the work for protection of property, workers, and the public. The Contractor shall hold the Owner harmless from damage or claims out of any injury or damage that may be sustained by any person or persons as a result of the work under the contract.

PART 2 - PRODUCTS

2.01 COATINGS

- A. Painting and Coatings
1. The following paint/coating manufacturers are approved for this project: Sherwin Williams.
 2. No substitutions by other manufacturers and products will be considered unless a written request for approval is received by the Engineer/Owner at least ten (10) days prior to the bid date. It is the Contractor's responsibility that the substitution is of equal or better quality. The decision regarding approval or disapproval of the substitution by the Owner will be considered final.
 3. The Contractor shall supply the Engineer/Owner with a color chart to allow for ample time for color selection. Colors are to be as follows:
 - a. When multiple coats are required, coatings shall be alternating colors
 - b. Interior final coat shall be white.
 - c. Exterior final coat shall be selected by the owner.
 4. All coating materials and required thinners for each tank shall be manufactured by the same single source coating manufacturer.
 5. All coatings shall meet all National Sanitation Foundation certification standards for potable water contact.

2.02 ZINC EPOXY POLYAMIDE – 2 COAT SYSTEM – WET INTERIOR

- A. Two (2) coat zinc epoxy polyamide system meeting all National Sanitation Foundation certification standards for potable water contact.
- B. Approved suppliers and systems:
- | <u>Manufacturer</u> | <u>System</u> |
|---------------------|----------------------------|
| Sherwin Williams | Galvapak 1k/Sherplate P.W. |
| Tnemec | Series 94 H2O/Series 22 |
- C. Approved seam sealer
- | | |
|------------------|--------------|
| Sika Corporation | Sika Flex 1a |
|------------------|--------------|

2.03 EPOXY POLYAMIDE – DRY INTERIOR

- A. Two (2) coat Zinc / Epoxy System
- B. Approved suppliers and systems: Dry interior access tube and bowl
- | <u>Manufacturer</u> | <u>System</u> |
|---------------------|----------------------------|
| Sherwin Williams | Galvapak 1k/Macropoxy 5500 |
| Tnemec | Series 91 H2O/N140 |
- C. Approved suppliers and systems: Dry interior (all other surfaces)

2.04 ZINC / EPOXY – 2 COAT SYSTEM – PIT PIPING

- A. Two (2) coat epoxy polyamide system.
- B. Approved suppliers and systems:

<u>Manufacturer</u>	<u>System</u>
Sherwin Williams	Galvapak 1k/Macropoxy 5500
Tnemec	Series 94 /Series N140

2.05 ZINC EPOXY URETHANE - 3 COAT SYSTEM – EXTERIOR

- A. Three (3) coat epoxy urethane system.
- B. The Contractor is advised to follow all rules for safety while using isocyanates.
- C. Ultraviolet protection additives mixed at factory only. There will be no tinting or addition of any material other than the manufacturer's thinners.
- D. Approved suppliers and systems:

<u>Manufacturer</u>	<u>System</u>
Sherwin Williams	Galvapak 1k/Acrolon 218HS/Fluorokem HS
Tnemec	Series 94 H2O/Series 73/Series V700

2.06 METALS REPAIRS

- A. Steel Plating and other structural repairs shall comply with ASTM – A36.

2.07 REPAIR OF CONCRETE STRUCTURES

- A. Foundation Repair
 - 1. Mortar Clad, Series 218 by Tnemec Co., Kansas City, MO.
 - 2. Sika Gard 75 EpoCem.
- B. Grout Repair
 - 1. The standard to fill holes is an epoxy grout Sika 212 Grout as manufactured by Sika Corporation.
 - 2. Where backer rod is required, use ITP standard closed cell polyethylene foam manufactured by Industrial Thermo Polymers, Ltd., 2316 Delaware Ave., Suite 216, Buffalo, NY 14216, 1-800-387-3847.

2.08 CONCRETE FOUNDATION COATING – TWO COAT EPOXY

- A. The coating shall be a two (2) coat epoxy polyamide system.
- B. Approved suppliers and manufacturers:

<u>Manufacturer</u>	<u>System</u>
Sherwin Williams	Macropoxy 5500/Macropoxy 5500
Tnemec	N69/N69

2.09 EPOXY CAULKING

- A. Epoxy caulking shall be flexible, NSF approved for use in contact with potable water and compatible with the epoxy coating system used in the tank.
- B. Caulk will be two component, polyamine or polyamide cured and 100% solids.
- C. The Coatings manufacturer and caulk material manufacturer shall confirm, in writing, that the internal epoxy coating system is compatible with the 100% solids epoxy caulk material.
- D. Any conditions for, or surface preparation requirements of the epoxy caulk material shall be included in the written confirmation of material compatibility.
- E. An acceptable product for this Project is "Aquatapoxy A7", manufactured by Raven Lining Systems, Tulsa, Oklahoma.

2.10 CONTAINMENT SYSTEM

- A. The Contractor shall provide a containment system as specified in SSPC-Guide 6 which allows for the containment of the environmentally sensitive waste, dust and paint over spray that will be generated during the blasting and paint operations and protection of surrounding environment.
- B. Containment shroud material and superstructure shall be non-penetrating, nylon rip-stop material manufactured by Eagle Industries, or written approved equal. Approval of alternate material will be based on density, weight, support strength, stitching, reinforcement, home office experience, and staff assistance
- C. The Contractor shall design a containment system for containing and controlling emissions, debris and protecting the air, ground and soil from contaminants resulting from surface preparation and painting operations.
 - 1. The containment system shall provide a safe working environment and provide for control of emissions.
 - 2. For rehabilitating an existing tank, a containment system meeting the requirements of an SSPC Class 2 a containment as described in 4.2.2.2 of SSPC Guide 6 - "Guide for containing surface preparation debris generated during paint removal operations."
 - 3. The containment system shall be maintained free of defects through the course of the project.
 - 4. The Contractor is responsible for the containment system design, bracing, shields, etc. depending on the size of the structure, availability of space, prevailing wind forces, and local restrictions.
 - 5. Proposed changes and modifications to the containment system during the course of the work must be submitted in writing and reviewed by the Engineer. The submittal shall address the operational and technical reasons for containment modifications.

2.11 HAZARDOUS MATERIAL

- A. The Hawthorn tank existing coating, both interior dry and exterior contain levels of lead, Cadmium and Chromium that are above the toxicity leachate levels (See attached).
- B. Contractor shall follow SSPC GUIDE 6 and SSPC GUIDE 7 for the containment and disposal of the hazardous waste material.

2.12 ABRASIVE BLAST MATERIALS

Mineral and slag abrasive materials shall conform to the requirements of the Society for Protective Coating's Abrasive Specification No. 1, SSPC-AB1. Abrasives are to be Class A, less than 1% crystalline silica. Abrasive material shall be a Grade 3 or higher abrasive grade.

Abrasive coal slag shall be 20-40 grade or 30-60 grade. The abrasive blast materials shall be free of moisture, water soluble contaminants, dust, and oil. The abrasive blast materials shall be stored and covered to prevent moisture contamination. The use of silica sand, flint sand, and glass beads is not allowed.

2.13 ABRASIVE BLAST MATERIAL ALTERNATIVE

Contractor may request an alternative to the abrasive blast material specified in section 2.12. Alternative blast material specifications shall be submitted to Engineer in writing for review and approval prior to use.

2.14 AIR MONITORING AND SOIL SAMPLING

- A. Background:

This section describes monitoring methods used for measuring emissions of hazardous and toxic substances, particulate matter, or dust emissions during surface preparation operations, construction or painting activities. The monitoring assessing the effectiveness of work site engineering controls (e.g., containment and ventilation systems) air quality sampling is implemented to protect the public and the surrounding environment and to assess the impact of hazardous and toxic substances, as well as; dust emissions from project operations, materials, equipment and other potential emission generating operations (e.g., waste handling operations).
- B. Emission Monitoring:

High volume air samplers shall be used for monitoring lead in the form of total suspended particulate (TSP-LEAD), in accordance with 40 CFR Part 50, appendix B. Analysis is to be performed in accordance with 50CFR50, appendix G. Contractor shall follow procedures outlined in SSPC-TU7, and shall submit an air, soil and monitoring plan to the Engineer for review and approval 10 working days prior to start of abrasive blasting operations. Air sampling emission reports shall be delivered to the Engineer and Owner for the duration of all surface preparation work.

2.15 DUST COLLECTORS – AIR FILTRATION UNITS

- A. Furnish and use a dust collector during all blasting work.
- B. Units to be equal in filtration capacity to Eagle Industries dust collectors. Other units may be used, but their substitution will be evaluated on efficiency at 0.5-micron size and airflow movement.
- C. Use 60,000 cfm minimum for wet interior work and exterior containment work.

- D. Furnish HEPA filters for dust collection.
- E. Number of dust collectors shall be sufficient to supply a 50ft./minute downward draft at most areas. An average may be considered. Determination of actual containment plan will be the deciding factor. Calculations of airflow shall be included in the containment submittal for Engineer review. Type and sizing of dust collection equipment shall be in accordance with SSPC-GUIDE 16.
- F. Use only new filters or filters certified clean.
- G. Contractor is responsible for power for air filtration units.

2.16 GROUND TARPS

- A. Use impermeable ground tarps, 20 mils thick.
- B. Use ground tarps able to withstand the anticipated construction traffic without tearing or separating.
- C. Ground tarps shall extend a minimum of three (3) feet outside of containment.
- D. Ground tarps that are impervious to the abrasive blast media, paint debris dusts, and process water and shall be placed on the ground around the tank to prevent contamination of the ground, storm waters and surface waters due to run-off.

2.17 EQUIPMENT COVERING

- A. Use material that is 8-10 mils thick, and 100% impermeable.
- B. Use material resistant to tear and/or rip by mechanical action from abrasive blasting during blasting operations.
- C. Make coverings airtight by use of duct tape at the openings, or other suitable measures.

2.18 AIR DRYER FOR COMPRESSOR

- A. Use air dryers sufficient to remove 98% of the moisture from the compressed air. Size the dryers on total cfm using manufacturer supplied charts. Upon request, supply charts to engineer for verification.
- B. If the fan is not operable, cease all blasting until the dryer is replaced or repaired.

2.19 ABRASIVE – COAL SLAG

- A. The coal slag shall be 20-40 grade, or 30-60 grade.
- B. The abrasive shall be free of moisture, water soluble contaminants, dust, and oil.
- C. The abrasive shall be stored and covered to prevent moisture contamination.
- D. All leaking or spilling bags shall be removed, and affected areas properly cleaned.
- E. All slag abrasive shall meet the requirements of SSPC-AB1 "Mineral and Slag Abrasive" June 1, 1991-Grade 3.
- F. The use of silica sand, flint sand, and glass beads is prohibited.
- G. All abrasive and grit material used, and all equipment supplied shall be subject to approval of the Engineer. The abrasive or grit shall be enough and hard enough to remove the mill scale, rust, and paint.

2.20 RECYCLABLE STEEL GRIT – ALTERNATE

- A. Use recyclable steel grit size G-25 or G-50.
- B. The abrasive is to be free of moisture, water soluble contaminants, dust, and oil.
- C. The abrasive is to be stored and covered to prevent moisture contamination.
- D. All leaking or spilling containers are to be removed, and affected areas properly cleaned.
- E. All recyclable steel grit shall meet requirements of SSPC-AB1 "Metallic Abrasive" June 1, 1991. All abrasive and grit material used, and all equipment supplied shall be subject to approval of the Engineer. The abrasive or grit shall be sharp enough and hard enough to remove the mill scale, rust, and paint.

PART 3 - EXECUTION

3.01 COATING APPLICATION REQUIREMENTS

- A. Tank Interior Humidity and Temperature
 - 1. During abrasive blast cleaning and painting operations, the relative humidity of the interior air shall not exceed fifty percent (50%). Relative humidity shall be measured by a sling psychrometer or other appropriate psychrometric measuring equipment.
 - 2. The interior air temperature and surface temperature of surfaces to be coated shall be between 50°F and 120°F and at least 5°F above the dew point or as otherwise required by the manufacturer.
 - 3. The Contractor shall achieve the required conditions for interior air conditions through the use of dehumidification equipment.
 - a. The dehumidification equipment shall supply dry, fresh (not recirculated) air within 12 inches of the tank bottom from a system of duct work and blowers. This ventilation system shall operate 24 hrs./day throughout the entire coating cure process.
 - b. Dehumidification shall be maintained until abrasive cleaning operations, coating operations, and coating cure are complete, but not less than ten (10) days.
- B. Tank Exterior Humidity and Temperature
 - 1. No coating shall be applied to wet or damp surfaces or in rain, snow, fog or mist.
 - 2. No coatings shall be applied when it is expected that the ambient air temperature will fall below 50°F or within 5°F of the dew point within 6 hours after application of coatings or paints.
 - 3. No coating shall be applied when the relative humidity will exceed 85%, or as specified in the coating manufacturer's product data sheet. Relative humidity and dew point shall be measured by use of a Sling Psychrometer in conjunction with US. Department of Commerce Weather Bureau Psychrometric Tables. If the above conditions are exceeded, coating or painting operations shall be delayed until conditions are favorable.
 - 4. The ambient conditions and surface temperature of the surfaces being coated must be between 50°F and 120°F. The surface temperature shall be at least 5°F above the dew point or within the manufacturer's recommendations.

3.02 DUST CONTAINMENT

- A. The Contractor shall do everything within industry standards to minimize dust as a nuisance, both from site and painting operations.
- B. The Contractor shall complete any additional measures required in these specifications for dust containment. There will be no negotiations for extra compensation for nuisance complaints and corrective measures.
- C. The Contractor shall fully inspect the area, land use, and other pertinent local conditions prior to bidding exterior work.
- D. The Contractor shall not permit dust, abrasive, or paint chips to fall a distance beyond the property line or ground cover.
- E. The Contractor shall protect existing storm sewer inlet(s) by placing a drop-in inlet filter which shall be removed upon completion of painting operations. The inlet filter shall be in accordance with Section 280 of the IDOT Standard Specifications. The debris must be contained within 30 feet of the base of the tank. Payment is incidental to exterior tank repaint with full containment.

- F. The Contractor shall not permit any visual dust release when transferring media from either the interior or exterior of the structure to the dumpster. Suppress all dust with tarps or water, or other preapproved method.

3.03 CONTAINMENT DURING EXTERIOR ABRASIVE BLAST CLEANING

- A. The Contractor shall furnish and install a total containment system to be used during all dust generating work during exterior abrasive blast cleaning, which is conforming to Section 4.2.2.2 of SSPC Guide 6, SSPC Guide 7, SSPC Guide 16 and SSPC-TU-7
- B. Paint chips shall be contained to an area immediately under the structure. Release outside the structure will not be permitted.
- C. The containment system shall be erected on all sides of the tank for 360-degree coverage.
- D. The roof shall be covered with the containment system. There will be separate vertical tarps from the roof or sidewalls to allow waste from the roof to slip down the sidewalls.
- E. The containment systems shall be supported by temporary braces attached to the roof and ground. Leave space to allow rigging and equipment to be used within the shields. The bracing shall be secured by cables to the ground by use of deadmen.
- F. Any damaged shrouds shall be repaired/replaced immediately. The Contractor shall discontinue blast operations until the damaged shrouds are repaired or replaced.
- G. The Contractor shall use air impenetrable walls and roof with either rigid or flexible framing.
- H. All seams shall be sealed by a 2-foot overlap. The Contractor shall completely seal all seams by stitching, taping, caulking, or other sealing measures.
- I. Payment is a separate line item "EXTERIOR TANK REPAINT WITH FULL CONTAINMENT" which the Owner reserves the right to delete.

3.04 CONTAINMENT SYSTEM TANK CONNECTIONS

- A. The Contractor shall request approval of all welding and cutting on the tank for any tank connections.
- B. All approved holes into the tank shall be cut with rounded corners.
- C. The Contractor shall use a welder certified to complete the type and position weld necessary for attachment.
- D. Payment is incidental to exterior tank repaint with full containment.

3.05 CONTAINMENT SYSTEM OPENINGS

- A. The Contractor shall design a means of ingress and egress of the containment structure. Access shall be through an overlapped door on each side of the chamber.
- B. The size of the opening structure shall be 8'x 8' x 6' high. Minimum clear walking height shall be 54-inches. Minimum width shall be 42-inches. The structure shall be fabricated from scaffolding and covered with overlapping tarps that are secured in-place. The chamber shall be constructed out of 6-foot high scaffold sections and installed so the majority of the scaffold is extended out from the containment.
- C. An opening for air piping exhaust shall be constructed with a minimum 18-inch long tunnel securely attached. Maintain the exhaust piping in as straight a line as possible to avoid restricting airflow. Exhaust air attachments may be elsewhere other than the entryway.

- D. An operating HEPA vacuum shall be supplied in the entryway to vacuum off workers leaving the containment. The vacuum shall be clean and serviced.
- E. Payment is incidental to exterior tank repaint with full containment.

3.06 CONTAINMENT SYSTEM GROUND COVER

- A. Ground tarps shall be provided for the area inside the containment system and a 3-foot diameter around the outside of the containment. Ground tarps shall be impermeable, 20 mils thick that can withstand construction traffic without tearing or separating.
- B. All ground tarps shall be lapped a minimum of 2-feet. Lap the inside ground tarps up 2-feet on the outside of the containment system. Lap the outside ground tarps 2-feet under the inside tarps with slots for cables. This will prevent loss of abrasive material between the ground tarp and vertical containment system.
- C. Payment is incidental to exterior tank repaint with full containment.

3.07 WET AND DRY INTERIOR PRE-SURFACE PREPARATION

- A. The Contractor shall low pressure water clean at 4,000 psi all surfaces and appurtenances to remove sediment, minerals, soot, and other contaminants.
- B. Staining may remain in place prior to abrasive blast cleaning. Engineer to approve cleanliness.

3.08 EXTERIOR PRE-SURFACE PREPARATION

- A. The Contractor shall low pressure water clean at 4,000 psi all surfaces and appurtenances to remove mildew, soot, and other contaminants.
- B. Treat areas of visible mildew with an approved mildewcide, compatible with the coating system to be applied.
- C. Use a biodegradable algicide for the exterior approved by the Engineer.
- D. Hand wash with a higher concentration of algicide any mildew not removed by power washing.
- E. Mix algicide at level recommended by the manufacturer, but not at a level that could result in an environmental problem.
- F. Hold water jet nozzle using a 0° or 15° tip perpendicular (90° to surface) at all times. Maintain a water jet nozzle distance of 2 in. – 10 in. from the surface.

3.09 WET INTERIOR - NEAR WHITE METAL (SSPC-SP10) DRY BLAST

- A. The Contractor shall abrasive blast clean all surfaces and appurtenances to a near white finish (SSPC-SP10), current edition.
- B. Maintain a profile of 2.0 – 3.0 mils on abrasive blast cleaned surfaces.
- C. Prior to any primer application, all prepared interior abrasive blast surfaces to be coated must have dust removed by vacuuming or cleaned by an alternative method acceptable to the Engineer.
- D. Once an area is acceptable for painting, apply all coats and allow coating to cure to touch prior to resumption of blasting or blast the entire tank before painting, use dehumidification to hold the blast.
- E. The Contractor is responsible for supplying heat and or dehumidification to maintain blast Conditions prior to primer application.

3.10 DRY INTERIOR – COMMERCIAL (SSPC-SP6) DRY BLAST

- A. The contractor shall abrasive blast clean all surfaces and appurtenances on the tank dry interior condensate and upper platforms and extend up the walls approximately 24-inches.
- B. Maintain a profile of 2.0-3.0 mils on abrasive blast cleaned surfaces.
- C. Prior to any coating application all abrasive blast cleaned surfaces must be free from dust and blast contaminant.
- D. Power Tool clean any areas of corrosion on access tube, ladders or piping to an SSPC-SP11 condition.

3.11 EXTERIOR – COMMERCIAL (SSPC-SP6) DRY BLAST

- A. The Contractor shall abrasive blast all surfaces of the tank structure to a commercial (SSPC-SP6) finish.
- B. Maintain a surface profile of 2.0-3.0 mils on the abrasive blast cleaned surface.
- C. Prior to coating application, all prepared surfaces to be coated shall be cleaned of blast media and dust, to a condition acceptable to the Engineer.

3.12 PROTECTION OF SURFACES

The Contractor shall protect all surfaces, which are not to be painted, from overblasting, spraying, over spray, spatters or spillage of paint.

PART 4 – COATING SYSTEM APPLICATION

4.01 GENERAL OBJECTIVE

The object of these specifications is to provide the material and workmanship necessary to produce a quality coating system. All painting work shall be implemented in strict accordance with the manufacturer's instructions and shall be performed in a manner satisfactory to the Engineer.

4.02 QUALITY OF PAINT

The paint mentioned in the following specifications are set up as standards of quality. The standard "or equal" clause shall apply. No substitution will be considered unless a written request for approval has been received by the Engineer at least 10 days prior to the date for receipt of bids. Each such request shall include the name of the specified material for which a substitute is being requested; the name of the proposed substitute material' and a complete description of the proposed substitute including performance and test data and any other information necessary for an evaluation. The burden of proof of the merit of the proposed substitute is upon the proposer. The decision of the Engineer regarding approval or disapproval of the proposed substitution shall be final.

All material shall be brought to the job site in the original sealed and labeled containers of the paint manufacturer and shall be subject to inspection by the Engineer. Colors, where not specified, shall be selected by the Owner.

The Contractor shall submit to the Engineer, immediately upon completion of the job, certification from the paint manufacturer indicating that the quantity of each coating purchased was sufficient to coat all surfaces in accordance with the specifications and manufacturer's recommendations.

4.03 APPLICATION OF PAINT

The Contractor shall apply each coating in accordance with these specifications and the paint manufacturer's recommendations. The coating shall be applied at the specified thickness. If the specified thickness is not obtained, an additional coat(s) of paint shall be applied.

All paint shall be applied in strict accordance with the applicable manufacturer's printed data sheet and container label outlining recommended minimum and maximum surface and air temperatures required for application. Paint shall be applied to wet or damp surfaces and shall not be applied in rain, snow, fog, or mist, or when the relative humidity exceeds 85%.

No paint shall be applied when it is expected that the relative humidity will exceed 85% and/or the air temperature will drop below recommended levels within 12 hours after paint application. Dew or moisture condensation should be anticipated, and if such conditions are prevalent, painting shall be delayed until certain that the surfaces are dry. Painting should be completed well in advance of the probable time of day when condensation will occur in order to permit the film an appropriate drying to the formation of moisture on the surface.

4.04 DRY FILM THICKNESS

Dry film thickness shall be measured in accordance with current SSPC PA2, "Dry Paint Thickness with Magnetic Gauges".

4.05 CONTAINMENT / DISPOSAL REQUIREMENTS

As discussed in Section 2.10, the entire tank and structure shall be enclosed, and surface preparation debris contained. Refer to SSPC-GUIDE 6 (CON), "Guide for Containing Debris Generated During Paint Removal Operations". The containment will serve to contain overspray during coating operations from vehicles, building, and other appurtenances.

The painting Contractor shall cut, and grind flush all exterior containment structure lugs and prepare and paint areas as described in the exterior painting section of these specifications.

Upon removal of the exterior lugs, the painting Contractor shall also repair any damaged interior coating by methods described in the interior painting section of these specifications. Abrasive blasting to bare metal (SSPC-SP10) will be required in the damaged areas.

All lead paint wastes generated on the interior or exterior of this project shall be rendered nonhazardous by using the PreTox 2000 or other approved application.

Paint debris shall be classified as hazardous if after testing for toxic characteristics using the TCLP test methods, the leachate contains any of the elements in concentrations at or greater than those listed in 40 CFR 261 or applicable state or local regulations. In any circumstances, the most stringent jurisdictional regulations governing the project location shall apply.

4.06 VENTILATION AND CURE TIME

Adequate ventilation that will effectively remove solvent vapors shall be provided for proper drying of paint on interior surfaces. Following final coat applications, the tank shall not be disinfected or filled until the coating system is fully cured. Refer to applicable product data sheet(s) for dry time / temperature requirements.

4.07 AMERICAN WATER WORKS ASSOCIATION

All work shall be implemented in accordance with the American Water Works Association's Standard D102-14.

4.08 NSF CERTIFICATION

All coatings in contact with potable water or applied to the inside wet area of the tank shall be listed by NSF International or UL under ANSI/NSF Standard 61, Section 5, Protective (Barrier) Materials. Potable Water Tank Coatings.

4.09 GUARANTEE

The bid shall be construed to contain a guarantee for a minimum of one (1) year for all materials and workmanship.

Any work proving defective within one year for the date acceptance shall be redone without additional expense to the Owner for labor or materials.

4.10 WET INTERIOR STEEL COATING APPLICATION

- A. The Contractor shall apply a two (2) coat high build epoxy paint system with a zinc primer to all prepared surfaces and appurtenances.
- B. Abrasive blast cleaning and paint requirements have been previously defined.
- C. Apply each coat at the following rates:

Manufacturer	Minimum	Maximum
<u>Sherwin Williams</u>	<u>D.F.T. mils</u>	<u>D.F.T. mils</u>
Primer SW Corothane/Galvapak 1k	2.0	3.0
Topcoat SW Sherplate PW	20.0	30.0
TOTAL	22.0*	33.0*

Manufacturer	Minimum	Maximum
<u>Tnemec</u>	<u>D.F.T. mils</u>	<u>D.F.T. mils</u>
Primer	2.5	3.5
Topcoat-Series 22	20.0	30.0
TOTAL	22.5*	33.5*

*Total does not include stripe coat.

- D. Stripe coat to be applied to all welds, angles, and sharp edges throughout the structure, including above the high-water line and all roof beams, etc.
- E. Each full coat shall be a different color from the previous coat and is to be approved by the Engineer. No color bleed-through should occur if proper application rates are observed.
- F. Apply all coats in uniform color and sheen without streaks, laps, runs, sags, cloudy, or missed areas. Correct all defects before application of the successive coat.
- G. Allow a minimum of twenty-four (24) hours between coats (including stripe coat). Additional time may be necessary if low temperatures require an increase in the necessary cure time.
- H. MAINTAIN FORCED VENTILATION A MINIMUM OF FOUR (4) DAYS AFTER TOPCOAT APPLICATION, time required for cure is dependent on the coating manufacturer and temperature. Record variations of the standard procedures (roof hatch closure because of rain, etc.), and submit to the Engineer. Heat is required if, in the opinion of the Engineer, the integrity of the coating is endangered by cold weather, or if additional cure time will delay the project beyond the substantial completion date.
- I. Maintain internal air movement at 20 ft., at 10 ft., and at 1 ft. above the floor for seven (7) days after painting. Suspend 2,500 cfm fans from the safety grabs at each elevation, at completion of painting.
- J. Payment is a separate line item "WET INTERIOR REPAINT" which the Owner reserves the right to delete.

4.11 WET INTERIOR ROOF – SEAM SEALING

- A. The Contractor shall apply a seam seal on all roof lap seams on the interior after the topcoat is dry to the touch. Seal using a caulking gun filling all cracks less than 1 in. separation. Tool sealant as required.
- B. Cost for seam sealing is incidental to the wet interior repaint.

4.12 DRY INTERIOR STEEL COATING APPLICATION

- A. The Contractor shall apply a two (2) coat zinc/epoxy system to all prepared dry interior steel areas.
- B. The surface preparation has been previously defined.
- C. Apply each coat at the following rates for the dry interior:

Manufacturer	Minimum	Maximum
<u>Sherwin Williams</u>	<u>D.F.T. mils</u>	<u>D.F.T. mils</u>
Primer SW Corothane/Galvapak 1k	2.0	3.0
Intermediate SW Macropoxy 5500	2.0	3.0
<u>Topcoat SW Macropoxy 5500</u>	<u>2.0</u>	<u>3.0</u>
TOTAL	6.0*	9.0*

Manufacturer	Minimum	Maximum
<u>Tnemec</u>	<u>D.F.T. mils</u>	<u>D.F.T. mils</u>
Primer-Series 91H2O	2.5	3.5
Stripe & Intermediate-Series 20HS-1255	3.0	5.0
<u>Topcoat-Series 20HS</u>	<u>4.0</u>	<u>6.0</u>
TOTAL	9.5*	14.5*

*Stripe coat is not included in totals.

- D. Stripe coat to be applied to all welds, angles, and sharp edges throughout the structure.
- E. Each full coat to be a different color from the previous coat and is to be approved by the Engineer. No color bleed-through should occur if proper application rates are observed.
- F. Apply all coats in uniform color and sheen without streaks, laps, runs, sags, cloudy, or missed areas. Correct all defects before application of the successive coat.
- G. Allow a minimum of twenty-four (24) hours between coats (including stripe coat). Additional time may be necessary if low temperatures require an increase in the necessary cure time.
- H. Payment is a separate line item "INTERIOR DRY TOUCH-UP AND PAINT" which the Owner reserves the right to delete.

4.13 INTERIOR STEEL PIPING COATING APPLICATION

- A. The Contractor shall apply a two (2) coat epoxy system to all prepared pit piping surfaces and appurtenances.
- B. The surface preparation has been previously defined.
- C. Apply each coat at the following rates:

Manufacturer	Minimum	Maximum
<u>Sherwin Williams</u>	<u>D.F.T.</u>	<u>D.F.T.</u>
Primer SW Corothane/Galvapak K1	2.0	3.0
Intermediate SW Macropoxy 5500	2.0	3.0
<u>Topcoat SW Macropoxy 5500</u>	<u>2.0</u>	<u>3.0</u>
Total	6.0*	9.0*

Manufacturer	Minimum	Maximum
<u>Tnemec</u>	<u>D.F.T. mils</u>	<u>D.F.T. mils</u>
Primer-Series 91 H20	2.0	3.5
Stripe-Series 20HS-1255	1.5	2.5
<u>Topcoat-Series 20HS</u>	<u>5.0</u>	<u>7.0</u>
TOTAL DFT	7.0*	10.5*

*Total does not include stripe coat.

- D. Stripe coat to be applied to all welds, angles, and sharp edges throughout the structure.
- E. Each full coat to be a different color from the previous coat and is to be approved by the Engineer. No color bleed-through should occur if proper application rates are observed.
- F. Apply all coats in uniform color and sheen without streaks, laps, runs, sags, cloudy, or missed areas. Correct all defects before application of the successive coat.
- G. Allow a minimum of twenty-four (24) hours between coats (including stripe coat). Additional time may be necessary if low temperatures require an increase in the necessary cure time.
- H. Payment is incidental to interior dry touch-up and paint.

4.14 EXTERIOR STEEL COATING APPLICATION

- A. The Contractor shall apply a three (3) coat zinc epoxy urethane system to all exterior steel prepared surfaces and appurtenances.
- B. Surface preparation and paint requirements have been previously defined.
- C. Apply all coatings by brush and roller. Spray application is prohibited unless the containment system is in place.

- D. Apply each coat at the following rates:

Manufacturer	Minimum	Maximum
<u>Sherwin Williams</u>	<u>D.F.T.</u>	<u>D.F.T.</u>
Primer SW Corothane Galvapak 1k	2.0	3.0
Epoxy Intermediate SW Acrolon 218 HS	3.0	4.0
<u>Urethane I Topcoat SW Fluorokem HS</u>	<u>2.0</u>	<u>3.0</u>
Total	7.0	10.0

Manufacturer	Minimum	Maximum
<u>Tnemec</u>	<u>D.F.T. mils</u>	<u>D.F.T. mils</u>
Primer-Series 91 Hydrozinc	2.5	3.0
Intermediate-Series 73	2.0	3.0
<u>Topcoat-Series V700</u>	<u>2.0</u>	<u>3.0</u>
TOTAL DFT	6.5	9.5

- E. Each full coat to be a different color from the previous coat and is to be approved by the Engineer. No color bleed-through should occur if proper application rates are observed.
- F. Apply all coats in uniform color and sheen without streaks, laps, runs, sags, cloudy, or missed areas. Correct all defects before application of the successive coat.
- G. Allow a minimum of twenty-four (24) hours between coats (including stripe coat). Additional time may be necessary if low temperatures require an increase in the necessary cure time.
- H. The Contractor should be advised that Robinson Engineering, Inc. will take mil readings on the exterior per SSPC-PA2 which requires gauge adjustment from magnetic plane to peak plane.
- I. Payment is a separate line item "EXTERIOR TANK REPAINT WITH FULL CONTAINMENT" which the Owner reserves the right to delete.

4.15 TANK LETTERING AND LOGO ALLOWANCE

- A. The Contractor shall paint the tank Lettering and Logo in style and locations as current.
- B.

<u>Manufacturer</u>	<u>System</u>
Sherwin Williams	Fluorochem HS
Tnemec	V700
- C. Apply lettering coating at 2.0 to 3.0 mils.
- D. Payment is a separate line item "TANK LETTERING AND LOGO ALLOWANCE" which the Owner reserves the right to delete.

4.16 CONCRETE FOUNDATION CRACK REPAIR

- A. The Contractor shall remove all loose, soft, or mottled grout from the riser and top of the foundation. Removal of grout shall be by hand, hammer, or chisel.
- B. The Contractor shall pressure wash the grout using a minimum nozzle tip pressure of 2,000 psi. All surfaces shall be free of all standing water or frost in accordance with the manufacturer's recommendations. Surface to be Saturated Surface Dry (SSD).
- C. Properly and thoroughly mix the grout in accordance with the manufacturer's recommendations as a dry mix.
- D. Force the grouting material into the annular space to ensure there are no voids. Make flush with the baseplate.
- E. Payment is a separate line item "CONCRETE FOUNDATION CRACK REPAIR" which the Owner reserves the right to delete.

4.17 CONCRETE FOUNDATION COATING APPLICATION

- A. The Contractor shall apply a two (2) coat epoxy system to all prepared concrete foundation areas.
- B. All foundations are to be water cleaned. Remove dirt 3" below grade around the entire foundation prior to coating, backfill once topcoat is dry to the touch. Apply topsoil and seed to disturbed areas as specified in section 7.2 Site Restoration.
- C. Apply each coat at the following rates:

Manufacturer	Minimum	Maximum
<u>Sherwin Williams</u>	<u>D.F.T.</u>	<u>D.F.T.</u>
Primer Macropoxy 5500	2.5	3.5
<u>Topcoat Macropoxy 5500</u>	<u>2.5</u>	<u>3.5</u>
Total	5.0	7.0

Manufacturer	Minimum	Maximum
<u>Tnemec</u>	<u>D.F.T. mils</u>	<u>D.F.T. mils</u>
Primer-Series N69	3.5	5.5
<u>Topcoat-Series N69</u>	<u>3.5</u>	<u>5.5</u>
TOTAL	7.0	11.0

- D. Allow the manufacturer's minimum time between coatings.
- E. Payment is a separate line item "CONCRETE FOUNDATION COATING APPLICATION" which the owner reserves the right to delete.

PART 5 - METAL EQUIPMENT REPAIR/REPLACEMENT

5.1 – GENERAL

5.1.01 REFERENCES

- A. AWWA D100 Weld Standard
- B. AWS Weld Standard
- C. API 650 Standard

5.1.02 OMISSIONS

- A. The specifications include all work and materials necessary for completion of the work. Any incidental item(s) of material, labor, or detail(s) required for the proper execution and completion of the work are included.

5.1.03 DEFINITIONS

- A. Ground Flush: Ground even with adjacent metal, no transition.
- B. Ground Smooth: Ground welds to the point that no cuts or scratches occur when rubbing your gloved hand over the weld. Rebuild any holes or cavities discovered during grinding with additional weld.

5.1.04 WELDER QUALIFICATION

- A. Certified for type of weld specified.
- B. Welder shall be experienced in industrial or heavy commercial welding and experienced in elevated work.

5.1.05 SUBMITTALS

- A. Safety Data Sheets for all job materials as required by OSHA.
- B. Welders certification.
- C. Materials List.

5.1.06 DESIGN SUBMITTALS

- A. All modifications that may be considered structural, as determined by the Board of Professional Engineers, State of Illinois, shall be designed and sealed by a Structural Engineer registered in the State of Illinois. This includes replacement of existing steel, which includes but is not limited to all roof designs and appurtenances, girders, balconies, ladders, and manways/hatches.
- B. Drawings included for Part 5 work are included for conceptual design and/or to establish minimal dimensions only. Contractor should field verify all dimensions prior to submittal preparations and installation.

5.2 – PRODUCTS

5.2.01 STEEL PLATING AND OTHER STRUCTURAL SHAPES

- A. ASTM – A36.

5.2.02 BOLTS AND NUTS

- A. Stainless Steel
 - 1. ASTM F594G – 316 Stainless Steel Bolts.
 - 2. ASTM F594G – 316 Stainless Steel Nuts.
- B. Galvanized Steel
 - 1. ASTM A307 Grade A zinc coated Steel Bolts.
 - 2. ASTM A307 Grade A zinc coated Nuts.

5.2.03 WELDS

- A. FINAL – E70XX Electrodes.
- B. Root – E60XX Electrodes.
- C. Wire – ER70S Electrodes.

5.2.04 CATHODIC CLIPS

- A. Cathodic system clips and coupling for interior, submerged cathodic protection system.

5.3 – EXECUTION – WORK ITEMS

5.3.01 FROST FREE ROOF VENT

- A. The Contractor shall provide a frost-free roof vent that is designed to operate if the screens frosts over.
- B. Screens shall be reinforced with steel frames designed to loft off the bearing surfaces in the event the screens frost over and either positive or negative tank pressure is experienced. Screen blowout provisions during frost conditions shall not be provided. Vent shall be weather-protected type. Entrance of rain or snow shall be prevented by overhanging and overlapping protective cap protruding down to the bottom of the course screens.
- C. Stainless steel No. 16 mesh screens shall be provided.
- D. Vent shall have flanged bottom to bolt down onto a new installed vent assembly welded to the tank shell. (See figure 5-1)
- E. Payment is a separate line item “FROST FREE ROOF VENT” which the Owner reserves the right to delete.

5.3.02 OVERFLOW FLAP GATE WITH SCREEN

- A. The Contractor shall construct and install a new overflow flap. All welds shall be continuous.
- B. Flap shall allow for closed positioning during non-flow conditions, and open operation during overflow conditions.
- C. The Contractor shall field verify existing overflow pipe dimensions. Lever arm configuration near hinge may vary if prior written approval is granted by the Engineer.

- D. Use a non-ferrous or stainless-steel screen material with a minimum opening of 1/4 in. x 1/4 in., and a maximum opening of 3/8 in. x 3/8 in. (See figure 5-2)
- E. Payment is a separate line item "OVERFLOW FLAP GATE" which the Owner reserves the right to delete.

5.3.03 INTERIOR WET ROOF HATCH REPLACEMENT

- A. Remove the existing access tube roof hatch. Contractor shall dispose of hatch properly.
- B. Furnish and install a 30-inch diameter hinged lockable hatch.
- C. Weld a 6-inch X 3-inch X 5/8-inch diameter hand hold on roof. (Location to be determined by Engineer). (See figure 5-4)
- D. Payment is a separate line item "INTERIOR WET ROOF HATCH REPLACEMENT" which the Owner reserves the right to delete.

5.3.04 INSTALL ROOF RAILING

- A. Provide a circular roof handrail to encompass all centrally located roof appurtenances.
- B. Install a 42-inch-high railing, 20 feet in diameter and shall include a top rail, intermediate rail, and toe rail on the tank roof. (See Drawing 5-5 & 5-6)
- C. Contractor shall relocate Aviation light to new roof handrail.
- D. Contractor shall relocate antenna mounts and antenna to new roof handrail.
- E. Payment is a separate line item "INSTALL ROOF RAILING" which the Owner reserves the right to delete.

5.3.05 INSTALL HANDHOLDS

- A. The Contractor shall furnish and install handholds at platform and roof openings for entering and exiting safety.
- B. Payment is a separate line item "INSTALL HANDHOLDS" which the Owner reserves the right to delete.

5.3.06 CATHODIC PROTECTION SYSTEM UPGRADE

- A. Remove existing non-functioning equipment in tank interior wet.
- B. Install cathodic clips and pressure fitting for new submerged cp system.
- C. Install new submerged cp system and rectifier (Contractor to supply material and installation submittal).
- D. Payment is a separate line item "CATHODIC PROTECTION SYSTEM UPGRADE" which the Owner reserves the right to delete.

5.3.07 SEAM SEAL ROOF PLATE LAP JOINTS

- A. The Contractor shall seam seal the roof plate lap joints on the wet interior following coating application.
- B. Payment is a separate line item "SEAM SEAL ROOF PLATE LAP JOINTS" which the Owner reserves the right to delete.

5.3.08 WELD ACCESS TUBE VENT

- A. Eliminate access tube vent with addition of ¼" steel plate welded to access tube and tank shell (See figure 5-3).
- B. Payment is incidental to exterior tank repaint with full containment.

5.3.09 REPLACE EXPANSION JOINT

- A. Remove existing glandular expansion joint (Contractor to properly dispose) and replace with a bellows type expansion joint.
- B. Payment is a separate line item "REPLACE EXPANSION JOINT" which the Owner reserves the right to delete.

5.3.10 INSTALL MUD VALVE

- A. Install a mud valve in wet interior tank bottom and route discharge to tank drain line. (See figure 5-7)
- B. Payment is a separate line item "INSTALL MUD VALVE" which the Owner reserves the right to delete.

5.3.11 OVERFLOW VORTEX BREAK REPLACEMENT

- A. Remove existing corroded vortex break and replace in-kind with a new steel vortex break.
- B. Payment is Incidental to wet interior repaint.

5.3.12 FILL PIPE INSULATION AND JACKET

- A. The Contractor shall remove and dispose of all existing fill pipe insulation.
- B. The Contractor shall furnish and install 2-inch molded rigid foam polyisocyanurate insulation complete with vapor barrier jacket on inlet/outlet pipe. Securely fasten the insulation to the pipe using aluminum cover.
- C. Payment is a separate line item "FILL PIPE INSULATION AND JACKET" which the Owner reserves the right to delete.

5.3.13 TANK MIXER AND APPURTENANCES

A. TANK MIXER AND APPURTENANCES

1. Provide one submersible mixer for installation in a 500,000-gallon steel waterspheroid storage tank. Submersible mixer and appurtenances shall be as specified herein, and as needed to provide a complete and proper installation.

Work includes:

- a) One (1) submersible tank mixer with 50' of cable.
 - b) One (1) manufacturer's suspended vertical mixer mounts with appurtenances for hanging from storage tank roof, including watertight penetrations.
 - c) One (1) manufacturer's control panel with dry contacts for low tank level input.
 - d) All electrical and SCADA connections for one (1) tank including adding one (1) new 20-amp GFCI feed breaker in existing Lighting Panel and incorporating one new 20-amp GFCI feed breaker in new lighting panel.
 - e) All tank roof, riser pipe and other required penetrations for one (1) tank.
 - f) All electrical equipment as described herein for one (1) tank.
 - g) All brackets and supports for installation of mixer, mixer mount, control panel, and conduit for a complete installation for one (1) tank.
 - h) All welding, drilling and paint repairs for complete installation for one (1) tank.
 - i) Contractor and equipment supplier shall coordinate with Owner on existing SCADA system to determine compatibility.
2. Related Work
 - a) Documents affecting work under this Section include but are not necessarily limited to General Conditions and Supplementary Condition Requirements of these Specifications.
 3. Shop Drawings Submittals
 - a) Submit shop drawings including assembly layout, drawings and dimensions, drive assembly, motor data, anchorage requirements, control panel schematics and panel layout drawings, and manufacturer's detailed specifications and recommended installation procedures.
 4. Operation and Maintenance Manuals
 - a) Submit three (3) operation and maintenance manuals for mixers.
 5. Certificates and Guarantees
 - a) Provide copies of Manufacturer's 2-year Equipment Guarantee for mixing equipment.
 6. Submersible Mixer and Appurtenances
 - a) Submersible tank mixer; Kasco, Certisafe NSF 61 Approved Mixer Model 2400C61050, with ½ HP motor with operation on 120-volt, single phase, 60 Hz power supply and 50 feet of 3 wire 16-gauge cable capable of being lowered to near bottom of tank through access manway. (Kasko Marine contact; Lucy Allen (715) 262-2335 (or equal).
 - b) Suspend vertical mixer mount, Kasco Marine, Model SM-100 with appurtenances for hanging from storage tank roof, including stainless steel chains, fittings, plugs and watertight penetrations with a waterproof electrical box (or equal).
 - c) UL5058 listed control panel, Kasco Marine, Model CS-100, with dry contact for low tank level input, HOA control switch, indicator LED light and SCADA I/O for remote operating and monitoring (or equal).
 - d) No substitutions in equipment allowed without Owner's pre-approval.

B. ELECTRICAL EQUIPMENT

1. General

- a) Provide all electrical equipment required for a complete and proper operating system.
- b) Comply with the latest edition of NFPA 70/NEC.

2. Low Voltage Power Conductors and Cables

- a) Insulation: Rated for 600 volts.
 - Use dual rated type THHN/THWN in temperature controlled indoor locations.
 - Use Type XHHW in underground locations and unheated structures.
- b) Use standard wire for control conductors.
- c) Use twist type insulated wire nut solderless connectors.
- d) Provide type-on, self-laminating vinyl, heat shrink polyolefin or nylon clip-sleeve, alpha-numeric, permanent wire markers.

3. Grounding and Bonding of Electrical Systems

- a) Use copper ground wire only.

4. Hangers and Supports for Electrical Systems

- a) Provide zinc galvanized, cadmium plated steel, or malleable iron supporting devices for rigid metal conduit system.
- b) Provide PVC supports, clamps and hardware for nonmetallic conduit system.

5. Raceway and Boxes for Electrical Systems

- a) Rigid Metal Conduit (RMC) and fittings:
 - 1) Galvanized rigid steel conduit and fittings
 - Conduit: Comply with ANSI C80.1 and UL 6 standards.
 - Fittings: Comply with UL 514B and NEMA FB1 & FB2.10 standards.
- b) Rigid Non-Metallic conduit
 - 1) Comply with ANSI C80.3, ASTM F512, NEMA TC-2 and UL 651 standards.
 - 2) Use heavy wall, sunlight resistant, PVC Schedule 80.
 - 3) Rated for use with 90-degree conductors.

6. Low Voltage Circuit Protection Devices

- a) Provide low-voltage circuit protective devices as specified herein and as needed for a complete and proper installation.
- b) Comply with UL 489 requirements.
- c) Provide thermal and magnetic protection.
- d) Provide permanent trip lighting panel circuit breakers as follows:
 - UL listed SWD (switching duty) on 120-volt circuits where switched circuits are indicated.
 - Short circuit rating (integrated equipment rating): 10,000 RMS symmetrical amps minimum.

C. PAINTING

- 1. Paint all new conduit and hangers and make any repairs to tank as a result of tank penetrations and/or attaching brackets including routing of conduits.
- 2. When painting any galvanized surfaces, contractor shall prepare and coat surfaces in accordance with SSPC-GUIDE 19.

D. GENERAL CONSTRUCTION REQUIREMENTS

1. Comply with requirements of federal, state local and other governmental agencies having jurisdiction.
2. Install the submersible mixer where directed in accordance with the manufacturer's recommendations.
3. Drill holes in the storage tank roof adjacent to the roof access manway for installation of the submersible mixer. Locations of drilled holes and access to submersible mixer to be coordinated with and approved by Owner prior to installation.
4. Provide and install a weatherproof "through tank fitting" into the resulting holes and attached to a weatherproof junction box, where electrical connections will be made.
5. Install mixer with the retrieval chains through the manway within arm's reach of manway and lower to the tank bottom.
 - a) Route mixer power cord and stainless-steel retrieval chain from the mixer up to the through tank fitting to the junction box at the top of the tank.
 - b) Connect mixer retrieval chain with cable strain relief to the quick link connected to the through tank fitting.
6. Route conduit and 3-conductor power cable from junction box at top of tank over to access tube, utilizing flexible conduit where for junction box mounting as appropriate.
7. Penetrate access tube at top of tank and provide watertight fitting for power supply into access tube. Locations of conduit across top of tank to be coordinated with and approved by Owner prior to installation.
8. Route conduit and 3 conductor power cable within access tube from top of tank to control panel. Provide flexible conduit at location to panel where appropriate. Location of conduit routing within access tube to be coordinated with and approved by Owner prior to installation.
9. Locate control panel in base of elevated tank near lighting panel. Location of lighting panel to be coordinated with and approved by Owner prior to installation.
10. Provide power from lighting panel to control panel within conduit and connect to new 20-amp GFCI feed breaker. Location of power supply conduit from lighting panel to control panel to be coordinated with and approved by Owner prior to installation.
11. Provided SCADA connection for low water level provided by connection to SCADA panel. SCADA monitoring and control interface to include:
 - a) Motor current: 4-20ma current transducer output to SCADA system. Transducer shall be a 24Vdc loop powered.
 - b) SCADA start/stop: auto mode, relay shall provide interface to existing SCADA system for remote start/stop function.
 - c) Auxiliary interlock: Shall prevent running the mixer dry (out of water). Shall be a Dry Contact closure input to control center.
12. Provide startup services by Manufacturer with Owner to confirm operation and SCADA capabilities.
13. Payment is a separate line item "TANK MIXER AND APPURTENANCES" which the Owner reserves the right to delete.

5.3.14 REPLACE ACCESS TUBE MANWAY GASKET

- A. Remove existing access tube manway gasket (Contractor to properly dispose) and replace with a new gasket.
- B. Payment is incidental to wet interior repaint.

5.3.15 WELD CATHODIC COVERS

- A. The Contractor shall weld plates over the cathodic protection access holes in tank roof. (See figure 5-8)
- B. Payment is a separate line item "WELD CATHODIC COVERS" which the Owner reserves the right to delete.

PART 6 – INSPECTION, TESTING & RECORD KEEPING

- A. The Contractor shall schedule and coordinate his work with the Engineer to allow for expeditious inspection by the Owner or their designated representative, including the use of ladders, scaffolds, lighting and lifts to provide regular access for inspections.
- B. All surfaces ready to receive a coating must be approved by the Engineer before the application of the next succeeding specified coat. The Contractor may, at the direction of the Engineer be required to remove and/or recoat all such work at no additional cost to the Owner.
- C. Wet film thickness readings shall be made by the painting Contractor at least once every thirty (30) minutes to make certain that proper film thickness is being achieved. More frequent checks may be required by the Engineer at his direction.
- D. The Owner reserves the right to perform low voltage holiday tests on the exterior and interior coatings.
- E. The Contractor shall record temperature, humidity, and dew point into a log including date and time reading obtained. The records shall be entered into a Windows compatible file such as Excel and a hard copy submitted with monthly pay requests for those months when coatings are applied. A complete coating summary report for the project is to be furnished to the Engineer at the end of the project, or in the interim, if requested.
- F. Paint films showing sags, checks, blisters, teardrops, curtains, fisheyes, or fat edges will not be accepted. Films exhibiting any of these defects shall be entirely removed and the surface recoated at no additional cost to the Owner.

PART 7 – SITE CLEAN UP AND RESTORATION

7.1 - SITE CLEAN-UP

The Contractor shall maintain the construction site in a neat and orderly manner throughout the duration of the project. Any issues brought to the attention to the Contractor shall be addressed immediately.

7.2 SITE RESTORATION

- A. The Contractor is to report any damaged ground at the construction site in writing prior to mobilization of equipment, otherwise all repairs to the damaged ground will be the responsibility of the Contractor.
- B. Refill all holes, ruts etc. and level area around the construction site to the original grade.
- C. Fill material to be clean soil, no gravel, rocks or construction debris is to be used as fill material without the Owner's consent.
- D. Bring soil to a friable condition by disking, harrowing, or otherwise loosening and mixing to a depth of 3 in. – 4 in. Thoroughly break all lumps and clods.
- E. Rake area to be seeded. Sow seed at a minimum rate of 220 lbs./acre. Use seed intended for the climate.
- F. Work to be completed to the Owner's satisfaction.
- G. Cost is incidental to exterior tank repaint with full containment.
- H. Any imported topsoil shall meet IDOT standard specifications for road and bridge construction section 211 and 1081.05(a).

PART 8 – DISINFECTION

- A. The Contractor shall disinfect the completely painted structure in accordance with AWWA Standard C652 Chlorination Method No.2 or 3.
- B. Furnish the material and labor necessary to disinfect the structure in the required manner. Assist Owner during filling and sampling. Promptly repair any defects in the work that may appear.
- C. Do not allow water to enter the distribution system until the structure is proven chemically and bacteriologically safe.
- D. Water vented to waste may not contain any substances in concentrations that can adversely affect the natural environment. Water discharged to the surface shall not contain any measurable total residual chlorine.
- E. The Contractor will be responsible to pay any and all additional expenses if it is necessary to repeat the testing and disinfection procedure as a result of defective work or defective testing.
- F. Cost is incidental to wet interior repaint.

Project Drawings

Pressure Vacuum Vent

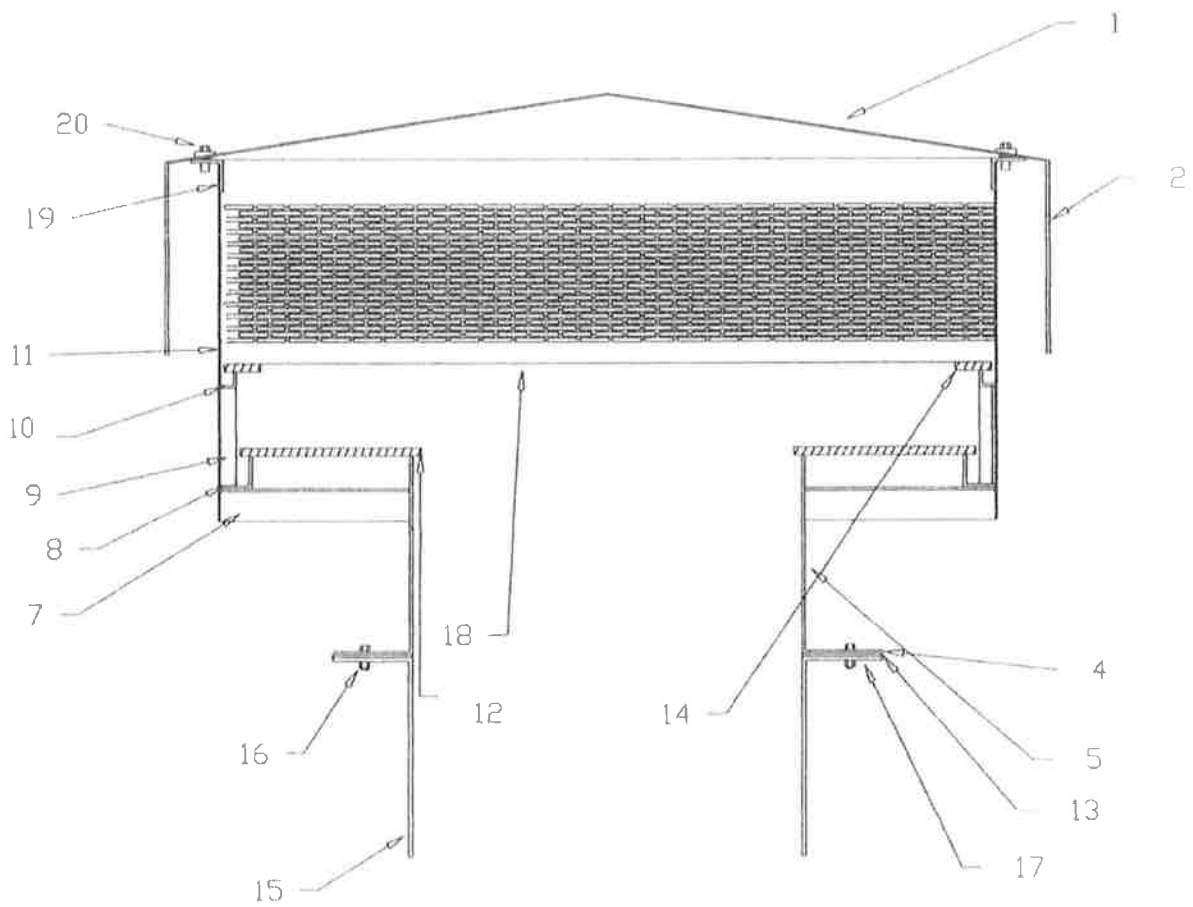


FIGURE 5-1

Material Specification for 24" Vent

1. 1/8" x 54 3/4" plate coned to 1" in 12" min.
2. 1/8" x 12" plate rolled to 54 3/8" I.D.
- 3.
4. 24" I.D. x 34" O.D. x 3/16" plate
bolt circle (8) 7/16" dia. Holes @ 15" rad
5. 12" x 3/16" plate rolled to 24" I.D.
- 6.
7. (6) 2" x 2" x 3/16" angle 11 7/8" long
8. 2" x 2" x 3/16" angle rolled leg out to 48" O.D.
9. (6) 1" x 1" x 6" angle
10. 1" x 1" x 3/16" angle rolled leg out to 48" O.D.
11. 1/8" x 22" plate with integrated bird screen rolled to 48" I.D.
12. Linear High Density Poly-Ethylene vacuum pallet 45 1/2" O.D x 23" I.D. 1/2" tk.
13. 1/8" red rubber gasket 24" I.D. 34" O.D.
14. Linear High Density Poly-Ethylene pressure pallet 47 1/2" O.D. 43" I.D. 1/2" tk.
15. 1/4" x 12" steel plate rolled to 24" I.D.
16. 3/8" x 1" s.s. bolt and nut
17. 1/4" steel plate 24 1/2" I.D. x 34" O.D.
18. 16 x 16 x .018 316 s.s. screen 47 1/2" O.D.
19. 2" x 2" x 3/16" angle rolled leg out to 47 5/8" I.D.
20. 3/8" x 1 1/4" s.s. bolt and 3/8" wedge washer

All Material is 3003 or 5052 aluminum Unless noted otherwise

All dimensions +/- 1/8" in tolerance

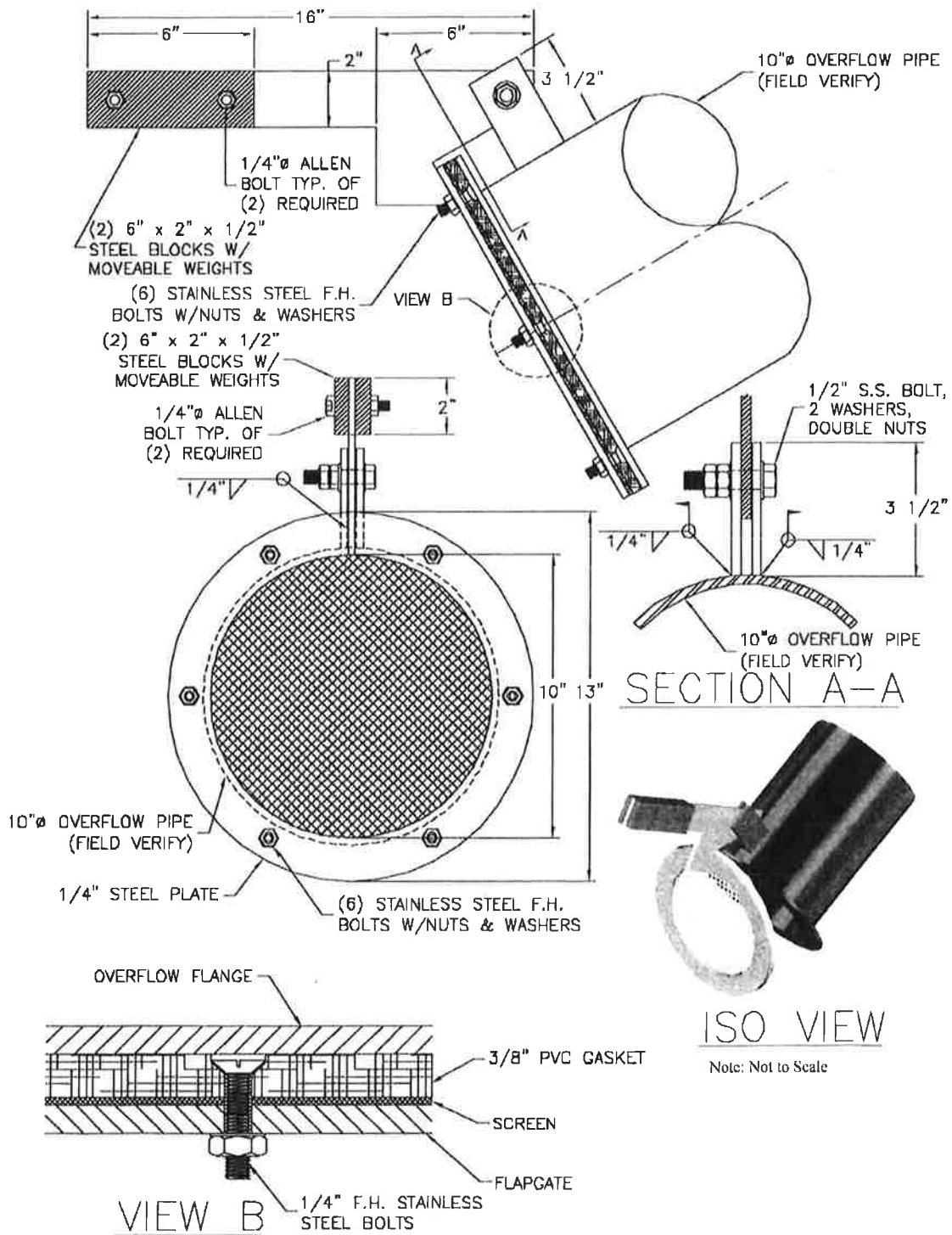


FIGURE 5-2

ACCESS TUBE AIR GAP MODIFICATION

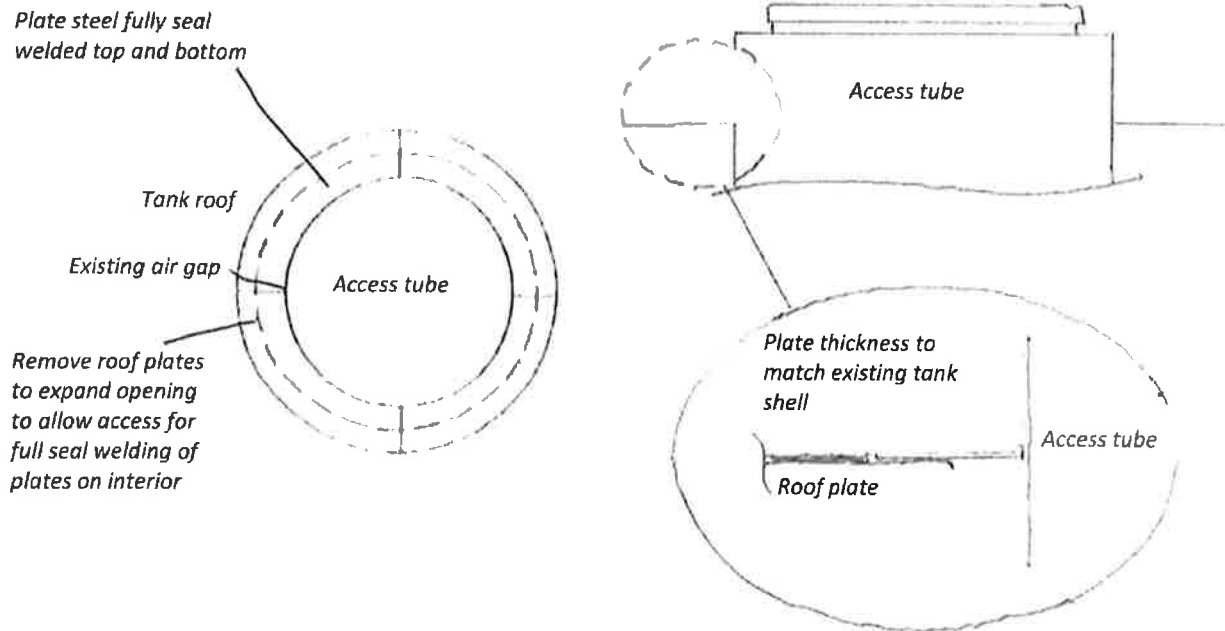


FIGURE 5-3

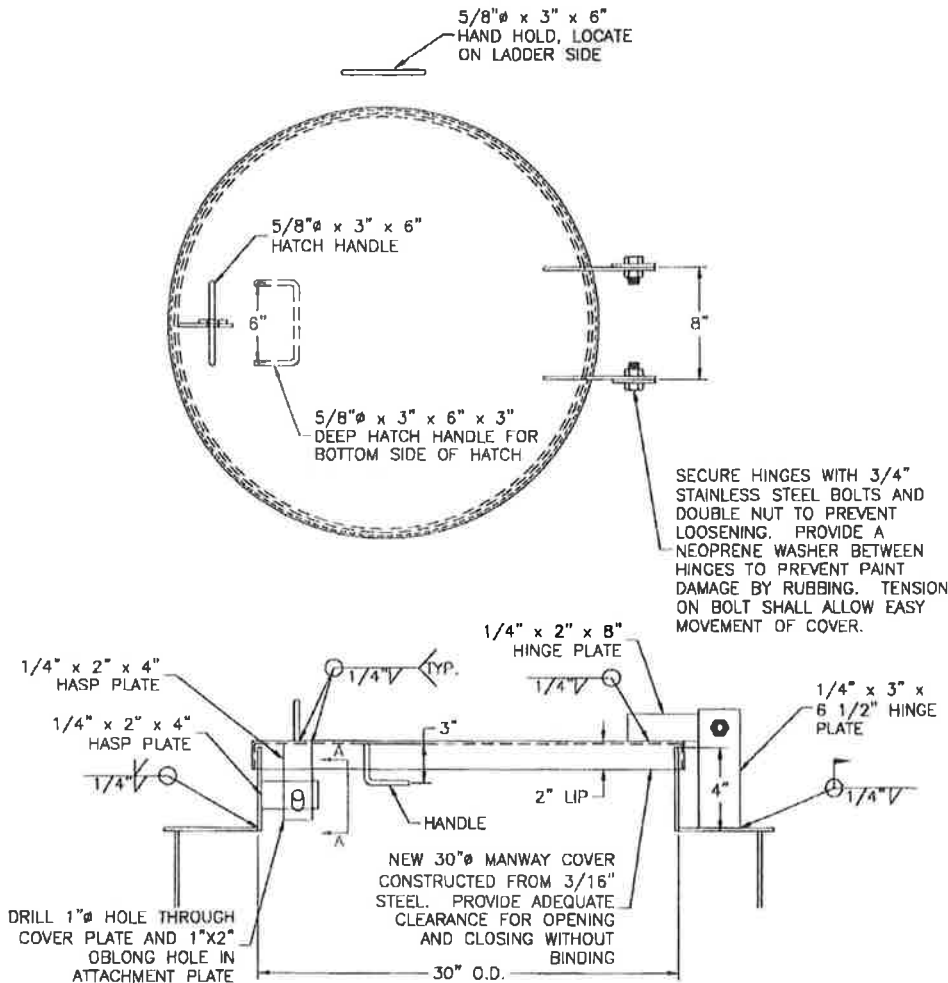


FIGURE 5-4

Project Drawings

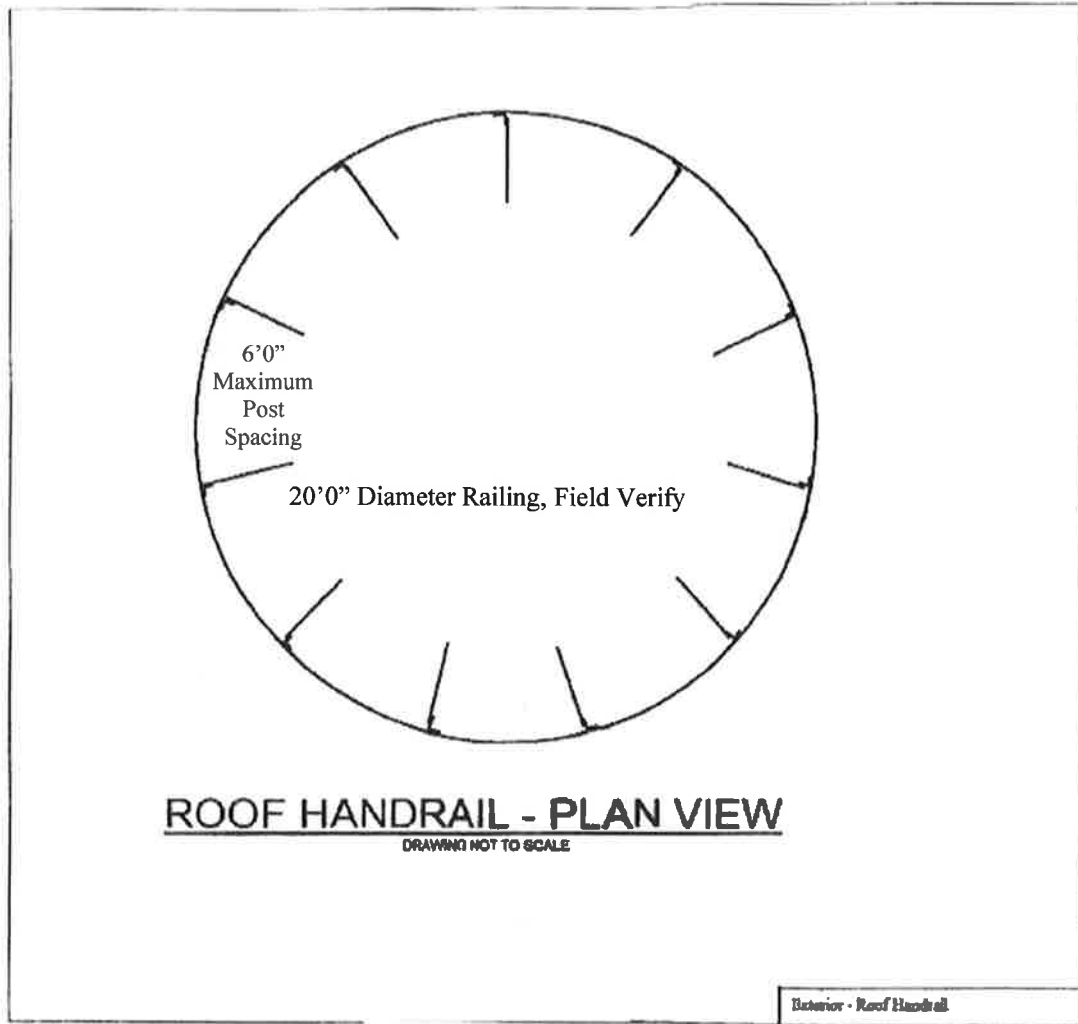


FIGURE 5-5

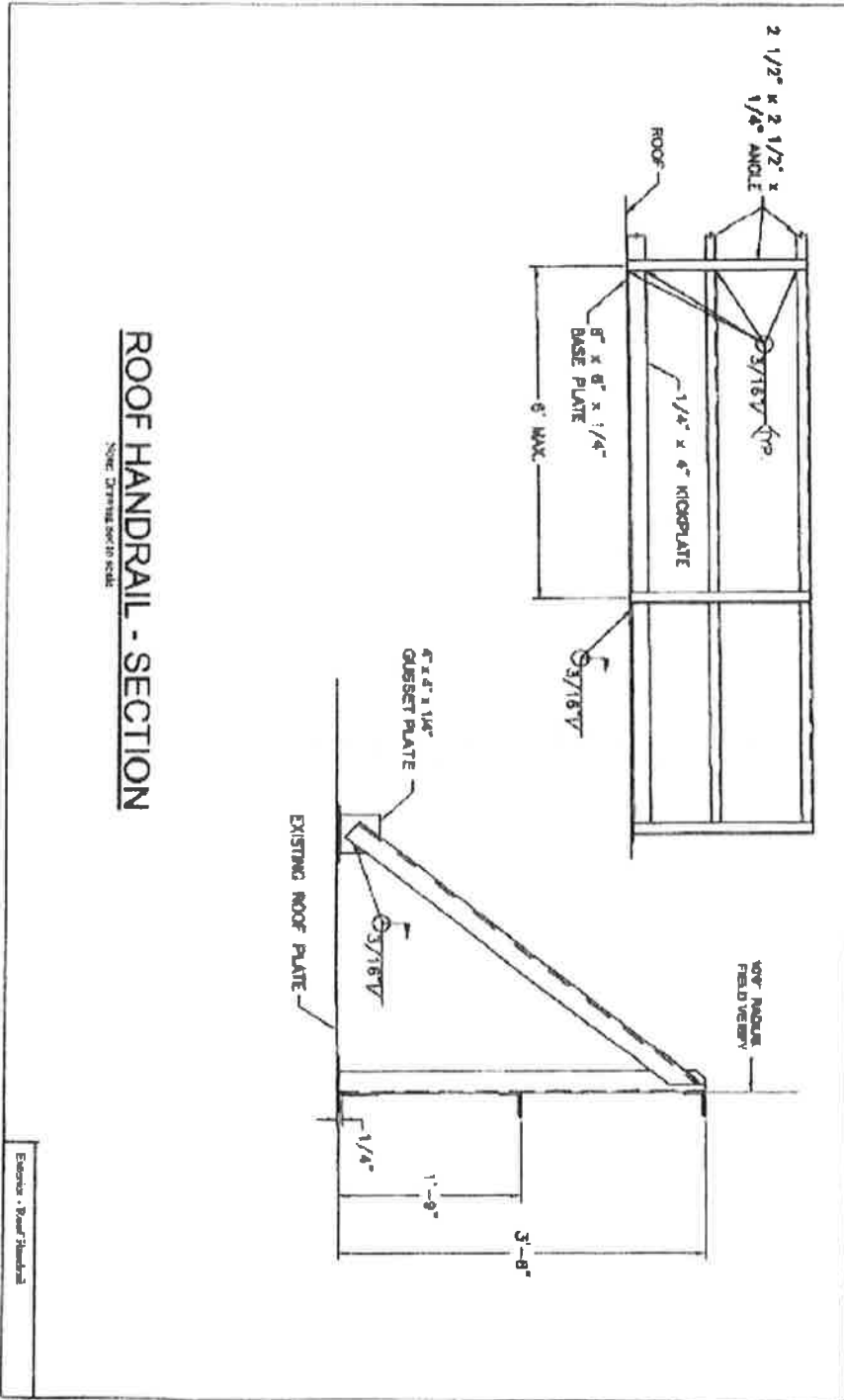


FIGURE 5-6

MUD VALVE INSTALL

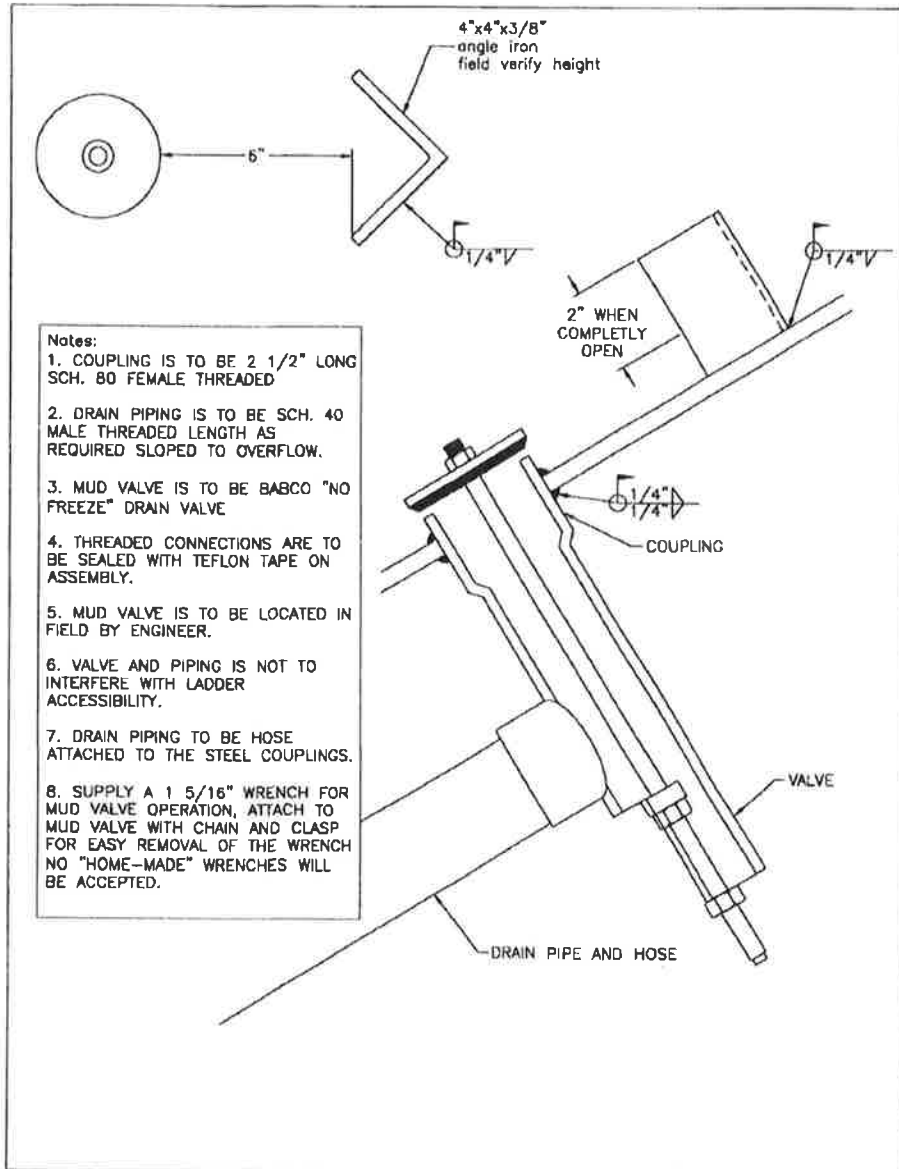
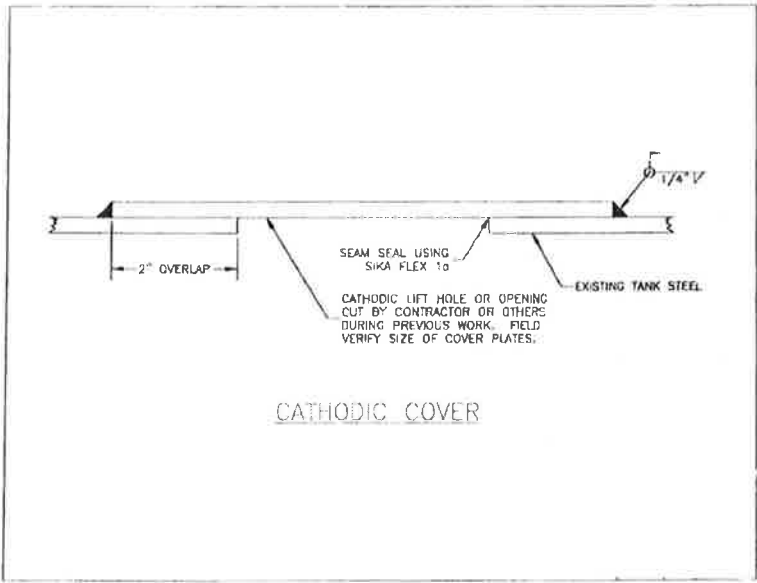


FIGURE 5-7



DRAWING 5-8

Limits of Project Site

