

# **CONTRACT DOCUMENTS AND SPECIFICATIONS**

**for**

## **City of Portsmouth Motor Vehicle Fuel System Replacement**

**BID #14-23**

**Karen S. Conard, City Manager**

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City of Portsmouth  
Portsmouth, NH  
Department of Public Works

**Motor Vehicle Fuel System Replacement**

**INVITATION TO BID**

**OWNER:** The City of Portsmouth is seeking Bids from qualified motor vehicle fuel system (“Pump and Tank”) contractors for the replacement of the fleet motor vehicle fuel system at Department of Works Headquarters on 680 Peverly Hill Road.

**BID OPENING:** Sealed Bids, plainly marked, “DPW Fuel Station Replacement, Bid Proposal #14-23” on the outside of the mailing envelope as well as the sealed bid envelope, addressed to the Finance/Purchasing Department, City Hall, 1 Junkins Avenue, Portsmouth, New Hampshire, 03801, will be accepted until **2:00 PM on March 30, 2023** at which time all bids will be publicly opened and read aloud. A mandatory pre-bid meeting will be held **March 1, 2023 at 9:00 AM** at the Department of Public Works, 680 Peverly Hill Road, in Portsmouth, N.H.

**BID DOCUMENTS:** Specifications, drawings, and bid proposal forms may be obtained from the City website at

<http://www.cityofportsmouth.com/finance/purchasing.htm>. Addenda to this bid document, if any, including written answers to questions, will be posted on the City of Portsmouth website at <http://www.cityofportsmouth.com/finance/purchasing.htm> under the project heading and updates will NOT be sent directly to vendors.

Questions may be addressed to the Purchasing Coordinator at [purchasing@cityofportsmouth.com](mailto:purchasing@cityofportsmouth.com) no later than **March 23, 2023**. Answers to questions will not be sent individually to bidders, but will be posted as addenda to the bid proposal forms on the City’s website.

**PRE-BID MEETING:** A mandatory Pre-Bid Meeting will be held at the Portsmouth Department of Public Works (DPW) Facility, 680 Peverly Hill Rd, Portsmouth, NH 03801, at **9:00 AM, on March 1, 2023.**

**BID SECURITY:** Each Bidder shall furnish a bid security in the amount of five percent (5%) of the bid. The bid security may be in the form of a certified check or a bid bond executed by a surety company authorized to do business in the State of New Hampshire, made payable to the City of Portsmouth, N.H.

**RESERVATION OF RIGHTS:** The City of Portsmouth reserves the right to reject any or all bids, to waive technical or legal deficiencies, and to accept any bid that it may deem to be in the best interest of the City.

**BID WITHDRAWAL:** No Bid shall be withdrawn for a period of 90 days after the opening of Bids without consent of OWNER.

**TIME FOR COMPLETION:** The Work shall be completed as described in Section 2 of General Requirements and Scope of Work.

## **INSTRUCTIONS TO BIDDERS**

### **BIDDING REQUIREMENTS AND CONDITIONS**

#### **ARTICLE 1 – DEFINED TERMS**

- 1.1 The Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:
- A. *OWNER* – The City of Portsmouth
  - B. *ENGINEER* – The engineering consulting firm that has been retained as the design engineer for this project.
  - C. *Bidder* - The individual or entity who submits a Bid directly to Owner.
  - D. *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.

#### **ARTICLE 2 – COPIES OF BIDDING DOCUMENTS**

- 2.1 Complete Bidding Documents will be available on the City of Portsmouth Purchasing Website: <https://www.cityofportsmouth.com/finance/purchasing-bids-and-proposals>
- 2.2 Complete Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete Bidding Documents.
- 2.3 Owner and Engineer, in providing Bidding Documents through the City's website, available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not authorize or confer a license for any other use.
- 2.4 Fee for Drawings and Documents:
- A. No monetary deposit is required to obtain an electronic copy of the Bidding Documents.

#### **ARTICLE 3 – QUALIFICATIONS OF BIDDERS**

- 3.1 Owner's decision as to qualification of the Bidders shall be final.
- 3.2 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.
- 3.3 Ability and Experience of Bidder:
- A. No award will be made to any bidder who cannot satisfy the Owner that he has sufficient ability and experience in this class of work and sufficient capital and plant to enable him to prosecute and complete the Work successfully within the time named. The Owner's decision

or judgment on these matters shall be final, conclusive, and binding.

- B. The Owner may make such investigations of Bidder's qualifications as it deems necessary, and the Bidder shall furnish to the Owner, under oath if so required, all such information and data for this purpose as the Owner may request.

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

##### **4.1 *Subsurface and Physical Conditions:***

- A. All information given on the Drawings or in the other Contract Documents relating to subsurface and other conditions, natural phenomena, existing pipes, and other structures is from the best sources at present available to the Owner. All such information is furnished only for the information and convenience of bidders and is not guaranteed.
- B. It is agreed and understood that the Owner does not warrant or guarantee that the subsurface or other conditions, natural phenomena, existing pipes or other structures encountered during construction will be the same as those indicated on the Drawings or in the other Contract Documents.
- C. It is agreed further and understood that no bidder or contractor shall use or be entitled to use any of the information made available to him or obtained in any examination made by him in any manner as a basis of or ground for any claim or demand against the Owner or the Engineer, arising from or by reason of any variance which may exist between the information made available and the actual subsurface or other conditions, natural phenomena, existing pipes or other structures actually encountered during the construction work, except as may otherwise be expressly provided for in the Contract Documents.
- D. The Supplementary Conditions identify:
  - 1. Those reports known to Owner of explorations and tests of subsurface conditions at or contiguous 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).
- E. Copies of reports, drawings, and land use restrictions referenced in Paragraph 4.1.D are included as Attachment 1 and Attachment 2. 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 4.02 of the General Conditions has been identified and established in Paragraph 4.02 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.
- F. Borings have been made in the approximate locations indicated on the drawings. Logs of the borings are included in the Geotechnical Report in Attachment 1 of the Technical Specifications.

4.2 *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.

4.3 *Hazardous Environmental Condition*

- A. The Supplementary Conditions identify any reports and drawings known to Owner relating to a Hazardous Environmental Condition identified at the Site.
- B. Copies of reports, drawings and land use restrictions referenced in the Supplementary Conditions 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 4.06 of the General Conditions has been identified and established in Paragraph 4.06 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.

4.4 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 subsurface or physical conditions appear in Paragraphs 4.02, 4.03, and 4.04 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 4.06 of the General Conditions.

4.5 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. Prospective Bidders who wish to visit the site must contact Al Pratt, Water Resource Manager (tel. 603-520-0622) during working hours (Monday through Friday, 7:30 A.M. to 3:30 P.M.) to arrange an appointment. No questions will be answered during these appointments. 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. Bidder shall comply with all applicable Laws and Regulations relative to excavation and utility locates.

4.6 Reference is made to Article 7 of the Supplementary Conditions for the identification of the general nature of other work that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) that relates to the Work contemplated by these Bidding Documents. 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.

4.7 It is the responsibility of each Bidder before submitting a Bid to:

- A. examine and carefully study the Bidding Documents, 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, and performance of the Work;
  - D. carefully study all: (1) all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in Paragraph 4.02 of the Supplementary Conditions as containing reliable "technical data," and report of Environmental Assessment, if any, at the Site that have been identified in the Paragraph 4.06 of the Supplementary Conditions as containing reliable "technical data";
  - E. consider the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Bidder's safety precautions and programs;
  - 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(s) bid and within the times required, 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.
- 4.8 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**

- 5.1 A **mandatory** pre-Bid conference will be held at **9:00 A.M. local time on March 1, 2023** at the **Portsmouth Department of Public Works, 680 Peverly Hill Road, Portsmouth NH**. A site tour will follow the conference. Representatives of Owner and Engineer will be present to discuss the Project. Bidders are required to attend and participate in the conference. Engineer will transmit through the City of Portsmouth Purchasing website, to all prospective Bidders of record such Addenda as Engineer considers necessary in response to questions arising at the conference. Oral statements may not be relied upon and will not be binding or legally effective.

#### **ARTICLE 6 – SITE AND OTHER AREAS**

- 6.1 The Site is identified in the Bidding Documents. 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.
- 6.2 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 beyond those indicated in the Contract Documents are to be obtained and paid for by Contractor.
- 6.3 The Contractor shall not work on property requiring obtaining of an easement until the Owner has obtained the necessary easement.
- 6.4 The Contractor shall have no claim for additional compensation or damage on account of any delay in obtaining the necessary easements.

#### **ARTICLE 7 – INTERPRETATIONS AND ADDENDA**

- 7.1 All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda through the City of Portsmouth Purchasing Website. Questions received less than **ten days** prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- 7.2 To receive consideration, such questions shall be submitted in writing to the City's Purchasing coordinator ([purchasing@cityofportsmouth.com](mailto:purchasing@cityofportsmouth.com)) at least **ten days** before the established date for receipt of Bids. In general, the Engineer will neither approve nor disapprove particular products prior to the opening of Bids; such products will be considered when offered by the Contractor for incorporation into the Work.
- 7.3 The Owner will set forth as Addenda, which shall become a part of the Contract Documents, such questions received as above provided as in his sole judgment are appropriate or necessary and its decision regarding each. At least five days prior to the receipt of Bids, addenda will be posted on the City of Portsmouth Purchasing Website: <https://www.cityofportsmouth.com/finance/purchasing-bids-and-proposals>

- 7.4 The Contractor agrees to use the products and methods designated or described in the Specifications as amended by the Addenda.

#### **ARTICLE 8 – BID SECURITY**

- 8.1 A Bid must be accompanied by Bid security made payable to Owner in amount of **5 percent** of the Bidder's maximum Bid price and in the form of a treasurer's check, certified check, or a Bid Bond (on the form attached) issued by a surety meeting the requirements of Paragraphs 5.01 and 5.02 of the General Conditions.
- 8.2 The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract Documents, furnished the required contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults. The Bid security of other Bidders whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Agreement or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be returned upon request.
- 8.3 Bid security of other Bidders whom Owner believes do not have a reasonable chance of receiving the award may be returned sooner upon request.

#### **ARTICLE 9 – CONTRACT TIMES**

The Work shall be completed as described in Section 2 of the General Requirements and Scope of Work.

#### **ARTICLE 10 – LIQUIDATED DAMAGES**

- 10.1 Provisions for liquidated damages are set forth in the Agreement.

#### **ARTICLE 11 – SUBSTITUTE AND “OR-EQUAL” ITEMS**

- 11.1 The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration of possible substitute or “or-equal” items. Whenever it is specified or described in the Bidding Documents that a substitute or “or-equal” item of material or equipment may be furnished or used by Contractor if acceptable to Engineer, application for such acceptance will not be considered by Engineer until after the Effective Date of the Agreement.

#### **ARTICLE 12 – BASIS OF DESIGN AND MAJOR EQUIPMENT ITEMS**

##### *12.1 Basis of Design*

- A. Unless otherwise indicated, design of this Project is based upon the material or Supplier's equipment named first in the list of manufacturers in the Specifications. Engineer has performed an evaluation of other listed manufacturers for compliance with the requirements of the Contract Documents. When other manufacturers are listed, Contractor may be required to make modifications or adjustments, at Contractor's expense, to coordinate the

installation of the furnished equipment with associated elements of Work, such as piping and electrical connections, or support and mounting provisions.

### **ARTICLE 13 – NOT USED**

### **ARTICLE 14 – PREPARATION OF BID**

14.1 The Bid Form is included with the Bidding Documents. Additional copies may be obtained from [www.cityofportsmouth.com/finance/purchasing.htm](http://www.cityofportsmouth.com/finance/purchasing.htm).

- A. All blanks on the Bid Form shall be completed in ink and Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form.
- B. A Bid price shall be indicated for each Bid item and alternative listed therein.
- C. The Bid shall contain an acknowledgement of the receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.
- D. Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.
- E. All names shall be printed in ink below the signatures.
- F. It is the responsibility of the Bidder to submit a neat, accurate, and complete Bid.

14.2 The Bidder, when signing the Bid(s) shall meet the following requirements:

- A. A Bid by an individual shall show Bidder's name and Bidder's official address.
- B. 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.
- C. 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.
- D. A Bid by a joint venture shall be executed by each joint venture in the manner indicated on the Bid form. The official address of joint venture shall be shown.
- E. 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 shall be shown.

14.3 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder's state Contractor license number, if any, shall also be shown on the Bid form.

### **ARTICLE 15 – BASIS OF BID**

- 15.1 Bidders shall submit a price for each item in the Bid Form and include a separate price for each alternate described in the Bidding Documents as provided in the Bid Form. The price for each alternate will be the amount added to or deleted if Owner selects the alternate. The basis of award shall be as stated in Article 20.

#### **ARTICLE 16 – SUBMITTAL OF BID**

- 16.1 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 a plainly marked package 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 package plainly marked on the outside with the notation “**Portsmouth Motor Vehicle Fuel System Replacement, Bid No. 14-23.**” A mailed Bid shall be addressed to Finance/Purchasing Department, City Hall, 1 Junkins Avenue, Portsmouth NH 03801.
- 16.2 Bids received after the official Bid closure time will be returned to the Bidder unopened.

#### **ARTICLE 17 – MODIFICATION AND WITHDRAWAL OF BID**

- 17.1 A Bid may be modified or withdrawn by an appropriate document duly executed in the same 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.
- A. Withdrawn Bids may be resubmitted up to the time designated for the receipt of Bids provided that they are then fully in conformance with these Instructions to Bidders.

#### **ARTICLE 18 – OPENING OF BIDS**

- 18.1 Bids will be opened at the time and place indicated in the Advertisement or Invitation to Bid and, unless obviously non-responsive, 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 19 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE**

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

#### **ARTICLE 20 – EVALUATION OF BIDS AND AWARD OF CONTRACT**

- 20.1 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, 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 not be 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. Owner also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder.

- 20.2 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.
- 20.3 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.
- 20.4 In evaluating Bidders, Owner will consider the qualifications of Bidders and may consider the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the Supplementary Conditions. Bids from prequalified Bidders only will be accepted.
- 20.5 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 proposed for those portions of the Work in accordance with the Contract Documents.
- 20.6 In the event that there is a discrepancy in the Bid between the lump sum or unit prices written in words and figures, the prices written in words shall govern.
- 20.7 Bids will be compared based on the Base Bid Price and Total Bid Price including Unit Costs, with award made to whichever is in the best interest of the City.

#### **ARTICLE 21 – CONTRACT SECURITY AND INSURANCE**

- 21.1 **Article 5 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. When the Successful Bidder delivers the executed Agreement to Owner, it shall be accompanied by such bonds.

#### **ARTICLE 22 – SIGNING OF AGREEMENT**

- 22.1 When Owner issues a Notice of Award to the Successful Bidder, it shall be accompanied by the required number of unsigned counterparts of the Agreement along 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 the Drawings with appropriate identification.

#### **ARTICLE 23 – RETAINAGE**

- 23.1 Provisions concerning Contractor's rights to deposit securities in lieu of retainage are set forth in the Agreement.

#### **ARTICLE 24 – NOT USED**

**ARTICLE 25 – NOT USED**

**ARTICLE 26 – NOT USED**

**ARTICLE 27 – NOT USED**

**ARTICLE 28 – NON-DISCRIMINATION IN EMPLOYMENT**

- 28.1 Contracts for work under this proposal obligate the contractors and sub-contractors not to discriminate in employment practices.
- 28.2 Bidders shall, if requested, submit a compliance report concerning their employment practices and policies in order to maintain their eligibility to receive the award of contract.
- 28.3 Successful bidders shall, if requested, submit a list of all subcontractors who will perform work on the project.

**ARTICLE 29 – STATE AND FEDERAL INSPECTION**

- 29.1 Work performed on this project may be subject to inspection by representatives of the NH Department of Environmental Services and the US Environmental Protection Agency. Such inspection shall in no sense make the State or Federal Government a party to this contract, unless said Government is also the Owner, and will in no way interfere with the rights of either party hereunder.
- 29.2 Representatives of the State of New Hampshire Department of Environmental Services and the US Environmental Protection Agency shall be given Right of Access to all portions of the proposed work, including but not limited to actual work site, storage yards, offsite manufacturing and fabricating location and job records.

**CITY OF PORTSMOUTH, N.H.**

**Motor Vehicle Fuel System Replacement**

**BID**  
**BID NO. 14-23**

**ARTICLE 1 – BID RECIPIENT**

1.1 This Bid is submitted to:

City of Portsmouth, NH  
Finance/Purchasing Department  
1 Junkins Avenue  
Portsmouth, NH 03801  
*(Hereinafter called Owner)*

1.2 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

**ARTICLE 2 – BIDDER’S ACKNOWLEDGEMENTS**

2.1 Bidder accepts all of the terms and conditions of the Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for the Bid withdrawal time period specified in the Invitation to Bid or Instructions to Bidders after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

**ARTICLE 3 – BIDDER’S REPRESENTATIONS**

3.1 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the complete set of Bidding Documents, other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

<u>Addendum No.</u>	<u>Addendum Date</u>
_____	_____
_____	_____
_____	_____
_____	_____

B. Bidder has carefully examined the sites of the proposed work and fully informed and satisfied himself as to the conditions there existing, the character and requirements of the

proposed work, the difficulties attendant upon its execution and the accuracy of all estimated quantities stated in this Bid, and the Bidder has carefully read and examined the Bidding Documents therein referred to and knows and understands the terms and provisions thereof.

- C. Bidder 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.
- D. Bidder is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
- E. Bidder has carefully studied all: report of explorations and tests of subsurface conditions project area on the site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) that have been identified in SC-4.02 as containing reliable "technical data," and the Environmental Assessment Report for the subject project, if any, at the Site that have been identified in SC-4.06 as containing reliable "technical data."
- F. Bidder has considered the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; and the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Bidder's safety precautions and programs.
- G. Based on the information and observations referred to in Paragraph 3.01.F above, Bidder does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- H. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- I. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer is acceptable to Bidder.
- J. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.



#### **ARTICLE 4 – BIDDER’S CERTIFICATION**

4.1 Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
  - 1. “corrupt practice” means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;
  - 2. “fraudulent practice” means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
  - 3. “collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
  - 4. “coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

#### **ARTICLE 5 – BASIS OF BID**

5.1 Bidder shall complete the Work in accordance with the Contract Documents for the following unit prices or lump sum:

- A. Unit Prices shall be computed in accordance with Paragraph 11.03 of the General Conditions.

## **BID SCHEDULE**

This project will be bid as lump sum:

### **1. PORTSMOUTH MOTOR VEHICLE FUEL SYSTEM REPLACEMENT BASE BID – Scope of Work Items:**

- a) Remove existing motor fuel system including underground storage tanks.
- b) Install new motor fuel system including underground storage tanks.
- c) Install new rigid metal canopy.

In Figures \$ \_\_\_\_\_

In Words \$ \_\_\_\_\_

**NOTE:**

**The base scope of work including a complete project as depicted and described on the contract documents is included entirely within the lump sum for Work Item #1.**

**The unit price items outlined in Work Item #2 are contingent items that may be used (at the City's sole option) for assigning values to unit priced portions of contract changes and are included in the total price herein only for the purpose of bid evaluation. The Owner makes no representation that any quantity of any unit item will be awarded for the performance of the project.**

### **2. CONTINGENT UNIT PRICE Work Items:**

Unit Items				
Item	Unit	Unit Cost	Bid Evaluation Quantity	Total Bid Evaluation Cost
Labor and Equipment Associated with excavation of Petroleum-Impacted Soil beyond that included in the Scope of Work (Presumes that excavation will be conducted concurrent with or immediately following tank removal/installation such that additional mobilization will not be required)	half day		<b>4</b>	
Transport and Disposal of 1-6 drums of Petroleum-Impacted Soil (Including mobilization, transportation, labor, equipment, and tipping fees)	drum		<b>6</b>	
Transport and Disposal of >6 drums and less than 15 tons of Petroleum-Impacted Soil (Including mobilization, transportation, labor, equipment, and tipping fees)	ton		<b>10</b>	

**PRICE PROPOSAL (Continued)**

Transport and Disposal of >15 tons of Petroleum Impacted Soil (Including mobilization, transportation, labor, equipment, and tipping fees)	ton		<b>300</b>	
Backfill to replace Petroleum-Impacted Soil excavated from the Site (Including delivery, placement, and compaction)	ton		<b>15</b>	
Excess Residual Fuel/Sludge Removal, Transport, and Disposal	gal		<b>500</b>	
Frac tank rental	wk		<b>1</b>	
Frac tank mobilization, cleaning and demobilization (waste disposal to be handled under separate units)	ea		<b>1</b>	
Carbon Treatment System for water disposal, two (2), 1,000 lb vessels	ea		<b>1</b>	
Disposal of carbon vessels for treatment system	lb		<b>1000</b>	
Offsite transport and disposal of petroleum contaminated groundwater (min 5,000 gals)	gal		<b>500</b>	
Secure Groundwater Discharge Permit, including initial sampling, application, operational sampling, reporting, mobilization and compliance	ea		<b>1</b>	
Labor, equipment, and materials for additional asphaltic paving (beyond designated disturbance limits), installed as shown detailed on construction drawings	ton		<b>10</b>	
Labor, equipment, and materials for additional concrete paving, including reinforcement - #4 rebar, 12" off center, top and bottom (beyond designated disturbance limits), installed 9" thick	cy		<b>10</b>	
Labor, equipment, and materials for additional crushed gravel backfill sub base (including delivery, placement and compaction)	cy		<b>25</b>	
Labor, equipment, and materials for additional crushed stone backfill sub base (including delivery, placement and compaction)	cy		<b>25</b>	
Labor, equipment, and materials for additional 3/4" PVC conduit (installed underground, with RMC end connections, sealoffs, no excavation, in existing conduit trench)	lf		<b>500</b>	

**PRICE PROPOSAL (Continued)**

Labor, equipment, and materials for additional 1" PVC conduit (installed underground, with RMC end connections, sealoffs, no excavation, in existing conduit trench)	lf		<b>500</b>	
Labor, equipment, and materials for additional 3/4" Electric Metal Tubing (EMT), installed aboveground	lf		<b>500</b>	
Labor, equipment, and materials for additional 1" Electric Metal Tubing (EMT), installed aboveground	lf		<b>500</b>	
Labor, equipment, and materials for additional electrical trench excavation, backfill (paving/concrete separate)	lf		<b>500</b>	

Total of **UNIT COST ITEMS** in Bid Evaluation Cost Column (total from three-page table):

In Figures \$ \_\_\_\_\_

In Words \$ \_\_\_\_\_

**Total of 1 and 2 above:**

In Figures \$ \_\_\_\_\_

In Words \$ \_\_\_\_\_

## **ARTICLE 6 – TIME OF COMPLETION**

- 6.1 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 6.2 Bidder accepts the provisions of the Agreement as to liquidated damages.

## **ARTICLE 7 – ATTACHMENTS TO THIS BID**

- 7.1 The following documents are submitted with and made a condition of this Bid:
- A. Required Bid security in the form of a certified treasurer's or cashier's check or bid bond.

## **ARTICLE 8 – DEFINED TERMS**

- 8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

## **ARTICLE 9 – BID SUBMITTAL**

- 9.01 This Bid is submitted by:

If Bidder is:

### **A Individual**

Name (typed or printed): \_\_\_\_\_

By: \_\_\_\_\_  
(Individual's signature)

Doing business as: \_\_\_\_\_

### **A Partnership**

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

By: \_\_\_\_\_  
(Signature of general partner -- attach evidence of authority to sign)

Name (typed or printed): \_\_\_\_\_

A Corporation

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

State of Incorporation: \_\_\_\_\_

Type (General Business, Professional, Service, Limited Liability): \_\_\_\_\_

By: \_\_\_\_\_  
(Signature -- attach evidence of authority to sign)

Name (typed or printed): \_\_\_\_\_

Title: \_\_\_\_\_  
(CORPORATE SEAL)

Attest \_\_\_\_\_

Date of Qualification to do business in New Hampshire is \_\_\_\_/\_\_\_\_/\_\_\_\_.

A Joint Venture

Name of Joint Venture: \_\_\_\_\_

First Joint Venturer Name: \_\_\_\_\_

By: \_ (Signature of first joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): \_\_\_\_\_

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

Second Joint Venturer Name: \_\_\_\_\_

By: \_ (Signature of first joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): \_\_\_\_\_

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

(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.)

**Bidder's Business Address**

---

---

**Phone No.** \_\_\_\_\_ **Fax No.** \_\_\_\_\_

**E-Mail** \_\_\_\_\_

**SUBMITTED on** \_\_\_\_\_, **20**\_\_.

**Sworn and subscribed to before me this**  
\_\_\_\_\_ **day of** \_\_\_\_, **20**\_\_.

\_\_\_\_\_  
**Notary or other officer authorized to administer oaths**

**My commission expires:** \_\_\_\_\_, **20**\_\_.

(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.)

**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*):

**City of Portsmouth, NH**  
**1 Junkins Ave**  
**Portsmouth, NH 03801**

BID

Bid Due Date:

Description (*Project Name and Include Location*):

**Portsmouth Motor Vehicle Fueling System Replacement**

BOND

Bond Number:

Date (*Not earlier than Bid due 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**

(Seal)

\_\_\_\_\_  
Bidder's Name and Corporate Seal

**SURETY**

(Seal)

\_\_\_\_\_  
Surety's Name and Corporate Seal

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

By: \_\_\_\_\_  
Signature (Attach Power of Attorney)

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

Attest: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

Attest: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

*Note: Above 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 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 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.

## **STATEMENT OF BIDDER'S QUALIFICATIONS**

Must be Supplied with Bid

**All questions must be answered and the data given must be clear and comprehensive. Add separate sheets if necessary.**

1. Name of Bidder
2. Permanent Main Office Address
3. Form of Entity
4. When Organized
5. Where Organized
6. How many years have you been engaged in the contracting business under your present name; also state names and dates of previous firm names, if any
7. Contracts on hand; (schedule these, showing gross amount of each contract and the approximate anticipated dates of completion).
8. General character of work performed by your company.
9. Have you failed within the last seven years to complete any work awarded to you?  
\_\_\_\_(no)\_\_\_\_(yes). If so, where and why?
10. Have you defaulted on a contract within the last seven years?  
\_\_\_\_(no)\_\_\_\_(yes). If so, where and why?
11. Have you ever failed to complete a project in the time allotment according to the Contract Documents?  
\_\_\_\_(no)\_\_\_\_(yes). If so, where and why?
12. List the most important contracts recently executed by your company, stating approximate cost for each, and the month and year completed.

**BIDDER'S QUALIFICATIONS continued**

13. How many motor vehicle fueling systems have you installed or constructed in the past five years?
14. List any subcontractors whom you would expect to use for this project and their scope of work (unless this work is to be done by your own organization).

Electrical \_\_\_\_\_

Environmental \_\_\_\_\_

Paving \_\_\_\_\_

Concrete \_\_\_\_\_

Other (Specify) \_\_\_\_\_

Other (Specify) \_\_\_\_\_

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

\_\_\_\_\_  
Name of Bidder

BY \_\_\_\_\_

TITLE \_\_\_\_\_

## **Motor Vehicle Fueling System Replacement**

### **CONTRACT AGREEMENT**

THIS AGREEMENT is by and between City of Portsmouth, NH ("Owner")  
and \_\_\_\_\_ ("Contractor").

Owner and Contractor hereby agree as follows:

#### **ARTICLE 1 – WORK**

- 1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Contractor shall provide, at his expense, all labor, materials, equipment and incidentals as may be necessary for the expeditious and proper execution of the Project.

#### **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:

**Motor Vehicle Fueling System Replacement  
for the City of Portsmouth, New Hampshire**

#### **ARTICLE 3 – ENGINEER**

- 3.01 The Project has been designed by Stantec Consulting (Engineer), which is to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

#### **ARTICLE 4 – CONTRACT TIMES**

##### *4.01 Time of the Essence*

- A. All time limits for Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract. Note schedule requirements described in Section 2 of the General Requirements and Scope of Work.

##### *4.02 Days to Achieve Substantial Completion for the Project*

- A. All facilities necessary to allow its startup will be substantially completed by **November 1, 2023**, as described in Section 2 of the General Requirements and Scope of Work.
- B. The facilities that are necessary for the facility startup are: All
- C. Failure to achieve Substantial Completion within the time noted in Paragraph 4.03.A will result in liquidated damages being assessed as described in Paragraph 4.04 below.

##### *4.03 Days to Achieve Substantial Completion and Final Payment of the Work*

- A. The Work will be substantially completed within **70 calendar days** after the start of construction as defined by the interruption of normal fueling operations, traffic flows and other services as described in Section 2 of the General Requirements and Scope of Work. Contract Times commence to run as provided in Paragraph 2.03 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions.

#### 4.04 *Liquidated Damages*

- A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial loss if the Work is not completed within the times specified in Paragraphs 4.02 through 4.03 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay Owner as outlined below for each calendar day that expires after the time specified in Paragraph Contractor shall pay Owner \$500 for each calendar day that expires after the time 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 for each calendar day that expires after the time specified for completion and readiness for final payment until the Work is completed and ready 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.
- C. Time limits for Substantial Completion and Final Completion are independent. Liquidated damages shall accrue simultaneously for each violation.

### **ARTICLE 5 – CONTRACT PRICE**

- 5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the prices stated in Contractor's Bid, attached hereto as an exhibit.

### **ARTICLE 6 – PAYMENT PROCEDURES**

#### 6.01 *Submittal and Processing of Payments*

- A. Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

#### 6.02 *Progress Payments; Retainage*

- A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the last day of each month during

performance of the Work as provided in Paragraph 6.02.A.1 below provided that such Applications for Payment have been submitted on a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the schedule of values established as provided in Paragraph 2.07.A 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 elsewhere in the Contract.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with Paragraph 14.02 of the General Conditions.
  - a. 90 percent of Work completed and of cost of materials and equipment not incorporated in the work (with the balance being retainage). If the Work has been 50 percent completed as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and
- B. Upon Substantial Completion of the entire construction to be provided under the Contract Documents, Owner shall pay an amount sufficient to increase total payments to Contractor to 98 percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 14.02.D of the General Conditions and less 100% of the Engineer's estimate of the value of Work to be completed or corrected as shown on the tentative list of items to be completed or corrected prior to final payment.
- C. The Owner will impose a set off in the amount equal to **2%** of the Contract value from Final Completion to the end of the Correction Period. Upon reaching the end of the Correction Period and contingent upon satisfactory completion of all warranty and/or remaining punch list items, the set off amount will be paid to the Contractor pursuant to Paragraph 6.03 of the Agreement.

#### 6.03 *Final Payment*

- 6.03.1 Upon Final Completion and acceptance of the Work in accordance with Paragraph 14.07 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 14.07.

### **ARTICLE 7 – CONTRACTOR'S REPRESENTATIONS**

7.01 In order to induce Owner to enter into this Agreement, Contractor makes the following representations:

- A. 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.
- B. 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.

- C. Contractor has examined and carefully studied the complete set of Contract Documents and the other related data identified in the complete set of Bidding Documents.
- D. Contractor has considered the information known to Contractor; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site- related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Contract Documents; and (3) Contractor's safety precautions and programs.
- E. Based on the information and observations referred to in Paragraph 8.01.E above, Contractor does not consider that 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.
- F. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
- G. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
- H. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
- I. In connection with the performance of Work under this Contract, Contractor agrees not to discriminate against any employee or applicant for employment because of age, race, religion, color, handicap, sex, physical condition, or developmental disability in accordance with New Hampshire state law.

## **ARTICLE 8 – CONTRACT DOCUMENTS**

### **8.01 *Contents***

- A. The Contract Documents consist of the following:
  - 1. This Agreement
  - 2. Performance Bond
  - 3. Payment Bond
  - 4. General Conditions
  - 5. Supplementary Conditions
  - 6. Specifications as listed in the table of contents thereof.



7. Drawings consisting of **28** sheets with each sheet bearing the following general title:  
**City of Portsmouth Department of Public Works Fuel System Upgrade.**
  8. Addenda (numbers \_\_\_\_\_ to \_\_\_\_\_, inclusive).
  9. Exhibits to this Agreement (enumerated as follows):
    - a. Contractor's Bid (pages \_\_\_\_\_ to \_\_\_\_\_, inclusive).
    - b. Documentation submitted by Contractor prior to Notice of Award (pages \_ to\_, inclusive).
  10. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
    - a. Notice to Proceed (pages \_\_\_\_\_ to \_\_\_\_\_, inclusive).
    - b. Work Change Directives.
    - c. Change Orders.
- B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 9.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in Paragraph 3.04 of the General Conditions.

## **ARTICLE 9 – MISCELLANEOUS**

### **9.01 Terms**

- A. Terms used in this Agreement will have the meanings stated in the General Conditions and the Supplementary Conditions.

### **9.02 Assignment of Contract**

- A. 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.

### **9.03 Successors and Assigns**

- A. 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.

### **9.04 Severability**

- A. 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.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement. Counterparts have been delivered to Owner and Contractor. All portions of the Contract Documents have been signed or have been identified by Owner and Contractor or on their behalf.

This Agreement will be effective on \_\_\_\_\_ (which is the Effective Date of the Agreement).

OWNER:

City of Portsmouth, NH

Signature: \_\_\_\_\_

By: Karen Conard

Title: City Manager

CONTRACTOR:

\_\_\_\_\_

Signature: \_\_\_\_\_

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

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

(If Contractor is a corporation, a partnership,  
or a joint venture, attach evidence of authority to sign.)

Attest: \_\_\_\_\_

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

Address for giving notices:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Address for giving notices:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

-END OF SECTION-

## **NOTICE OF INTENT TO AWARD**

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

Project: **Portsmouth Motor Vehicle Fueling System Replacement**

Owner: **City of Portsmouth, NH**

Owner's Contract No.: 14-23

Contract: **Agreement for Project: Portsmouth Motor Vehicle Fueling System Replacement**

Engineer's Project No.:

Bidder: \_\_\_\_\_

Bidder's Address: *[send Notice of Award Certified Mail, Return Receipt Requested]*

You are notified that your Bid dated [\_\_\_\_\_] for the above Contract has been considered. You are the Successful Bidder and are awarded a Contract for [\_\_]

*[Indicate total Work, alternates, or sections of Work awarded.]*

The Contract Price of your Contract is [\_\_\_\_\_] [\_\_\_\_\_] Dollars (\$[\_\_\_\_]).

*[Insert appropriate data if unit prices are used. Change language for cost-plus contracts.]*

[\_\_\_\_\_] copies of the proposed Contract Documents (except Drawings) accompany this Notice of Award.

[\_\_\_\_\_] sets of the Drawings will be delivered separately or otherwise made available to you immediately.

You must comply with the following conditions precedent within **[10]** days of the date you receive this Notice of Award.

1. Deliver to the Owner [\_\_\_\_\_] fully executed counterparts of the Contract Documents.
2. Deliver with the executed Contract Documents the Contract security **Bonds** as specified in the Instructions to Bidders (Article 20), General Conditions (Paragraph 5.01), and Supplementary Conditions (Paragraph SC-5.01) as well as **Proof of Insurance Coverage** as specified in General Conditions Paragraph 5.3 and Supplementary Conditions.
3. Other conditions precedent:

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within ten days after you comply with the above conditions, Owner will return to you one fully executed counterpart of the Contract Documents.

\_\_\_\_\_  
Owner

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

Authorized Signature

## **NOTICE TO PROCEED**

Notice to Proceed Date: \_\_\_\_\_

Project: **Portsmouth Motor Fueling System Replacement**

Owner: **City of Portsmouth, NH**

Owner's Contract No.: 14-23

Contract: **Agreement for Project: Portsmouth Motor Fueling  
System Replacement**

Engineer's Project No.:

Contractor:

Contractor's Address: [send Certified Mail, Return Receipt Requested]

You are notified that the Contract Times under the above Contract will commence to run on [\_\_\_\_\_].  
On or before that date, you are to start performing your obligations under the Contract Documents. In  
accordance with Article 4 of the Agreement, the number of days to achieve Substantial Completion is [\_\_\_\_  
\_\_\_\_], and the number of days to achieve readiness for final payment is [\_\_\_\_\_].

In accordance with the number of days stated Article 4 of the Agreement and the date of this Notice to  
Proceed, the date to achieve Substantial Completion is: \_\_\_\_\_, and the date to achieve  
Final Completion is: \_\_\_\_\_.

Also, before you may start any Work at the Site, you must:

\_\_\_\_\_ *[add other requirements]*.

Owner Given by:

Authorized Signature

Title

Date

## **CHANGE ORDER**

**Change Order Number:** \_\_\_\_\_ **Date of Issuance:** \_\_\_\_\_

**Project: Portsmouth Motor Vehicle Fueling System Replacement**

**Owner: CITY OF PORTSMOUTH, N.H**

**Contractor:**

**The Contract Documents are modified as follows upon execution of this Change Order:**

**Purpose of Change Order:**

**Attachments:**

---

**CHANGE IN CONTRACT PRICE**

**CHANGE IN CONTRACT TIME**

Original Contract Price:  
\$

Original Completion Date:

---

Contract Price prior to this  
Change Order:  
\$

Contract Time prior to this  
Change Order:  
days

---

Net Increase of  
this Change Order:  
\$

Net Increase of  
this Change Order:  
days

---

Contract Price with all  
approved Change Orders:  
\$

Contract Time with all  
approved Change Orders:  
days

---

**RECOMMENDED:**

**APPROVED:**

**APPROVED:**

by \_\_\_\_\_  
PW Director

by \_\_\_\_\_  
City Finance

by \_\_\_\_\_  
City Manager

by \_\_\_\_\_  
Contractor

## **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

\_\_\_\_\_  
Surety's Name and Corporate Seal

**By:** \_\_\_\_\_  
Signature

**By:** \_\_\_\_\_  
Signature *(attach power of attorney)*

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

**Attest:** \_\_\_\_\_

**Attest:** \_\_\_\_\_

\_\_\_\_\_  
Signature

\_\_\_\_\_  
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 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 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.

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:

-END OF SECTION-

## **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

\_\_\_\_\_  
Surety's Name and Corporate Seal

**By:** \_\_\_\_\_  
Signature

**By:** \_\_\_\_\_  
Signature *(attach power of attorney)*

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

**Attest:** \_\_\_\_\_

**Attest:** \_\_\_\_\_

\_\_\_\_\_  
Signature

\_\_\_\_\_  
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;
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.

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.

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:

-END OF SECTION-

## **CERTIFICATE OF SUBSTANTIAL COMPLETION**

### **Certificate of Substantial Completion**

Project: **Portsmouth Motor Vehicle Fueling System Replacement**

Owner: **City of Portsmouth, NH**

Owner's Contract No.: 14-23

Contract: **Agreement for Project: Portsmouth Motor Vehicle Fueling System Replacement**

Engineer's Project No.:

**This [tentative] [definitive] Certificate of Substantial Completion applies to:**

“ All Work under the Contract Documents:

“ 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 Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Project or portion thereof designated above is hereby declared and is also the date of commencement of applicable warranties required by the Contract Documents, except as stated below.

A [tentative] [definitive] list of items to be completed or corrected is attached hereto. 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 Documents.

**The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance and warranties shall be as provided in the Contract Documents except as amended as follows:**

“ Amended Responsibilities

“ Not Amended Owner's Amended Responsibilities:

Contractor's Amended Responsibilities:

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The following documents are attached to and made part of this Certificate:

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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 Documents.

_____ Executed by Engineer	_____ Date
_____ Accepted by Contractor	_____ Date
_____ Accepted by Owner	_____ Date

-END OF SECTION-



## **CERTIFICATE OF FINAL COMPLETION**

Bid Number: **14-23** Engineer's Project No. \_\_\_\_\_

Project: **Portsmouth Motor Vehicle Fueling System Replacement**

Owner: **City of Portsmouth, NH**

Contractor: \_\_\_\_\_

Engineer: **Stantec Consulting**

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

Notice to Proceed Date: \_\_\_\_\_

Contractual Substantial Completion Date as modified by Change Orders: \_\_\_\_\_

Actual Substantial Completion Date: \_\_\_\_\_

Contractual Final Completion Date as modified by Change Orders: \_\_\_\_\_

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, Engineer and NHDES, the punch list has been completed and the Work of the Contract is hereby declared to be Finally Complete in accordance with the Contract Documents on:

\_\_\_\_\_  
Date of Final Completion

This Certificate does not constitute an acceptance of any 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. The Warranty for all Work completed subsequent to the date of Substantial Completion expires one year from the date of this Final Acceptance.

Executed by Engineer on: \_\_\_\_\_, 20

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

Contractor Accepts this Certificate of Final Completion on: \_\_\_\_\_, 20

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

Owner Accepts this Certificate of Final Completion on: \_\_\_\_\_, 20

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

NHDES Accepts this Certificate of Final Completion on: \_\_\_\_\_, 20

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

-END OF SECTION-

## **GENERAL REQUIREMENTS AND SCOPE OF WORK**

### **1. INTENT OF CONTRACT**

The intent of the Contract is to provide for the construction and completion in every detail of the work described. The Contractor shall furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the work in accordance with the terms of the Contract. The Contractor shall be required to conform to the intent of the plans and specifications. No extra claims shall be allowed for portions of the work not specifically addressed in the plans and specifications but required to produce a whole and complete project, such work will be considered subsidiary to the bid items.

### **2. SCHEDULE AND NOTIFICATION OF START**

- A. The Completion Date for the Project is November 1, 2023. The project shall be substantially complete by this date, notwithstanding the other schedule requirements listed below. Substantial completion shall include the site operating at full capability, a temporary or permanent certificate of occupancy received, NHDES Authorization to Operate received, all paving installed, all concrete installed, and the canopy fully installed.
- B. The Contractor shall not mobilize or begin construction work earlier than April 15, 2023.
- C. The Completion Date indicated above notwithstanding, the project shall be substantially complete no greater than 70 calendar days after the start of construction work. Start of construction work shall be defined as any work that interrupts the existing fuel system operation, any work that interrupts existing traffic flows, any excavation activities, delivery of materials to the site, or any demolition activities. Utility marking, survey or mark-outs or other pre-construction activities that do not impact existing operations are not considered construction activities for the purposes of schedule milestones.
- D. The Contractor shall give the Owner notice no less than 30 days prior to beginning construction work.

### **3. SCOPE OF WORK**

This project consists of constructing a new vehicle fueling facility and removing the existing fueling facility at the City of Portsmouth Department of Public Works (DPW) Facility located at 680 Peverly Hill Rd, Portsmouth, NH 03801. The Contractor shall provide all labor and materials to complete the work. The scope of work at the facility will include the installation of one (1) 10,000-gallon diesel underground storage tank (UST), one (1) 10,000-gallon gasoline UST, two (2)-product suction dispensers and fueling pad with lighted canopy, a new electrical and monitoring system to support the fuel system, paving, concrete, new fencing and gates, and all other associated fueling system equipment and appurtenances. The project will also include the removal of one (1) existing 12,000-gallon diesel UST, one (1) existing

5,000-gallon gasoline UST, existing dispensers and associated fueling pad, the existing canopy, and all associated fueling system equipment and appurtenances related to the existing fueling system at this location. Engineered shoring for the installation of the new tank excavation will be required.

#### 4. ENVIRONMENTAL REQUIREMENTS

- A. SWPPP and Erosion Controls: A Storm Water Pollution Prevention Plan will not be required for this project. However, appropriate pollution preventative measures and “Best Management Practices (BMP)” as outlined within the New Hampshire Stormwater Manual Vol. 3 – Erosion Control and Sediment Controls During Construction (December 2008), available on-line at the New Hampshire Department of Environmental Services website, shall be employed by the Contractor to assure that any detrimental impacts are minimized to the extent practicable. Amend BMPs as necessary to provide for continued erosion and sediment control through the duration of the project. Appropriate temporary measures shall be constructed as necessary to prevent erosion based upon the Contractor's method of operation and schedule. Erosion control is incidental to the project and shall be subsidiary to the Work.
- B. Contaminated Materials: The facility is subject to an Activity and Use Restriction (AUR) dated November 10, 2016. No work associated with this project is anticipated within the limits of that restriction. The Contractor shall not excavate or disturb soils within the limits of that restriction. A copy of the AUR is provided as an attachment.

All activities related to the “clean” closure of the existing underground storage tank systems is included in the Scope of Work. Incidental handling up to 25 cubic yards of soil identified as contaminated during the underground storage tank removal activities, including excavation, segregation, backfill, and covering with poly, is included in the Scope of Work.

The Owner will provide the services of a tank removal oversight/environmental consultant who will be present during the removal activities and will complete the sampling and closure reporting. The Contractor shall cooperate with the owner-provided consultant to facilitate their sampling and assessment work.

The Contractor shall be responsible for the removal and disposal of any contaminated soils (up to 25 cubic yards) and the tank removal. The Contractor shall be solely responsible for the contaminated soils for the period of time the contaminated soils are in the possession of the Contractor or its subcontractors, agents or employees.

- C. Dewatering: Existing groundwater conditions are outlined in the attached Geotechnical Report. All clean dewatering is included in the Scope of Work i.e., all means necessary to remove any water from the excavations is within the Scope of Work. Securing a Temporary Groundwater Discharge Permit is not in the Scope of Work. Treating or disposing of contaminated groundwater is not in the Scope of Work.

#### 5. GEOTECHNICAL REPORT

A Geotechnical Report is attached. The Contractor is responsible for reviewing this report and providing all labor and materials to complete the project considering these conditions. The Contractor shall assume that groundwater level is seasonal and will not be provided additional compensation for normal groundwater fluctuation. Canopy foundations shall be designed to accommodate the conditions outlined in the report.

#### 6. POST AWARD AND PRE-CONSTRUCTION MEETINGS

- A. Understanding that there may be an extended period of time between the contract award and start of construction, the Contractor shall schedule a Post-Award teleconference or on-site meeting with the Owner to be held no later than 30 days after the Notice to Proceed is issued. The agenda for this meeting shall be a review of the Scope of Work and schedule, review of submittal procedures, identification of key personnel, as well as other relevant information that may be necessary.
- B. The Contractor shall schedule with the Owner a Pre-Construction Meeting at the project site no more than 60 days prior and no more than 15 days prior to the start of construction work. At the Pre-Construction Meeting, the Contractor shall submit:
  - 1. A detailed Construction Schedule
  - 2. The Health and Safety Plan
  - 3. The Emergency and Spill Plan
  - 4. The ICC UST Installer Certification
  - 5. The ICC UST Decommissioner Certification
  - 6. A copy of the license for the New Hampshire Master Electrician
  - 7. Manufacturer piping installer certifications
  - 8. Veeder-Root Certified Technician certification

#### 7. SUBMITTALS AND ALTERNATES

Within 30 days of notice to proceed, submit all equipment cut sheets, shop drawings, sealed shoring design, sealed canopy design, and other submittals required in the specifications for review by the Owner. Make every effort to submit long lead time items as expeditiously as possible. No accommodations for the delay resulting from equipment non-availability will be made if submittals are not made within 30 days of Notice to Proceed.

Unless specifically identified in the Specifications, alternates to specified manufacturers and models are not authorized. Alternate equipment will be considered only in the case of non-availability.

#### 8. INSPECTIONS BY REGULATORY AUTHORITIES AND ENGINEER

The Contractor shall schedule and coordinate all required inspections with regulatory authorities, including the City of Portsmouth Inspection Department and the New Hampshire Department of Environmental Services, providing required notices as necessary. The Contractor shall schedule and coordinate all required inspections by the ENGINEER, providing no less than five (5) working days

notice for each inspection. At a minimum, the Contractor shall schedule the ENGINEER for the following inspections:

- A. Tank Installation
- B. Pre-Backfill of Piping
- C. Pre-NHDES Compliance Inspection
- D. Commissioning and Operational Testing
- E. Final Inspection

The ENGINEER is Stantec Consulting Services, Inc., 5 Dartmouth Drive, Auburn, NH 03032, 603-669-8672.

#### 9. WARRANTY

By accepting this Work, the Contractor is providing a warranty to the City of Portsmouth that:

- 1. All work will be performed in a good and workmanlike manner;
- 2. All equipment has been installed in accordance with manufacturer recommendations and requirements such that the City will receive maximum manufacturer warranty protection;
- 3. All materials will be new and of good quality, all equipment will be new and free of defect; and
- 4. All work will conform to the requirements of the contract documents and all applicable laws, codes, and regulations.

In addition, the Contractor shall provide an unlimited one-year warranty correction period against all defects in workmanship, equipment, or materials, beginning at the date of substantial completion. Correction work meeting these criteria during this period shall be at the expense of the Contractor.

#### 10. PERMITS

- A. The Contractor shall secure all permits by all State, City, and other Regulatory Authorities, including but not limited to Building, Electrical, and other Permits from the City of Portsmouth.
- B. The UST Conditional Construction Approval for this project issued by the New Hampshire Department of Environmental Services is attached. The Contractor shall read, be familiar with, and comply with all the requirements and conditions of that approval.

#### 11. NOTIFICATIONS

The Contractor shall make all required regulatory notifications and notify the Owner and Engineer-of-Record prior to all key construction milestones and inspections, as indicated elsewhere in these instructions and the attached specifications.

## 12. UST REGISTRATION

The ENGINEER will provide a partially completed NHDES UST Registration Form. When completed, the Contractor shall complete the form with the required milestone dates, execute the form (by the Certified Installer), and provide the original to the NNDES fully completed and executed. Copies shall be provided to the Owner on the day of submission to the NHDES and as part of the closeout documentation.

## 13. WORK HOURS

Work hours shall be 7:00 AM to 5:00 PM, unless otherwise authorized by the Director of Public Works.

## 13. CONSTRUCTION PROGRESS AND DOCUMENTATION

- A. The Contractor shall convene a weekly construction progress meeting while construction work is ongoing. The meeting will be conducted at the project site with and via teleconference. The Owner, at their sole discretion, may allow the meeting to be conducted by teleconference only.
- B. The Contractor shall submit, at the beginning of the weekly construction progress meeting, an updated construction schedule, a list of outstanding RFIs, a list of outstanding owner required actions, a summary of all change order requests with their status, and a total updated contract value report.
- C. The Contractor shall document, within 3 days of each meeting, all key meeting decisions and issues not identified in the weekly reports.

## 14. MAINTENANCE DURING CONSTRUCTION

The Contractor shall maintain the work during construction and until the project is accepted. This maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and workers to ensure that the structure is kept in satisfactory conditions at all times.

## 15. QUALITY

Quality is the sole responsibility of the Contractor. The Contractor shall conduct and document all code and regulation required tests, inspections, procedures, calibrations, and investigations. All test reports shall be submitted to the Owner within 48 hours of the test and in the closeout documents.

The Owner, at their sole option, may choose to engage the services of a third-party testing agency. The Owner will notify the Contractor of such inspections or tests and the Contractor shall cooperate with the

testing agency to conduct the tests. Any deficiencies identified in owner engaged third-party tests shall be corrected by the Contractor at the Contractor's expense.

## 16. HEALTH AND SAFETY

The Contractor shall be responsible for Health and Safety compliance, including compliance with all Federal and State (OSHA) regulations during all work activities associated with this project.

The Contractor shall prepare and submit a Health and Safety Plan at the Pre-Construction Meeting and comply with the plan for the duration of construction.

Should the Contractor be engaged by the City to engage with work handling contaminated materials, the Contractor shall provide OSHA HAZWOPER 40-Hour trained workers and prepare a HASP compliant with the OSHA requirements for handling contaminated materials. Contractor is responsible for complying with OSHA requirements by providing all employees and subcontractors with proper safety equipment including but not limited to hardhats, safety glasses, safety harnesses.

The Contractor shall provide, erect and maintain all necessary barricades, suitable and sufficient lights, danger signals, signs and other traffic control devices, and shall take all necessary precautions for the protection of the work and safety of the public.

## 17. EMERGENCY PLAN

The Contractor shall prepare and submit at the Pre-Construction meeting an Emergency Plan which at a minimum includes:

- A. Responsibilities
- B. Primary and Alternate 24-Hour Contact information
- C. Actions plans for emergencies, including Spills, Extreme Weather, Injury, and Accidents.

## 18. INCIDENTAL WORK

Incidental work items for which separate payment is not measured includes, but is not limited to, the following items:

- A. Rigging
- B. General clean up
- C. Cleaning around work area
- D. Signs & barricades
- E. Mobilization/Demobilization
- F. Restoration of property

- G. Cooperation with other contractors, abutters and occupants.
- H. Accessories and fasteners or components required to make items complete and functional.

#### 19. ALTERATION OF PLANS OR OF CHARACTER OF WORK

The Owner reserves the right, without notice to Surety, to make such alterations of the plans or of the character of the work as may be necessary or desirable to complete fully and acceptably the proposed construction; provided that such alterations do not increase or decrease the contract cost. Within these cost limits, the alterations authorized in writing by the Owner shall not impair or affect any provisions of the Contract or bond and such increases or decreases of the quantities as a result from these alterations or deletions of certain items, shall not be the basis of claim for loss or for anticipated profits by the Contractor. The Contractor shall perform the work as altered at the contract unit price or prices.

#### 20. EXTRA WORK ITEMS

Extra work shall be performed by the Contractor in accordance with the specifications and as directed, and will be paid for at a price as provided in the Contract documents or if such pay items are not applicable than at a price negotiated between the Contractor and the Owner or at the unit bid price. If no agreement can be negotiated, the Contractor will accept as payment for extra work, cost plus 15% (overhead & profit). Costs shall be substantiated by invoices and certified payroll. If the Owner determines that extra work is to be performed, a change order will be issued.

#### 21. CHANGE ORDERS

The Owner reserves the right to issue a formal change order for any increase, decrease, deletion, or addition of work or any increase in contract time or price. The Contractor shall be required to sign the change order and it shall be considered as part of the Contract documents.

#### 22. FINAL CLEAN UP

Before acceptance of the work, the Contractor shall remove from the site all machinery, equipment, surplus materials, rubbish, temporary buildings, barricades and signs. All parts of the work shall be left in a neat and presentable condition. On all areas used or occupied by the Contractor, regardless of the contract limits, the bidder shall clean-up all sites and storage grounds.

The items prescribed herein will not be paid for separately, but shall be paid for as part of the total contract price.

#### 23. ERRORS AND INCONSISTENCY IN CONTRACT DOCUMENTS

Any provisions in any of the Contract Documents that may be in conflict with the paragraphs in these General Requirements shall be subject to the following order of precedence for interpretation.



- A. Specifications will govern General Requirements, Control of Work, Temporary Facilities, Measurement and Payment, sections.

Any provisions in any of the Contract Documents that may be in conflict with each other shall be subject to the following order of precedence for interpretation.

- A. Construction Drawings
- B. Specifications

## **TEMPORARY FACILITIES**

### **1. STORAGE FACILITIES**

(a) The Contractor shall not store materials or equipment in a public right-of-way beyond the needs of one working day. Equipment and materials shall be stored in a location approved by the Owner.

(b) The Contractor shall protect all stored materials from damage by weather or accident and shall insure adequate drainage at and about the storage location.

(c) Prior to final acceptance of the work all temporary storage facilities and surplus stored materials shall be removed from the site.

### **2. SANITARY FACILITIES**

The Owner shall provide toilet facilities for the use of the workers employed on the work. The sole location of toilet facilities to be used on site will be identified by Owner.

### **3. WATER FACILITIES**

The Owner shall provide the Contractor with reasonable access to water facilities for construction operations. The Contractor at times may be responsible for providing water for project related needs.

### **4. TEMPORARY ELECTRICITY**

The Owner shall provide the Contractor with reasonable access to electrical power necessary for construction operation at the site. One 20 Amp/120V duplex receptacle shall be assumed to be available.

## **MEASUREMENT AND PAYMENT**

### **1. MEASUREMENT OF QUANTITIES**

(a) All work completed under the contract will be measured according to the United States standard measure.

(b) The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice. Unless otherwise stated all quantities measured for payment shall be computed or adjusted for "in place" conditions.

(n) The term "lump sum" when used as an item of payment will mean complete payment for the work described in the item.

### **2. SCOPE OF PAYMENT**

(a) The Contractor shall receive and accept compensation provided for in the contract as full payment for furnishing all materials and for performing all work under the contract in a complete and acceptable manner and for all risk, loss, damage or expense of whatever character arising out of the nature of the work or the prosecution thereof.

(b) The Contractor shall be liable to the Owner for failure to repair, correct, renew or replace, at his own expense, all damage due or attributable to defects or imperfections in the construction which defects or imperfections may be discovered before or at the time of the final inspection and acceptance of the work.

(c) No monies, payable under the contract or any part thereof, shall become due or payable if the Owner so elects, until the Contractor shall satisfy the Owner that the Contractor has fully settled or paid all labor performed or furnished for all equipment hired, including trucks, for all materials used, and for fuels, lubricants, power tools, hardware and supplies purchased by the Contractor and used in carrying out said contract and for labor and parts furnished upon the order of said Contractor for the repair of equipment used in carrying out said contract; and the Owner, if he so elects, may pay any and all such bills, in whole or in part.

### **3. PAYMENT PROCEDURES**

Submit Application for Payment after completion of Project closeout procedures with release of liens and supporting documentation. Include consent of surety to final payment and insurance certificates.

### **4. COMPENSATION FOR ALTERED QUANTITIES**

(a) Except as provided for under the particular contract item, when the accepted quantities of work vary from the quantities in the bid schedule the Contractor shall accept as payment in full, so far as contract items are concerned, at the original contract unit prices for the accepted quantities of work done.

No allowance will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor resulting either directly from such alterations or indirectly from unbalanced allocation among the contract items of overhead expense on the part of the Bidder and subsequent loss of expected reimbursements therefore or from any other cause.

(b) Extra work performed will be paid for at the contract bid prices or at the price negotiated between the Owner and the Contractor if the item was not bid upon. If no agreement can be negotiated, the Contractor will accept as payment for extra work, cost plus 15% (overhead and profit). Costs shall be substantiated by invoices and certified payroll.

#### 5. PARTIAL PAYMENTS

Partial payments will be made on a monthly basis during the contract period. From the total amount ascertained as payable, an amount equivalent to ten percent (10%) of the whole will be deducted and retained by the Owner until such time as the work is 50 % complete at which time retainage will be reduced to 5%.

#### 6. FINAL ACCEPTANCE

Upon due notice from the Contractor of presumptive completion of the entire project, the Owner or City Engineer will make an inspection. If all construction provided for and contemplated by the contract is found complete to his satisfaction, this inspection shall constitute the final inspection and the Owner or City Engineer will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of the final inspection. If, however, the City Engineer's inspection discloses any work in whole or in part, as being unsatisfactory, the Engineer will give the Contractor the necessary instructions for correction of such work, and the Contractor shall immediately comply with and execute such instructions. Upon correction of the work, another inspection will be made which shall constitute the final inspection provided the work has been satisfactorily completed. In such event, the City Engineer will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of final inspection.

#### 7. ACCEPTANCE AND FINAL PAYMENT

(a) When the project has been accepted and upon submission by the Contractor of all required reports, completed forms and certifications, the Owner will review the final estimate of the quantities of the various classes of work performed. The Contractor may be required to certify that all bills for labor and material used under this contract have been paid.

(b) The Contractor shall file with the Owner any claim that the Contractor may have regarding the final estimate at the same time the Contractor submits the final estimate. Failure to do so shall be a waiver of all such claims and shall be considered as acceptance of the final estimate. From the total amount ascertained as payable, **an amount equal to two percent (2%) of the whole will be deducted and retained by the Owner for the guaranty period.** After approval of the final estimate by the Owner, the Contractor will be paid the entire sum found to be due after deducting all previous payments and all amounts to be retained or deducted under the provisions of the contract.

(c) All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

#### 8. GENERAL GUARANTY AND WARRANTY OF TITLE

(a) Neither the final certification of payment nor any provision in the contract nor partial or entire use of the improvements embraced in this Contract by the Owner or the public shall constitute an acceptance of work not done in accordance with the Contract or relieve the Contractor of liability in respect to any express or implied warranties or responsibility for faulty materials or workmanship. The Contractor shall promptly remedy any defects in the work and pay for any damage to other work resulting there from which shall appear within a period of twelve (12) months from the date of final acceptance of the work. The Owner will give notice of defective materials and work with reasonable promptness.

(b) No material, supplies or equipment to be installed or furnished under this Contract shall be purchased subject to any chattel mortgage or under a conditional sale, lease purchase or other agreement by which an interest therein or in any part thereof is retained by the Seller or supplier. The Contractor shall warrant good title to all materials, supplies and equipment installed or incorporated in the work and upon completion of all work, shall deliver the same together with all improvements and appurtenances constructed or placed thereon by him to the Owner free from any claims, liens or charges. Neither the Contractor nor any person, firm or corporation furnishing any material or labor for any work covered by this Contract shall have the right to a lien upon any improvements or appurtenances thereon.

Nothing contained in this paragraph, however, shall defeat or impair the right of persons furnishing materials or labor to recover under any bond given by the Contractor for their protection or any rights under any law permitting such persons to look to funds due the Contractor in the hands of the Owner. The provisions of this paragraph shall be inserted in all subcontractors and material contracts and notice of its provisions shall be given to all persons furnishing materials for the work when no formal contract is entered into for such materials.

(c) At completion of project, Contractor to provide to Owner, written guarantee of one (1) year Workmanship warranty; and one (1) year Manufacturer's warranty.

#### 9. NO WAIVER OF LEGAL RIGHTS

(a) Upon completion of the work, the Owner will expeditiously make final inspection and notify the Contractor of acceptance. Such final acceptance, however, shall not preclude or stop the Owner from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall the Owner be precluded or be stopped from recovering from the Contractor or his Surety, or both, such overpayment as it may sustain by failure on the part of the Contractor to fulfill his obligations under the contract. A waiver on the part of the Owner of any breach of any part of the contract shall not be held to be a waiver of any other or subsequent breach.

(b) The Contractor, without prejudice to the Contract shall be liable to the terms of the Contract, shall be liable to the Owner for latent defects, fraud or such gross mistakes as may amount to fraud, and as regards the Owner's right under any warranty or guaranty.

#### 10. TERMINATION OF CONTRACTOR'S RESPONSIBILITY

Whenever the improvement provided for by the Contract shall have been completely performed on the part of the Contractor and all parts of the work have been released from further obligations except as set forth in his bond and as provided in Section 8 above.

#### 9. ESCALATION

The Owner will not compensate the Contractor for the price escalation of equipment or materials included in the firm, fixed price bid or itemized unit charges with the following exception:

- A. The Owner will reimburse the Contractor as an extra charge outside the lump sum Scope of Work for delivery surcharges only on the **rigid metal canopy, underground storage tanks, underground piping, or containment sumps**. Delivery surcharges are defined as charges imposed by the manufacturer outside of the purchase agreement that are incurred as a result of **manufacturing cost escalation**. To receive compensation for delivery surcharges, the Contractor shall provide, in the form of a change order, the following information.
  - 1. The original quote and purchase order, including the amount, date, and authorizing signature.
  - 2. Documentation provided by the manufacturer of the requested or demanded surcharge.
  - 3. A statement and affidavit executed by an Officer of the entity who entered into the Contract with the City for this project, certifying that the delivery surcharge is outside of the purchase agreement, imposed by the manufacturer outside the control of the Contractor, not known by the Contractor at the time the equipment was ordered or purchased, and not the result of any collusion or coordination between the Contractor and manufacturer. A letter from the manufacturer stating that the Delivery Surcharge has been similarly applied to other orders manufactured within the same timeframe, and not unique to this order shall also be required.

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

**ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE**

and

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CONSTRUCTION SPECIFICATIONS INSTITUTE

These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor (EJCDC C-520 or C-525, 2007 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the Narrative Guide to the EJCDC Construction Documents (EJCDC C-001, 2007 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (EJCDC C-800, 2007 Edition).

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STANDARD GENERAL CONDITIONS OF

## THE 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 and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. 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 which is evidence of the agreement between Owner and Contractor covering the Work.
  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. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
  5. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
  6. *Bidder*—The individual or entity who submits a Bid directly to Owner.
  7. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).
  8. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and the Bid Form with any supplements.
  9. *Change Order*—A document recommended by Engineer 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, issued on or after the Effective Date of the Agreement.
  10. *Claim*—A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.
  11. *Contract*—The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.
13. *Contract Price*—The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).
14. *Contract Times*—The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.
15. *Contractor*—The individual or entity with whom Owner has entered into the Agreement.
16. *Cost of the Work*—See Paragraph 11.01 for definition.
17. *Drawings*—That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.
18. *Effective Date of the Agreement*—The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.
19. *Engineer*—The individual or entity named as such in the Agreement.
20. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.
21. *General Requirements*—Sections of Division 1 of the Specifications.
22. *Hazardous Environmental Condition*—The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.
23. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
24. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.
26. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.
27. *Notice of Award*—The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.
28. *Notice to Proceed*—A written notice given 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 under the Contract Documents.
29. *Owner*—The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.
30. *PCBs*—Polychlorinated biphenyls.
31. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.
32. *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.
33. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
34. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
35. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.
36. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
37. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.
38. *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.

39. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
40. *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 for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.
41. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
42. *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 at the Site.
43. *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.
44. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.
45. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.
46. *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 Subcontractor.
47. *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 those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
48. *Unit Price Work*—Work to be paid for on the basis of unit prices.
49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such

construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

50. *Work Change Directive*—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

## 1.2 *Terminology*

A. The words and terms discussed in Paragraph 1.02.B through F 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 Paragraph 9.09 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 14.04 or 14.05).

**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. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, "provide" is implied.

- 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. 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 Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

**2.02 *Copies of Documents***

- C. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 *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 Agreement 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 Agreement. 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 Agreement, whichever date is earlier.

2.04 *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 the date on which the Contract Times commence to run.

2.05 *Before Starting Construction*

*Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:

- A. 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 Documents;
- B. a preliminary Schedule of Submittals; and
- C. 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.

2.06 *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 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, 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 instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

**2.07**    *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 2.05.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.
- B. 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.
- C. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
- D. 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 component parts of the Work.

**ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, 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. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.
- C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

**3.02**    *Reference Standards*

- A. Standards, Specifications, Codes, Laws, and Regulations
  - 1. Reference to standards, specifications, manuals, 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, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement 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, 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 Contract Documents. 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 Contract Documents.

### 3.03 *Reporting and Resolving Discrepancies*

#### A. *Reporting Discrepancies:*

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers, or has actual knowledge of, and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.
2. *Contractor's Review of Contract Documents During Performance of Work:* If, 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) any standard, specification, manual, or code, or (c) 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 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.
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 Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:
  - a. the provisions of any standard, specification, manual, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference in the Contract Documents); 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**     *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.
- B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:
  - 1. A Field Order;
  - 2. Engineer's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or Engineer's written interpretation or clarification.

**3.05**     *Reuse of Documents*

- A. Contractor and any Subcontractor or Supplier 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
  - 2. 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.
- 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.

**3.06**     *Electronic Data*

- A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor, or by Contractor to Owner or Engineer, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.
- C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents

resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

**ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS;  
HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS**

**4.01**    *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. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.
- 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 the Work is to be performed 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.

**4.02**    *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 contiguous to the Site; and
  - 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "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.

**4.03** *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed 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 4.02 is materially inaccurate; or
2. is of such a nature as to require a change in the Contract Documents; 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 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. *Engineer’s Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner’s obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer’s findings and conclusions.

C. *Possible Price and Times Adjustments:*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition 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 meet any one or more of the categories described in Paragraph 4.03.A; and
  - 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 Paragraphs 9.07 and 11.03.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:
  - a. Contractor knew of the existence of such conditions at the time Contractor made a

final 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

- b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or
  - c. Contractor failed to give the written notice as required by Paragraph 4.03.A.
3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall be liable to Contractor for any claims, costs, losses, or 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) sustained by Contractor on or in connection with any other project or anticipated project.

#### 4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous 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 shall not be responsible for 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 such information and data;
  - b. locating all Underground Facilities shown or indicated in the Contract Documents;
  - c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and
  - d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated:*

- 1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which



was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, 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 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

#### 4.05 *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.

#### 4.06 *Hazardous Environmental Condition at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "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

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- 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 any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.
- D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) 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 4.06.E.
- E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. 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, either party may make a Claim therefor as provided in Paragraph 10.05.
- F. 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. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.
- G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and
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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: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

- H. 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 a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

## **ARTICLE 5 – BONDS AND INSURANCE**

### **5.01 *Performance, Payment, and Other Bonds***

- A. Contractor shall furnish performance and payment bonds, 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 Documents. 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 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.
- B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds 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 each bond.
- C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located

or it ceases to meet the requirements of Paragraph 5.01.B, 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 requirements of Paragraphs 5.01.B and 5.02.

**5.02** *Licensed Sureties and Insurers*

- A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

**5.03** *Certificates of Insurance*

- A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.
- B. Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.
- C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.
- D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.
- E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

**5.04** *Contractor's Insurance*

- A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which 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:
  - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;

2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:
  - a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
  - b. by any other person for any other reason;
5. 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; and
6. 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.

B. The policies of insurance required by this Paragraph 5.04 shall:

1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and 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;
2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;
4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);
5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph

13.07; and

6. include completed operations coverage:
  - a. Such insurance shall remain in effect for two years after final payment.
  - b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

*5.05 Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, 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.

*5.06 Property Insurance*

- A. Unless otherwise provided in the Supplementary Conditions, Owner 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 the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
  1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;
  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, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, 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.
  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 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;
  5. allow for partial utilization of the Work by Owner;

6. include testing and startup; and
  7. 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 loss payee to whom a certificate of insurance has been issued.
- B. Owner shall purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.
- C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.
- D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.
- E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under this Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

#### *5.07 Waiver of Rights*

- A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies 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 of the insureds or loss payees thereunder. Owner and Contractor waive all rights against each other and their 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 Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (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 as trustee 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 utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.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, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them.

#### *5.08 Receipt and Application of Insurance Proceeds*

- A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.
- B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by

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any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

**5.09**    *Acceptance of Bonds and Insurance; Option to Replace*

A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, 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. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

**5.10**    *Partial Utilization, Acknowledgment of Property Insurer*

A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

**ARTICLE 6 – CONTRACTOR'S RESPONSIBILITIES**

**6.01**    *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. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.
- 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.

**6.02**    *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. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

**6.03**    *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.
- B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, 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.

**6.04**    *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 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 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.
  - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "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 specification or description 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 or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. *"Or-Equal" Items:* If in Engineer's sole discretion 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, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion with agreement from the Owner, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, 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; and
- 3) it has a proven record of performance and availability of responsive service.

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.

2. *Substitute Items:*

- a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.
- b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.

- c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Engineer may decide is appropriate under the circumstances.
  - d. 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:
    - 1) shall certify that the proposed substitute item will:
      - a) perform adequately the functions and achieve the results called for by the general design,
      - b) be similar in substance to that specified, and
      - c) be suited to the same use as that specified;
    - 2) will state:
      - a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,
      - b) 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
      - c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;
    - 3) will identify:
      - a) all variations of the proposed substitute item from that specified, and
      - b) available engineering, sales, maintenance, repair, and replacement services; and
    - 4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.
- B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute

proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.

- C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.
- D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- E. *Engineer's Cost Reimbursement:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. 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.
- F. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

#### 6.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.
- B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. 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 any right of Owner or Engineer to reject defective Work.

- C. 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. 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 moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.
- D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.
- E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.
- F. 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.
- G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (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 such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

#### 6.07 *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.

#### 6.08 *Permits*

- A. Unless otherwise provided in the Supplementary Conditions, 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 opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

#### 6.09 *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 knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear 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. However, it shall not be Contractor's responsibility to make certain that the

Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.

- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

#### 6.10 *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.

#### 6.11 *Use of Site and Other Areas*

##### A. *Limitation on Use of Site and Other Areas:*

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.
2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
3. 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 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 by or based upon Contractor's performance of the Work.

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other 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 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 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 property to stresses or pressures that will endanger it.

#### 6.12 *Record Documents*

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

#### 6.13 *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, 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 owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.
- 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 6.13.A.2 or 6.13.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 (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 for protection of the Work 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 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

#### 6.14 *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.

#### 6.15 *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.

#### 6.16 *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.

#### 6.17 *Shop Drawings and Samples*

- A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

##### 1. *Shop Drawings:*

- a. Submit number of copies specified in the General Requirements.
- 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 6.17.D.

2. *Samples:*

- a. Submit number of Samples specified in the Specifications.
- b. 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 6.17.D.

B. 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. *Submittal Procedures:*

1. Before submitting each Shop Drawing or Sample, Contractor shall have:
  - a. reviewed and coordinated each 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 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 and approval of that 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 both a written communication separate from the Shop

Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

*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 (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
3. Engineer's review and approval 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 6.17.C.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's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

*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.

**6.18** *Continuing the Work*

- A. 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, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

**6.19** *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 representation of 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 or the issuance of a notice of acceptability by Engineer;
  6. any inspection, test, or approval by others; or
  7. any correction of defective Work by Owner.

#### 6.20 *Indemnification*

- A. 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 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 6.20.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 6.20.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.

**6.21** *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 law.
- 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, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to 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 6.21, 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 6.17.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

## **ARTICLE 7 – OTHER WORK AT THE SITE**

### **7.01   *Related Work at Site***

- A. Owner may perform other work related to the Project at the Site with Owner's employees, or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:
1. written notice thereof will be given to Contractor prior to starting any such other work; and
  2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.
- B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. 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. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.
- C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, 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.

### **7.02   *Coordination***

- A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:
1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
  2. the specific matters to be covered by such authority and responsibility will be itemized; and
  3. the extent of such authority and responsibilities will be provided.

- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

### 7.03 *Legal Relationships*

- A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.
- B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's wrongful actions or inactions.
- C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's wrongful action or inactions.

## **ARTICLE 8 – OWNER'S RESPONSIBILITIES**

### 8.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer except for any specific pre-arranged circumstances.

### 8.02 *Replacement of Engineer*

- A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

### 8.03 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

### 8.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

### 8.05 *Lands and Easements; Reports and Tests*

- A. Owner's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions relating to existing surface or subsurface structures at the Site.



8.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

- A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *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.

8.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *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.

8.12 *Compliance with Safety Program*

- 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 pursuant to Paragraph 6.13.D.

**ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION**

9.01 *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 Documents.

9.02 *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 9.09. 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.

9.03 *Project Representative*

- A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. 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.

9.04 *Authorized Variations in Work*

- A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which 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. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

- A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders, and Payments*

- A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.
- B. In connection with 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, see Paragraph 6.21.
- C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.
- D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

- A. 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 Paragraph 10.05.

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

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.
- B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner and Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

- C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.
- D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

**9.09** *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents 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 14.07.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 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

**9.10** *Compliance with Safety Program*

- F. While at the Site, Engineer's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Engineer has been informed pursuant to Paragraph 6.13.D.

**ARTICLE 10 – CHANGES IN THE WORK; CLAIMS**

**10.01** *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 by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

- B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

#### 10.02 *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 as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.D.

#### 10.03 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:
1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;
  2. 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; and
  3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

#### 10.04 *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.

#### 10.05 *Claims*

- A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.
- B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).
- C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:
1. deny the Claim in whole or in part;
  2. approve the Claim; or
  3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.
- D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.
- E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.
- F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

## **ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK**

### **10.01**    *Cost of the Work*

A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 11.01.B, 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, 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 11.01.
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. Owner reserves the right to request three quotes and to average these quotes to determine the cost. 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. 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 5.06.D), 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.
- f. The cost of utilities, fuel, and sanitary facilities at the Site.
- g. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- h. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. *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 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which 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 Paragraphs 11.01.A.
- C. *Contractor's Fee:* When all the Work 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 or when a Claim for an 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 12.01.C. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, 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.

## 11.02 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:*
1. Contractor agrees that:
    - a. 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

- b. 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:*

1. 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.

**11.03** *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. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.
- 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. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 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; and
  2. there is no corresponding adjustment with respect to any other item of Work; and
  3. Contractor believes that Contractor 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 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES**

### **12.01**    *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. The value of any Work covered by a Change Order or of any Claim for 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, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or
  - 2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or
  - 3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).
- C. *Contractor's Fee:* 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 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;
    - b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent; 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 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;
    - c. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;

- d. 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
- e. 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 12.01.C.2.a through 12.01.C.2.e, inclusive.

#### 12.02 *Change of Contract Times*

- D. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the contract in accordance with the provisions of Paragraph 10.05.
- E. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

#### 12.03 *Delays*

- F. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.
- G. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, 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 Price or the Contract Times, or both. 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.
- H. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is 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 described in this Paragraph 12.03.C.
- I. Owner, Engineer, and their officers, directors, members, partners, employees, agents,

consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or 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) sustained by Contractor on or in connection with any other project or anticipated project.

- J. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

### **ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK**

#### **13.01   *Notice of Defects***

- A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. Defective Work may be rejected, corrected, or accepted as provided in this Article 13.

#### **13.02   *Access to Work***

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests 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.

#### **13.03   *Tests and Inspections***

- A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
  2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and
  3. as otherwise specifically provided in the Contract Documents.
- 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 and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.
- E. 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.
- F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

#### 13.04 *Uncovering Work*

- A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.
- B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, 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, furnishing all necessary labor, material, and equipment.
- C. If it is found that the uncovered Work is defective, 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 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 Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor.
- D. 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, Contractor may make a Claim therefor as provided in Paragraph 10.05.

#### 13.05 *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, 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.

**13.06**    *Correction or Removal of Defective Work*

- A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. 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 removal (including but not limited to all costs of repair or replacement of work of others).
- B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

**13.07**    *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 land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
  - 1. repair such defective land or areas; or
  - 2. correct such defective Work; or
  - 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 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. 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) will be paid by Contractor.

- 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 13.07, 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 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

**13.08**    *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. 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) 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 pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

**13.09**    *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 in accordance with Paragraph 13.06.A, 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, 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 13.09, 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, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, 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 (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) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim for costs, losses and damages, including 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 13.09.

#### **ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION**

##### **14.01 Schedule of Values**

- A. The Schedule of Values established as provided in Paragraph 2.07.A 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.

##### **14.02 Progress Payments**

###### **A. *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 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  
Standard General Conditions of the Construction Contract

the Agreement.

**B. *Review of Applications:***

1. Engineer will, within 10 days after receipt of each Application for Payment, 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 9.07, 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 Documents; 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 moneys 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 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:
- a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
  - b. the Contract Price has been reduced by Change Orders;
  - c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
  - d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

*C. Payment Becomes Due:*

- 1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

*D. Reduction in Payment:*

- 1. Owner may refuse to make payment of the full amount recommended by Engineer for reasons that may without limitation include:
  - a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
  - b. 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;
  - c. there are other items entitling Owner to a set-off against the amount recommended; or

- d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.
2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action 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, when Contractor remedies the reasons for such action.
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 14.02.C.1 and subject to interest as provided in the Agreement.

#### 14.03 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

#### 14.04 *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 (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.
- 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 tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the tentative certificate to Owner, notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will, within said 14 days, execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

- D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.
- E. 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 tentative list.

#### 14.05 *Partial Utilization*

- 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. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and 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 14.04.A through D for that part of the Work.
  2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and 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 14.04 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 5.10 regarding property insurance.

14.06 *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 is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *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, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.
2. The final Application for Payment shall be accompanied (except as previously delivered) by:
  - a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.6;
  - b. consent of the surety, if any, to final payment;
  - c. a list of all Claims against Owner that Contractor believes are unsettled; and
  - d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) 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.

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 Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. 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 14.09. 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. Payment Becomes Due:*

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor in full or in part as set forth in Section 14.02 (D).

**14.08** *Final Completion Delayed*

- A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

**14.09** *Waiver of Claims*

- A. The making and acceptance of final payment will constitute:
  1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and
  2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

## **ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION**

### **15.01    *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 notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

### **15.02    *Owner May Terminate for Cause***

- A. The occurrence of any one or more of the following events will 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 established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);
  2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;
  3. Contractor's repeated disregard of the authority of Engineer; or
  4. Contractor's violation in any substantial way of any provisions of the Contract Documents.
- B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:
1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);
  2. 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
  3. complete the Work as Owner may deem expedient.
- C. If Owner proceeds as provided in Paragraph 15.02.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 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) sustained by Owner arising out of or relating



to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed 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, if so approved by Owner, 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.

- D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.
- E. 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. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.
- F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B and 15.02.C.

#### 15.03 *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;
  - 3. 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) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and
  - 4. reasonable expenses directly attributable to termination.
- B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

**15.04**    *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) 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 15.03.
- 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 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 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 16 – DISPUTE RESOLUTION**

**16.01**    *Methods and Procedures*

- A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.
- B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.
- C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:
  - 1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions; or
  - 2. agrees with the other party to submit the Claim to another dispute resolution process; or
  - 3. gives written notice to the other party of the intent to submit the Claim to a court of competent jurisdiction.

## **ARTICLE 17 – MISCELLANEOUS**

### **17.01**    *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 to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or
  - 2. delivered at or sent by over-night mail or other courier service that tracks receipt to the last business address known to the giver of the notice.

### **17.02**    *Computation of Times*

- A. When any period of time is referred to in the Contract Documents 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.

### **17.03**    *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 Documents. 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.

### **17.04**    *Survival of Obligations*

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

### **17.05**    *Controlling Law*

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

17.06 *Headings*

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

-END OF SECTION-

## **SUPPLEMENTARY CONDITIONS**

### **ARTICLE 1 - DEFINITIONS AND TERMINOLOGY**

#### **SC-1.01** *Defined Terms*

Delete definition 1.01 A.41 entitled "Specifications" in the General Conditions in its entirety and insert the following in its place:

Sections included under Division 1 through Division 16 of the Contract Documents.

Delete the definition 1.01 A.43 entitled "Substantial Completion" in the General Conditions in its entirety and add the following in its place:

The Work (or a specified part thereof) required by the Contract has been completed except for work (or a specified part thereof) having a Contract Price of less than one percent of the then adjusted total contract price, or substantially all of the Work (or a specified part thereof) has been completed and opened to Owner's use except for minor incomplete or unsatisfactory work items that do not materially impair the usefulness of the Work (or a specified part thereof) required by the Contract.

### **ARTICLE 2 - PRELIMINARY MATTERS**

#### **SC-2.01** *Delivery of Bonds and Evidence of Insurance*

Delete Paragraph 2.01.B of the General Conditions in its entirety and insert the following in its place:

- B. *Evidence of Insurance*: When Contractor delivers executed sections of the Agreement to Owner, Contractor shall deliver to Owner, with a copy to Engineer, certificates of insurance (and other evidence of insurance requested by Owner) which Contractor is required to purchase and maintain in accordance with the requirements of Article 5.

#### **SC-2.02** *Copies of Documents*

Delete Paragraph 2.02.A in its entirety and insert the following in its place:

- B. Owner shall furnish Contractor up to 6 printed or hard copies of the Drawings and Project Manual and one set in electronic format. Additional printed copies will be furnished upon request at the cost of reproduction.

#### **SC-2.03** *Commencement of Contract Times; Notice to Proceed*

Delete Paragraph 2.03.A of the General Conditions in its entirety and insert the following in its place:

- A. The Contract Time will commence to run on the tenth day following the effective date of the

Agreement, or if a Notice to Proceed is issued, the Contract Time will commence to run on the date of the Notice to Proceed.

### **ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE**

#### **SC-3.01 *Intent***

Add a new paragraph immediately after Paragraph 3.01.A of the General Conditions which is to read as follows:

1. Each and every provision of law and clause required by law to be inserted in the Contract shall be deemed to be inserted herein, and the Contract shall be read and enforced as though they were included herein. If through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, the Contract shall forthwith be physically amended to make such insertion.
2. Sections of Division 1 - General Requirements govern the execution of the work of all sections of the specifications.

### **ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS**

#### **SC-4.02 *Subsurface and Physical Conditions***

Delete Paragraph 4.02.A of the General Conditions in its entirety and insert the following in its place:

- A. *Reports and Drawings:* In the preparation of Drawings and Specifications, Engineer or Engineer's Consultants have relied upon:
  1. Engineer has relied upon data obtained from subsurface investigations made at the site in the form of test borings. Such data is in the form of boring logs which are included in Appendix A to the Specifications. The locations of the test borings are indicated on the Drawings.

#### **SC-4.04 *Underground Facilities***

Delete the following words from line 5 of Paragraph 4.04.B.2 of the General Conditions: "or not shown or indicated with reasonable accuracy"

#### **SC-4.05 *Reference Points***

Add a new paragraph at the end of Paragraph 4.05.A of the General Conditions which is to read as follows:

B. Contractor to employ surveyor licensed in New Hampshire to provide reference points and monuments. Engineer may check the lines, elevations, reference marks, batter boards, etc., set by Contractor, and Contractor shall correct any errors disclosed by such check. Such a check shall not be considered as approval of Contractor's work and shall not relieve Contractor of the responsibility for accurate and satisfactory construction and completion of

the entire Work. Contractor shall furnish personnel to assist Engineer in checking lines and grades.

**SC-4.06** *Hazardous Environmental Conditions at Site*

Add the following new subparagraphs immediately after Paragraph 4.06.A:

1. The following reports regarding Hazardous Environmental Conditions at the Site are known to Owner:
  - a. Existing fuel storage tanks, piping and dispensers contain flammable liquid fuel
  - b. The site area is adjacent to a historic landfill area that is under an Activity and Use Restriction (AUR). See Attachment 2 for restrictions and extent of AUR area.

Delete Paragraph 4.06.G and add the following new paragraph 4.06.G immediately after Paragraph 4.06.F:

- G. To the fullest extent permitted by Laws and Regulations, Owner shall release Contractor, Subcontractors, and Engineer, and officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses and damages arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Conditions: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall constitute an indemnity of obligation.

**ARTICLE 5 - BONDS AND INSURANCE**

**SC-5.02** *Licensed Sureties and Insurers*

Insert the following paragraph at the end of Paragraph 5.02.A.:

- B. The insurance policies and surety bonds required to be provided by the Contractor shall be written by a company or companies licensed by the State of New Hampshire which company or companies shall have not less than an A rating and a Class XV financial status as reported in the latest edition of Best's Insurance Guide. In addition, all carriers are subject to approval by the Owner.

**SC-5.03** *Certificates of Insurance*

Delete Paragraph 5.03.B of the General Conditions.

**SC-5.04 Contractor's Insurance**

Add the following new paragraph immediately after Paragraph 5.04.B.:

C. The limits of liability for the insurance required by Paragraph 5.04 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Worker's Compensation, and related coverage under Paragraphs 5.04.A.1 and 5.04.A.2 of the General Conditions:
  - a. State: Statutory
  - b. Applicable Federal  
(e.g., Longshoreman's): Statutory
2. Contractor's General Liability under Paragraphs 5.04.A.3 through 5.04.A.6 of the General Conditions which shall include completed operations and product liability coverage's and eliminate the exclusion with respect to property under the care, custody, and control of Contractor or provide equivalent coverage under Builders Risk:
  - a. General Aggregate including per project aggregate endorsement.  
(Except Products-Completed Operations): \$ 5,000,000
  - b. Products-Completed  
Operations Aggregate: \$ 5,000,000
  - c. Each Occurrence  
(Bodily Injury and Property Damage): \$ 2,000,000  
Property Damage liability insurance shall include Collapse and Underground coverages
  - d. If blasting is to be used, include explosion coverage.  
Occurrence: \$2,000,000  
Aggregate: \$5,000,000
3. Automobile Liability under Paragraph 5.04.A.6 of the General Conditions:
  1. Combined Single Limit for bodily injury  
and property damage: \$ 2,000,000
4. The Contractual Liability coverage required by Paragraph 5.04.B.3 of the General Conditions shall provide coverage for not less than the following amounts:



- |    |                  |              |
|----|------------------|--------------|
| a. | Bodily Injury:   |              |
|    | Each Accident    | \$ 2,000,000 |
|    | Annual Aggregate | \$ 2,000,000 |
|    |                  |              |
| b. | Property Damage: |              |
|    | Each Accident    | \$ 2,000,000 |
|    | Annual Aggregate | \$ 2,000,000 |
5. Owner does not have pollution property or liability coverage. Contractor shall maintain Pollution Liability Coverage of at least \$1,000,000 for this Project.
6. Coverage amounts may be satisfied by excess or umbrella policies provided Owner is satisfied as to the form of coverage.
7. Owner shall be listed as an additional insured on all liability policies. The City of Portsmouth shall be named as additional insured as follows:

City of Portsmouth  
Attn: Legal Department  
1 Junkins Avenue  
Portsmouth, NH 03801

**SC-5.05** *Owner's Liability Insurance*

Delete Paragraph 5.05 of the General Conditions in its entirety and insert the following in its place:

- A. Contractor shall purchase and maintain a separate Owner's Protective Liability policy, issued to Owner at the expense of Contractor, including Owner and Engineer as named insured. This insurance shall provide coverage for not less than the following amounts:

- |    |                  |              |
|----|------------------|--------------|
| 1. | Bodily Injury:   |              |
|    | Each Accident    | \$ 1,000,000 |
|    | Annual Aggregate | \$ 1,000,000 |
|    |                  |              |
| 2. | Property Damage: |              |
|    | Each Accident    | \$ 1,000,000 |
|    | Annual Aggregate | \$ 1,000,000 |

**SC-5.06** *Property Insurance*

Delete Paragraph 5.06 in its entirety and insert the following in its place:

- A. Contractor will provide and maintain Builders Risk for the Work. The policy shall be available for review. Subcontractors shall be responsible for insuring their own interests in the event of loss.

**SC-5.07** *Waiver of Rights*

Delete Section 5.07 in its entirety.

**SC-5.08** *Receipt and Application of Insurance Proceeds*

Delete Section 5.08 in its entirety.

**ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES**

**SC – 6.02** *Labor: Working Hours*

Add the following new paragraph immediately after and part of Paragraph 6.02.B:

- C. Normal working hours shall be from 7:00 AM to 5:00 PM Monday through Friday. Work hours may be adjusted if authorized by the Director of Public Works. No construction vehicles shall be started prior to 7:00 AM. Contractor shall refer to the City of Portsmouth Zoning Ordinances for noise restrictions.

The legal holidays to be observed by the City of Portsmouth NH in 2023 are shown on the posting from the City Manager dated August 3, 2022 and included at the end of this section.

**SC-6.05** *Substitutes and “Or- Equals”*

Add the following new subparagraphs immediately after Subparagraph 6.05.A.2.d.:

- e. The application for review of a substitute shall be on the Contractor's Application for Consideration of Substitution form provided in Section 01250 of the Project Manual and shall be included with the submittal. The Installation List included with the Application shall include only installations of the proposed substitute in applications of approximately the same size and complexity, and the same design as those proposed to be furnished for this Project. Include in the Installation List, as a minimum, the owner's name, address, and telephone number, Engineer's name, address and telephone number, location and name of project, installation date, startup date, and date of final acceptance by owner; and application of material or equipment.
- f. If the experience indicated by the Installation List does not demonstrate at least five years of successful operation of the proposed substitute item, Owner may require Contractor and Supplier to furnish, at Contractor's expense, a special performance guarantee with surety bond as required by Paragraph 6.05.D of the General Conditions with respect to the substitute. Only the time period between final acceptance of the proposed material or equipment on the referenced project and the Bid date for this Project will count towards the required satisfactory experience of the proposed substitute item. Engineer will be the sole judge of acceptability of experience, time credited, and whether the special performance guarantee will be required for a substitute item. Engineer will notify Contractor which proposed substitute(s) will require a special performance guarantee and surety bond.

**SC-6.05** *Substitutes and “Or- Equals”*

Add the following new paragraphs immediately after Paragraph 6.05.F.:

1. When a substitute item of material or equipment is proposed by Contractor and accepted by Engineer, and the substitution will require a change in any of the Contract Documents to adapt the design to the proposed substitute, Contractor shall notify Engineer of the changes and be responsible for the costs involved to revise the design and to make modifications or changes to the construction, including the costs associated with the Work of other contractors due to such changes in design or space requirements.
  - a. Redesign and drawing revisions will be prepared by Engineer, and Contractor shall reimburse Owner for charges of Engineer for redesign and drawing preparation.
  - b. Reimbursement of Engineer shall be based on Engineer’s direct labor costs, indirect labor costs, profit on the total labor, and any direct non-labor expenses such as travel or per diem.

**SC-6.06** *Concerning Subcontractor’s, Suppliers, and Others*

Renumber Subparagraph 6.06.F to 6.06.G and Subparagraph 6.06.G to 6.06.H and add new subparagraph as follows:

- F. Owner or Engineer may furnish to any such Subcontractor, Supplier, or other person or organization, to the extent practicable, information about amounts paid to Contractor in accordance with Contractor's Applications for Payment on account of the particular Subcontractor's, Suppliers, other person's, or other organization's Work.

**SC – 6.07** *Patent Fees and Royalties*

Delete Section 6.07.B in its entirety.

**SC-6.08** *Permits*

Delete the last sentence in Paragraph 6.08.A. in its entirety and replace with the following:

Unless otherwise specified in the General Requirements or Specifications, Contractor shall pay all charges of utility owners for connections for providing permanent service to the Work.

Add the following new paragraph immediately after 6.08.A of the General Conditions:

- D. The following permits and/or licenses will be obtained by the Owner:
  - a. None

**SC- 6.12** *Record Documents*

Add the following new paragraph immediately after Paragraph 6.12.A:

- B. The Contractor shall provide as-built survey information in an acceptable format of GPS locations (vertical & horizontal) of all new buried pipes, joints, valves, tees, fittings, conduits

etc in CAD & ArcGIS shapefile format. Where existing buried pipes, conduits are uncovered as part of the construction (i.e. raw water main, finished water transmission main, etc., GPS vertical & horizontal points shall also be provided. As-built survey information shall include:

1. GPS coordinates of the installed pipe and conduit locations
2. Elevation of pipes and conduits as installed
3. GPS coordinates and elevations of changes in pipe slope and/or alignment
4. Elevation and designation of other utilities at crossings
5. Final edge of gravel and edge of pavement along road and parking areas.
6. GPS location of valves, fittings, bends, structures, etc. and any transition in materials.

The Contractor shall designate personnel who will be responsible for layout, measurements, and as-built survey for the entire project. The Contractor shall submit final copies of field engineering survey to the Engineer for review on a monthly basis. Plan information provided shall be the same scale and datum as the design drawings.

#### **SC-6.16** *Emergencies*

Add the following new paragraph immediately after Paragraph 6.16.A.:

- 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 the correction or remedy shall be charged against Contractor. A Change Order will be issued to document the reduction in Contract Price.

#### **SC-6.17** *Shop Drawings and Samples*

Add the following new paragraphs immediately after Paragraph 6.17.E.:

- F. Contractor shall furnish required submittals with sufficient information and accuracy in order to obtain required approval of an item with no more than three submittals. Engineer will record Engineer's time for reviewing subsequent submittals of Shop Drawings, samples, or other items requiring approval and Contractor shall reimburse Owner for Engineer's charges for such time.
- G. 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 but not as a result of Contractor's failure to timely pursue the Work or to coordinate various activities properly, or Owner requests a different manufacturer or Supplier.

#### **SC-6.19** *Contractor's General Warranty and Guarantee*

Add the following new paragraph prior to Article 6.19, Paragraph A of the General Conditions:

- A. The Contractor warrants the Work for a period of one year from substantial completion of the entire project or a part thereof, unless a longer warranty is specified for a particular item or element of the project, in which case the longer warranty period shall govern.

## **ARTICLE 7 - OTHER WORK AT THE SITE**

### **SC-7.04** *Damages to the Work*

*or Property*

Add the following new Paragraph 7.04 at the end of Article 7 of the General Conditions:

#### **7.2** *Damages to the Work or Property*

- A. Should Contractor cause damage to the work or property of any separate contractor at the site, or should any claim arising out of Contractor's performance of the Work at the site be made by any separate contractor against Contractor, Owner, Engineer, Engineer's Consultants, or any other person, Contractor shall promptly attempt to settle with such other contractor by agreement, or to otherwise resolve the dispute by arbitration or at law. Contractor shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold Owner, Engineer, and Engineer's Consultants, harmless from and against all claims, damages, losses, and expenses (including, but not limited to, fees of engineers, architects, attorneys, and other professionals, and court and arbitration costs) arising directly, indirectly, or consequentially out of any action, legal or equitable, brought by any separate contractor against Owner, Engineer, or Engineer's Consultants, to the extent based on a claim arising out of the Contractor's performance of the Work. Should a separate contractor cause damage to the Work or property of Contractor or should the performance of Work by any separate contractor at the site give rise to any other claim, Contractor shall not institute any action, legal or equitable, against Owner, Engineer or Engineer's Consultants, or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from Owner, Engineer, or Engineer's Consultants, on such damage or claim. If Contractor is delayed at any time in performing or furnishing Work by any act or neglect of a separate contractor and Owner and Contractor are unable to agree to the extent of any adjustment in Contract Times attributable thereto, Contractor may make a claim for an extension of times in accordance with Article 12. An extension of the Contract Times shall be Contractor's exclusive remedy with respect to Owner, Engineer, and Engineer's Consultants, for any delay, disruption, interference or hindrance caused by any separate contractor. This paragraph does not prevent recovery from Owner, Engineer, or Engineer's Consultant, for activities that are their respective responsibilities.

## **ARTICLE 8 - OWNER'S RESPONSIBILITIES**

### **SC-8.06** *Insurance*

Delete Paragraph 8.06 of the General Conditions in its entirety.

### **SC-8.07** *Change Orders*

Delete Paragraph 8.07 of the General Conditions in its entirety.

**SC-8.08** *Inspections, Tests and Approvals*

Delete Paragraph 8.08 of the General Conditions in its entirety.

**ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION**

**SC-9.03** *Project Representative*

Add the following new paragraphs immediately after Paragraph 9.03.A.:

- B. Engineer will furnish a Resident Project Representative and assistants to assist Engineer in observing the performance of the Work. The duties and responsibility of the Resident Project Representative will be as enumerated in a document entitled "Duties, Responsibilities, and Limitations of the Authority of Resident Project Representative" and will be made available to Contractor at the start of his work.

**SC-9.08** *Decisions on Requirements of Contract Documents and Acceptability of Work*

Delete Paragraph 9.08.B and 9.08.C in their entirety and replace with the following:

- B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Contractor believes that any such decision entitles him to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.
- C. Engineer's written decision on the issue referred will be final and binding on the Contractor, subject to the provisions of Paragraph 10.05.

**SC-9.10** *Compliance with Safety Program*

Add the following new paragraph immediately after Paragraph 9.10.A.:

- B. In the event Engineer and/or Owner determines that Contractor's safety plans, programs, and procedures do not provide adequate protection for Engineer and/or Owner, Engineer and/or Owner may direct its employees to leave the Project Site or implement additional safeguards for Engineer's protection. If taken, these actions will be in furtherance of Engineer and/or Owner's responsibility to its own employees only, and Engineer and/or Owner will not assume any responsibility for protection of any other persons affected by the Work. In the event Engineer and/or Owner observes situations which appear to have potential for immediate and serious injury to persons, Engineer 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 Engineer and/or Owner 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.

## **ARTICLE 10 - CHANGES IN THE WORK; CLAIMS**

### **SC-10.01** *Authorized Changes in the Work*

Add the following new subparagraph immediately after Paragraph 10.01.B.:

1. By submission of a Claim Contractor certifies that the claim is made in good faith, that the supporting data are accurate and complete to the best of 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-10.05** *Claims*

Delete Paragraph 10.05.A, 10.05.B, 10.05.C and 10.05.E in their entirety and replace with the following:

- A. Engineer's Decision Required: All Contractor claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by the Contractor of any rights or remedies the Contractor may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.
- B. Notice: Written notice stating the general nature of each Claim shall be delivered by the Contractor to Engineer and Owner promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the Contractor. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the Owner within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by Contractor's written statement that the adjustment claimed is the entire adjustment to which the Contractor believes it is entitled as a result of said event.
- C. Engineer's Action: Engineer will review each Claim and, within 30 days after receipt shall take one of the following actions in writing:
  1. deny the Claim in whole or in part;
  2. approve the Claim; or
  3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.
- E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon the Contractor, unless the Contractor invokes the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.

**ARTICLE 11 - COST OF THE WORK; CASH ALLOWANCES; UNIT PRICE WORK**

**SC-11.01** *Cost of the Work*

In the second sentence of Paragraph 11.01.A.1, delete the word “superintendents.”

Delete Paragraph 11.01.A.5.a and c in their entirety and replace with the following:

- a. The proportion of necessary transportation, and travel of Contractor’s employees incurred in discharge of duties connected with the Work.
- 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. Owner reserves the right to request three quotes and to average these quotes to determine the cost. 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.

In Paragraph 11.01.B.1 add “superintendents” after “engineers” in the first sentence.

**SC-11.02** *Allowances*

In Paragraph 11.02.B.1.b, add: “Except where Contractor’s costs are allowed in the description of the bid item in Section 01151 - Measurement and Payment,” prior to the first sentence.

**SC-11.03** *Unit Price Work*

Add the following new Paragraph 11.03.D immediately after Paragraph 11.03.C. :

- D. The unit price of an item of Unit Price Work shall be subject to reevaluation and adjustment under the following conditions:
  1. If the Bid price of a particular item of Unit Price Work amounts to 5 percent 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 percent from the estimated quantity of such item indicated in the Agreement.
  2. If there is no corresponding adjustment with respect to any other item of Work.
  3. If Contractor believes that Contractor has incurred additional expense as a result thereof or if Owner believes that the quantity variation entitles Owner to an adjustment in the unit price, either Owner or Contractor may make a claim for an adjustment in the Contract Price in accordance with Article 10 if the parties are unable to agree as to the effect of any such variations in the quantity of Unit Price Work performed.



**ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES**

**SC-12.01** *Change of Contract Price*

Delete Paragraph 12.01.A in its entirety and replace with the following:

- A. The Contract Price may only be changed by a Change Order. Any Claim by the Contractor for an adjustment in the Contract Price shall be based on written notice submitted by in accordance with the provisions of Paragraph 10.05.

Delete Paragraph 12.01.C.1 in its entirety.

**SC-12.02** *Change of Contract Times*

Delete Paragraph 12.02.A in its entirety and replace with the following:

- A. The Contract Times may only be changed by a Change Order. Contractor's Claim for an adjustment in the Contract Times shall be based on written notice submitted by in accordance with the provisions of Paragraph 10.05.

**ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION**

**SC-14.02** *Progress Payments*

Add new paragraphs immediately after Paragraph 14.02A.3 of the General Conditions to read as follows:

- 4. Equipment accepted for delivery at the site or at a local bonded warehouse and included in progress estimates in advance of actual requirement will be subject to all conditions stated below.
- 5. Materials and equipment will not be included in progress estimates until the following requirements have been fulfilled.
  - a. The Contractor must present an invoice to the Engineer for each item of equipment he is requesting payment for. The invoice must be broken down to show the costs for the actual equipment, and reasonable costs for O&M Manuals, spare parts, start-up certification, training, testing, final acceptance testing, and any other services required by Contract.
  - b. Sufficient monies have been allocated in the payment requisition line items to cover all of the costs listed in "a" above, plus the costs of physically installing the equipment.
  - c. The equipment has been submitted and accepted for use in this Project.
  - d. The equipment is acceptably stored and protected. Storage in a bonded warehouse will require proof of bonding, and insurance coverage specifically for the item being stored.
  - e. The manufacturer's short and/or long term storage requirements have been received by the

Engineer, prior to payment.

- f. The Contractor has established a program to implement the manufacturer's required storage procedures. Said program to consist of at the very least a written schedule of daily, weekly, monthly, etc., routine maintenance requirements for each piece of equipment. A copy of this schedule to be presented to the Engineer prior to each requisition submittal, signed by the Contractor, stating that the required maintenance has been performed.
  - g. Signed, notarized Title Transfers, format to be furnished by the Engineer, must be furnished for each item of equipment.
6. When the above have been complied with to the satisfaction of the Engineer, payment will be authorized for the full invoice values of the item of equipment, less normal retainage and less all costs for O&M Manuals, spare parts, start-up certification, training, testing, final acceptance testing, and installation.

**SC-14.02** *Progress Payments*

Amend Paragraph 14.02.C.1. by striking out the words "Ten days" and inserting the words "Thirty days" in their place.

Delete Paragraph 14.02.D.1. in its entirety and replace with the following:

- 1. Owner may refuse to make payment of the full amount recommended by Engineer for reasons that may without limitation include:
  - a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
  - b. Owner requires additional supporting documentation of the work;
  - c. 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;
  - d. there are other items entitling Owner to a set-off against the amount recommended; or
  - e. Owner has a reasonable belief of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.

Delete paragraph 14.02.D.3. in its entirety.

**SC-14.07** *Final Payment*

Delete Paragraph 14.06.C.1. in its entirety and replace with the following:

- 1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will

become due and will be paid by Owner to Contractor in full or in part as set forth in Section 14.02 (D).

## **ARTICLE 16 - DISPUTE RESOLUTION**

### **SC-16.01** *Methods and Procedures*

Delete Paragraphs 16.01.A, B, and C. in there entirety and replace with the following:

- A. Either Owner or Contractor may request mediation of any Claim or dispute. The parties will endeavor to identify a mutually agreeable mediator and share the costs for such mediation equally. Neither party shall be required to agree to mediation.
- B. Owner and Contractor shall participate in any mediation process in good faith. If held, the process shall be concluded within 60 days of filing of the request.

## **ARTICLE 17 - MISCELLANEOUS**

### **SC-17.06** *Headings*

Delete Paragraph 17.06 in its entirety and replace with the following:

#### *17.06 Headings*

- A. The headings or titles of any article, paragraph, subparagraph, section, subsection, or part of the Contract Documents shall not be deemed to limit or restrict the article, paragraph, section, or part.

### **SC-17.07** *Legal Address of Contractor*

Add new paragraph immediately after Paragraph 17.06 of the General Conditions as follows:

#### *17.7 Legal Address of Contractor*

- A. Contractor's business address and his office at or near the site of the Work are both hereby designated as places to which communications shall be delivered. The date of such service shall be the date of receipt. The first-named address may be changed at any time by an instrument in writing, executed and acknowledged by Contractor and delivered to Engineer. Service of any notice, letter, or other communication upon the Contractor personally shall likewise be deemed sufficient service.

### **SC-18.01 - New Article**

Insert the following Article 18 immediately after Paragraph 17.07 of the General Conditions as follows:

## **ARTICLE 18 NOT USED**

**SC-19.01 – New Article**

Insert the following Article 19 immediately after Article 18 of the General Conditions as follows:

**ARTICLE 19 - OSHA CONSTRUCTION SAFETY PROGRAM**

- 19.1 Pursuant to NHRSA 277:5-a, the Contractor shall provide an Occupational Health and Safety Administration (OSHA) 10-hour construction safety program for its on-site employees. All employees are required to complete the program prior to beginning work. The training program shall utilize an OSHA-approved curriculum. Graduates shall receive a card from OSHA certifying the successful completion of the training program.
- 19.2 Any employee required to complete the OSHA 10-hour construction safety program, and who cannot within 15 days provide documentation of completion of such program, shall be subject to removal from the job site.
- 19.3 The following individuals are exempt from the requirements of the 10-hour construction safety program: law enforcement officers involved with traffic control or jobsite security; flagging personnel who have completed the training required by the Department of Transportation; all relevant federal, state and municipal government employees and inspectors; and all individuals who are not considered to be on the site of work under the federal Davis-Bacon Act, including, but not limited to, construction and non-construction delivery personnel and non-trade personnel.

**CITY OF PORTSMOUTH  
PORTSMOUTH, NH 03801**

*Office of the City Manager*

**DATE:** August 3, 2022  
**TO:** All Departments  
**FROM:** Karen Conard, City Manager *KSC*  
**CC:** Honorable Mayor McEachern and City Council Members  
**RE:** 2023 Holiday Schedule

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**HOLIDAY**

**OBSERVED**

New Year's Day	Monday, January 2, 2023
Dr. Martin Luther King Jr. Day	Monday, January 16, 2023
Presidents' Day	Monday, February 20, 2023
Good Friday (Half-Day)	Friday, April 7, 2023
Memorial Day	Monday, May 29, 2023
Independence Day	Tuesday, July 4, 2023
Labor Day	Monday, September 4, 2023
Indigenous People's Day	Monday, October 9, 2023
Veterans' Day	Friday, November 10, 2023
Thanksgiving Day	Thursday, November 23, 2023
Day After Thanksgiving Day	Friday, November 24, 2023
Christmas Day	Monday, December 25, 2023

*All employees must refer to their union contract for permitted holidays*

-END OF SECTION-

## **TECHNICAL SPECIFICATIONS, DRAWINGS, AND ATTACHMENTS**

### SPECIFICATION SEAL PAGE

SECTION 13 20 00- MOTOR FUEL STORAGE AND DISPENSING SYSTEM

SECTION 13 20 05- REMOVAL OF UNDERGROUND STORAGE TANKS

SECTION 13 20 10- RIGID METAL FUEL SYSTEM CANOPY

ATTACHMENT 1- GEOTECHNICAL REPORT

ATTACHMENT 2 ACTIVITY AND USE RESTRICTION

ATTACHMENT 3 NHDES UST CONDITIONAL CONSTRUCTION APPROVAL

ATTACHMENT 4 CONSTRUCTION DRAWINGS (28 SHEETS)

### DRAWING LIST:

FS.100 COVER SHEET

FS.101 FUEL SYSTEM NOTES, ABBREVIATIONS & LEGENDS, WELL MAP, AND FLOOD MAP

FS.102 VERIFICATION FORMS

FS.210 EXISTING SITE PLAN

FS.211 DEMOLITION PLAN

FS.212 PROPOSED SITE PLAN

FS.213 GRADING AND DRAINAGE PLAN

FS.220 DISPENSER AND FUEL ISLAND DETAILS

FS.221 CONCRETE PLANS AND DETAILS

FS.222 PLB, BOLLARD, AND PAVEMENT DETAILS

FS.223 CANOPY AND SIGN DETAILS

FS.224 FENCING DETAILS

FS.225 TRAFFIC CONTROL PLAN

FS.310 PIPING PLAN

FS.320 UST INSTALLATION DETAILS AND NOTES CONTAINMENT SOLUTIONS 10K GAS AND DIESEL

FS.322 UST RISER DETAILS AND HIGH LEVEL SET POINTS

FS.323 UST PIPING SUMP PLAN AND DETAILS

FS.324 PIPING TRENCH AND DISPENSER SUMP DETAILS

FS.325 VENT RISER PIPING DETAILS

FS.410 CONDUIT PLAN AND CONDUIT SCHEDULE

FS.420 SINGLE LINE DIAGRAM

FS.421 UST SUMP CONDUIT DETAILS AND DISPENSER SUMP CONDUIT DETAILS

FS.422 INTERSTITIAL RISER, I.S. SENSOR, AND CONDUIT TRENCH DETAILS.

FS.423 HIGH LEVEL ALARM AND E-STOP DETAILS, PANEL SCHEDULE AND ELECTRICAL COMPONENTS LIST.

FS.424 ELECTRICAL SCHEMATIC (1 OF 3)

FS.425 ELECTRICAL SCHEMATIC (2 OF 3)

FS.426 ELECTRICAL SCHEMATIC (3 OF 3)

FS.427 ELECTRICAL HAZARD LOCATION PLAN

# SPECIFICATIONS

City of Portsmouth, New Hampshire

## DPW Fuel Station Replacement

680 Peverley Hill Road  
Portsmouth, NH 03801

Issued for Bid  
August 2022

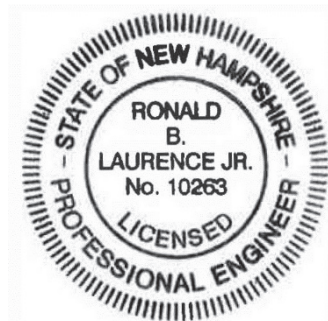
### Table of Contents

Section	Title
13 20 00	Motor Fuel Storage and Dispensing System
13 20 05	Removal of Underground Storage Tanks
13 20 10	Rigid Metal Fuel System Canopy

Prepared by:

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Auburn, NH 03032  
603-669-8672  
NH COA #00865

Ronald B. Laurence Jr.  
Digitally signed by Ronald B. Laurence Jr.  
Date: 2022.08.26 16:36:56 -04'00'



Ronald B. Laurence Jr., PE  
New Hampshire PE# 10263



## SECTION 132000

### MOTOR FUEL STORAGE AND DISPENSING SYSTEM

#### PART 1 - GENERAL

##### 1.1 SUMMARY

- A. Work under this section is subject to the requirements of the Contract Documents.
- B. Furnish and install a gasoline storage and dispensing system as shown on the Contract Drawings and as specified herein, including but not limited to the following:
  - 1. Underground fiberglass storage tanks.
  - 2. Geotextile fabric.
  - 3. Earthworks and excavation support.
  - 4. Concrete.
  - 5. Tank top equipment.
  - 6. Spill and overfill protection.
  - 7. Sump and riser assemblies.
  - 8. Fuel dispensers.
  - 9. Underground piping.
  - 10. Signage.
  - 11. Valves.
  - 12. Fire extinguishers.
  - 13. Dispenser equipment.
  - 14. Other motor fuel system equipment.
- C. Related Sections:
  - 1. Section 132010 – Rigid Metal Fuel System Canopy.

##### 1.2 REFERENCES:

- A. ASME B31.3 – Code for Process Piping.
- B. API Spec 12P - Fiberglass Reinforced Plastic Tanks.
- C. API 1615 - Installation of Underground Petroleum Storage Systems.
- D. PEI - RP100 - Installation of Underground Liquid Storage Systems.
- E. PEI - RP300 - Installation and Testing of Vapor Recovery Systems.
- F. PEI - RP400 - Testing Electrical Continuity.
- G. API 2000 - Venting Atmospheric and Low Pressure Storage Tanks.
- H. ASME Sec. 9 - Welding and Brazing Qualifications.

- I. NFPA 30 - Flammable and Combustible Liquids Code.
- J. NFPA 30A – Motor Fuel Dispensing Facilities and Repair Garages.
- K. NFPA 70 – National Electric Code.
- L. UL 971 - Nonmetallic Underground Piping For Flammable Liquids.
- M. UL 1316 - Glass-Fiber-Reinforced Plastic Underground Tanks for Petroleum Products.
- N. ASTM A53 - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
- O. ASTM D2996 - Standard Specification for Filament-Wound "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe.
- P. ASTM D2310 - Standard Classification for Machine Made "Fiberglass" (Glass Fiber Reinforced Thermosetting Resin) Pipe.

### 1.3 DEFINITIONS

- A. City or Owner: The City of Portsmouth, New Hampshire

### 1.4 PERFORMANCE

- A. Perform work and provide material and equipment as shown on Drawings and as specified or indicated in this Section of the Specifications. Completely coordinate work of this Section with work of other trades and provide a complete and fully functional installation.
- B. Give notices, file plans, obtain permits and licenses, pay fees and back charges, and obtain necessary approvals from authorities that have jurisdiction as required to perform work in accordance with all legal requirements and with the contract documents.
- C. In general, the work of this Section includes furnishing labor, equipment and materials necessary to perform the excavation, trenching, de-watering, bedding, backfilling, compaction, shoring and off-site disposal of excess and unsuitable materials during installation of fuel piping, underground storage tanks, fuel related electrical conduit, and all other related utilities specified or indicated in the Contract Documents.

### 1.5 SUBMITTALS

- A. Refer to General Requirements for Submittal Requirements.
- B. Shop Drawings: Submit original copies of product data submittals for materials and equipment in Part 2 of this section including, but not limited to:
  - 1. Pipe bedding and backfill material.
  - 2. Tank bedding and backfill material.
  - 3. Dewatering Plan. (if required)

4. Groundwater Discharge Permits (if required)
5. Underground Storage Tanks.
6. Anchors and Supports.
7. Leak detection and monitoring.
8. Asphalt.
9. Concrete.
10. Shoring.
11. Piping.
12. Ball Valves.
13. Containment Sumps.
14. Spill Containment Manholes.
15. Dispensers and Fuel Management System.
16. Hose Retractors.
17. Nozzles.
18. Hoses.
19. Breakaways.
20. Hose Swivels.

Shop drawings for all equipment shall be submitted to the City for approval within 21 days of contract award. Realizing the long lead time associated with certain equipment, e.g., underground storage tanks, the Contractor shall make every effort to submit these shop drawings as soon as possible after the contract award date. If the Contractor does not submit shop drawings in the allotted time, no consideration will be given on the project schedule for supply problems.

- C. Contractor's certificates certifying that installers are licensed and qualified to install equipment as required by the Project, including NH Master Electrician's license, ICC UST Installer Certification and piping and monitoring system manufacturer issued installer certifications. Provide certifications and licenses no later than the pre-construction meeting.
- D. Each operator's certificate must be on file at the site and must be made available upon request.
- E. At no expense to the City, the Contractor must obtain State, City of Portsmouth, and other authorities having jurisdiction, permits and certificates required for tank and system installations. The Owner will provide a UST Conditional Construction Approval issued by the New Hampshire Department of Environmental Services.
- F. Provide certification that a tank and piping tightness test has been performed according to State and Federal EPA standards, and system is free of leaks.
- G. Provide certification that inspections and tests, as described in PART 3 of this Section, have been performed, system is free of leaks, and has passed specified testing requirements.
- H. Manufacturer's Field Reports: Submit report of each visit of manufacturer's representative to provide technical assistance during installation.

- I. State Installer Certification: Certify tank installers employed on the Work, verifying that all work meet State installer requirements.
- J. Operation and Maintenance Manuals: Submit copies of the Operation and Maintenance Manuals in compliance with closeout submittals.
- K. Closeout Submittals:

The Contractor shall provide the City with one (1) electronic copy of the following closeout documentation within 30 days of project completion. Closeout documents shall be organized into appropriate folders and in Portable Document Format (PDF) format. Index all documents. Provide documents on a USB 2.0 or 3.0 Flash Drive or Portable Hard Drive. The City reserves the right to withhold final payment to the Contractor until the City is in receipt of all required documentation. Note: Hard copies shall be provided for manufacturer provided hard copy operating manuals (generator, dispenser, etc.). When these bound books are provided, they need not be provided electronically.

- 1. UST installation/warranty checklist with proof of delivery to manufacturer.
- 2. Piping installation checklist with proof of delivery to manufacturer.
- 3. Monitoring System Installation and Intrinsic Safety Checklist with proof of delivery to manufacturer.
- 4. Monitoring System final setup printout.
- 5. NHDES backfill approval.
- 6. NHDES authorization to use system.
- 7. NHDES Annual Leak Monitoring Test Form with proof of delivery to NHDES.
- 8. NHDAM&F – Bureau of Weights & Measures Placed in Service/Inspection Report Form.
- 9. A minimum of one hundred (100) photographs of key phases of the project such as; foundation and bollard installation, system component and equipment installation (i.e. tank placement, conduit runs and connections, etc.).
- 10. As-Built Construction Drawings. All sheets shall be submitted, even if there are no changes, each signed and dated by the Contractor. If any sheets do not require editing, the Contractor shall indicate “No changes this sheet” then sign and date the notation.
- 11. Primary Tank and Piping Test Results and Test Results for all secondary containment structures or annuluses and all containment sumps.
- 12. Final NHDES Registration Form (signed by installer), including proof of submission to NHDES.
- 13. Tank certificate.
- 14. Warranties for all equipment and apparatus not already listed above. In general, any product/manufacturer documentation that was provided with the equipment shall be provided as part of the closeout documents.
- 15. Training certification for the fuel management system, monitoring system, and dispenser operation signed by the individuals trained on these systems.
- 16. All instruction bulletins, preventive maintenance schedules, operational instructions, and parts lists provided with the tanks, dispensers, and monitoring system (only 1 copy of owner operating manuals required).
- 17. General Release of Liens.
- 18. Release of Liens for all subcontractors.

19. Waste disposal documentation (if any).
20. Other environmental information (if any).
21. Copies of receipts for any keys, locks, or other equipment turned over to the City.  
Signatures of recipient and printed names required

#### 1.6 QUALITY ASSURANCE

- A. Perform site work in accordance with City of Portsmouth construction standards. In the absence of City of Portsmouth standards, comply with the New Hampshire Department of Transportation Standards for Road and Bridge Construction.
- B. Regulatory requirements from the following agencies must be followed as minimum requirements for equipment required by the Project. Stricter requirements indicated in the Contract Drawings or the Specifications must have precedence over the requirements listed below:
  1. Materials and Equipment shall be manufactured, installed, and tested as specified in latest editions of applicable publications, standards and ruling of:
    - a. Local and State building, plumbing, mechanical, electrical, fire and health department codes.
    - b. National Fire Protection Association (NFPA).
    - c. Occupational Safety and Health Act (OSHA).
    - d. Factory Mutual Association (FM).
    - e. Underwriter's Laboratories (UL).
    - f. American Petroleum Institute (API).
    - g. Manufacturer recommendations and requirements.
  2. The most recent editions of applicable specifications and publications of the following organizations form part of the Contract Documents:
    - a. American National Standards Institute (ANSI).
    - b. American Society of Mechanical Engineers (ASME).
    - c. National Electric Manufacturers Association (NEMA).
    - d. American Society for Testing of Materials (ASTM).
    - e. American Welding Society (AWS).
    - f. Manufacturers Standardization Society of the Valve and Fitting Industry (MSS).
- C. Specific reference is made to the following Standards of the National Fire Protection Association (NFPA) which shall govern provision of work as specified and as required by codes and authorities:
  1. NFPA 30 - Flammable and Combustible Liquids Code.
  2. NFPA 30A – Code for Motor Fuel Dispensing Facilities.
  3. NFPA 70 – National Electrical Code
- D. Qualifications: Use adequate numbers of skilled, licensed individuals who are thoroughly trained and experienced in the installation and testing of the specified systems and who are completely familiar with the requirements and the methods needed for proper performance of the work of this Section.

- E. All fuel system equipment shall be compatible with oxygenated fuel blends including up to 15% Ethanol.
- F. Complete the gasoline system installation in accordance with the requirements of State of New Hampshire Fire and Building Codes and the NHDES.
- G. Comply with the testing and field quality control requirements elsewhere in this section.
- H. Qualifications:
  - 1. Manufacturer: Utilize companies specializing in manufacturing products specified in this section with minimum five years documented experience.
  - 2. Leak Detection Systems: The installing contractor of the monitoring system shall be the highest grade technician as certified by the leak detection manufacturer.
  - 3. Tank Installer: Company specializing in performing Work of this section with minimum ten years documented experience. The Contractor installing the Gasoline System shall be a Certified tank installer in accordance with Local and State requirements.
  - 4. Provide a manufacturer certified installer to supervise the installation of the underground UL-971 piping systems (both flexible and fiberglass reinforced plastic). Provide installers of the aboveground pre-manufactured piping system that have a resume of significant experience installing the system, including at least 5 years of demonstrated experience with that system.

#### 1.7 PERMITS AND SUBMISSIONS

- A. The Contractor shall be responsible for all permits and notifications required by State and Local codes and regulations, with the following exceptions:
  - 1. The Owner will provide a Conditional Construction Approval for the Installation of an Underground Storage Tank System pursuant to Env-Or 400, issued by the NH Department of Environmental Services.
- B. Specifically at a minimum, the Contractor shall make the following submission:
  - 1. New Hampshire Department of Environmental Services Registration for Underground Storage Tank Systems.
  - 2. Application for Building, Demolition, and appropriate Trade permits to the City of Portsmouth Building and Fire Departments
- C. If required, the Contractor shall apply for and obtain a Temporary Groundwater Discharge Permit issued by the New Hampshire Department of Environmental Services in the event that the discharge of groundwater is required for the installation of the Underground Storage Tanks. The contractor shall be responsible for securing all samples required to apply for the permit.
- D. The Contractor shall also be responsible for the making the following submission to the New Hampshire Department of Agriculture, Markets & Food (NHDAM&F) – Bureau of Weights and Measures:
  - 1. Placed in Service/Inspection Report Form, Retail Motor Fuel Devices.

- E. Copies of all submissions and permits/registrations received shall be provided as part of the closeout documentation.

## PART 2 PRODUCTS

### 2.1 EARTHWORK AND PAVEMENT

- A. The following materials shall be used for earthwork activities conducted under this Contract:
  - 1. Structural Fill. Per NHDOT Standard Specifications Section 508 – Structural Fill.
  - 2. Crushed Stone, Crushed Gravel, Gravel. Per NHDOT Standard Specifications Section 321216 – Asphalt Paving.
  - 3. Pea Gravel. As specified by the tank manufacturer.
  - 4. Pavement: Pavement shall be installed in two (2) lifts, a 3-inch binder wearing course (Per NHDOT Standard Specifications Item 403.11023 - HBP-BINDER, MM) and a 1 ½ inch high-strength wearing course (Per NHDOT Standard Specifications Item 403.11943 - HBP-1/2” WEARING, MM, HIGH STRENGTH).
  - 5. Pavement Joint Adhesive. NHDOT Standard Specifications Item 403.16
  - 6. Asphalt Emulsion Tack Coat: Per NHDOT Standard Specifications Item 410.22

### 2.2 UNDERGROUND STORAGE TANKS

- A. Materials for the UST installations shall be as specified on the construction drawings and herein.
- B. The Contractor shall provide two (2) 10,000-gallon USTs that shall be: factory-fabricated, double-walled, fiberglass, fuel storage tank, of capacity, dimension, and use as scheduled. The secondary containment underground fuel storage tank shall be UL 1316 listed. The approved manufacturers are:
  - 1. Containment Solutions Double Wall FRP UST
  - 2. Xerxes/ZCL Double Wall FRP UST
- C. Primary and secondary tanks shall withstand pressure test requirements as specified by the tank manufacturer.
- D. Tank storage requirements shall conform with the following:
  - 1. Capacity: 10,000-gallon (Nominal capacity) tanks. Size shall be consistent with those depicted on the construction drawings.
  - 2. Venting: Tanks shall be vented and operated at atmospheric pressure in accordance with the construction drawings.
  - 3. Specific Gravity: Tanks must store liquids with specific gravities up to 1.1.
  - 4. Chemical Resistance: Tanks must be chemically inert to the petroleum products being stored.



- E. The tanks shall be tested, manufactured, and certified for tightness per UL 1316 Standards.
- F. The double-wall tanks shall comply with all of the requirements of the State of N.H. Administrative Code Env-Or 400.
- G. Tanks shall be warranted for 30 years of service.
- H. The Contractor shall provide documentation for each tank indicating that the tank was factory tested for tightness and guaranteed by the manufacturer to be tight. The contractor shall provide all documentation required for the 30 year warranty to the City within 30 days of tank installation.
- I. The Contractor shall provide the following tank accessories:
  - 1. Certification Plate: The Contractor shall provide a plate bearing the UL label, and permanently affix it to the tank.
  - 2. Fittings: The Contractor shall provide threaded fittings on top of tanks of sizes and number as specified on the construction drawings.
  - 3. All tanks shall include appropriate size gauge stick calibrated in inches.
  - 4. Tank manufacturer supplied deadmen. Field constructed deadmen will not be accepted.
- J. The Contractor shall provide a standard aluminum drop tube extension into each tank compartment, as specified on the construction drawings. The drop tube shall include an automatic shutoff valve set to stop the filling process at 95 percent of the actual tank capacity.
- K. Fill pipe shall conform to specifications on construction drawings.
- L. The monitoring equipment must meet Env-Or 400 requirements, be compatible with the tank installed, and include all wiring, sensors and components for a complete operational system.
- M. The hydrostatic interstitial space sensor shall be capable of detecting a breach in either the inner and/or outer tank. Any solution used in the tank's annual space shall have UL approval for compatibility with the tank and be a contrasting color to the tank surface to facilitate visual inspection of the tank for leaks prior to burial.
- N. The internal tank sensor shall be capable of measuring water level and product high and low levels.
- O. The leak monitor shall be capable of sensing any liquid that has entered the piping containment sump. The sensor is to be connected to the same unit used for the tank monitor.
- P. The tank piping sumps shall be manufactured by the tank manufacturer, and made of fiberglass. The base shall be 48 inches in diameter and the top to be 38 inches in diameter, use Model Numbers as specified in the construction drawings. Tank piping sumps shall be the "polygon" type.



- Q. Dispenser piping sumps shall be manufactured by Bravo, made of fiberglass, and provided with a offset frame to allow conduit installation with limited sump penetrations.. Use Model Number specified on the construction drawings with appropriate watertight boots, mounting, hardware, gaskets, and watertight cover.
- R. The overfill alarm visible indicators and horn shall be the same manufacturer as the tank monitor.
- S. The overfill alarm horn sign shall be constructed in accordance with the construction drawings with the words "OVERFILL ALARM WHEN ALARM SOUNDS TANK IS FULL" and with other language as specified on the construction drawings. Size the sign and lettering in accordance with the construction drawings for easy reading from ground level.
- T. Manhole covers shall comply with the following:
  - 1. The interstitial sensor shall have a manhole manufactured by OPW / Flexworks with a composite locking cover and 18 inch extended skirt and 18 inch inner diameter as specified on the construction drawings.
  - 2. The manhole covers for the piping sumps shall be as specified in the construction drawings.
- U. The Contractor shall provide one (1) Master lock (#2359) for each fill port.

### 2.3 PIPING

- A. Vent Piping shall comply with the following:
  - 1. Piping exposed above grade shall be Schedule 40 minimum, galvanized carbon steel.
  - 2. Buried piping shall be double wall fiberglass product pipe as manufactured by NOV, 2-inch, UL 971 listed.
  - 3. All fittings on steel piping shall be galvanized 150 pound malleable iron.
- B. 2.3.2 Product Piping shall be 2-inch double wall flexible product pipe as manufactured by APT, Inc., APT XP-200-SC, UL 971 listed. Product piping within containment sumps shall be seamless schedule 40 steel conforming to ASTM A53. Product carrying piping shall not be galvanized.
- C. Duct Piping shall be flexible ducting as manufactured by the APT, Inc., 4-inch, APT DCT-400.
- D. Alternates: Not Authorized

### 2.4 TANK TOP EQUIPMENT

- A. All tank top equipment, including vent caps, shall meet the Phase I EVR standard as defined by the California Air Resources Board, and be certified as a complete system by CARB Executive Order.

## 2.5 CONTAINMENT SUMPS

- A. All containment sumps shall be constructed of fiberglass reinforced plastic (FRP) and of a make and model as shown on the construction drawings..

## 2.6 ENVIRONMENTAL MONITORING SYSTEM

- A. Manufacturer: Veeder Root
- B. Console Model: TLS 450 Plus
- C. Alternates: Not Authorized
- D. Provide probes and sensors of the same manufacturer as shown on the construction drawings
- E. Provide all wire and cabling in accordance with the Veeder Root installation and site setup manuals.
- F. Environmental monitoring console shall be configured with dispensers and associated pumps to provide positive shutdown upon detection of a leak in a dispenser or piping sump. Refer to construction drawings for additional information.

## 2.7 ELECTRICAL

- A. Electrical conduits shall comply with the following:
  - 1. EMT Conduit: Conduits installed overhead or above the equipment and in the building shall be galvanized EMT conduit, sized as per latest edition of National Electrical Code (NFPA 70), minimum size to be 3/4" diameter. Size conduits per the construction drawings.
  - 2. Rigid Conduit: Conduits (other than overhead runs under canopies and/or over the equipment and building) shall be new rigid galvanized steel sized in accordance with NFPA 70, but no smaller than 3/4" diameter. Rigid non-metallic conduit is permitted underground when allowed by NFPA 70 and by the dispenser and fuel management system manufacturer. All rigid non-metallic conduit shall be Schedule 40 PVC. All underground non-metallic conduit shall be installed with magnetic warning tape.
  - 3. Flexible Conduit: Flexible conduit in NEC, Class I, Division 1 Classified Areas shall be Crouse-Hinds, flexible couplings type "ED" series or equal. Flexible conduit in NEC, Class I, Division 2 or Non-Classified Areas shall be liquid-tight metallic-core galvanized steel, grounding type with extruded PVC cover. Adapters and connectors shall be liquid-tight Crouse-Hinds "LT" type connectors or equal.
- B. Junction/outlet boxes in Classified Hazardous Areas shall be explosion proof, Class I, Division 1 or Division 2, Crouse-Hinds, Appleton, or approved equal, and sized in accordance with NEC requirements.
- C. All electrical wire and cable for circuits shall be properly sized to conform to NFPA 70.

- D. All wire and cable installed within conduits that exit, enter, or go through a hazardous area must conform to NEC, Article 501-13 for conductor insulation.
- E. Cable and wire for conduit installation shall be of the size and type specified on the construction drawings. All wire shall be stranded. All cable and wire conductors shall be copper.
- F. Control cable shall consist of multi-conductors of stranded wires, 95% shield coverage, black PVC jacket, oil and grease resistant; manufactured by Belden.
- G. Ground wires and bonds shall be #2 AWG stranded copper cable with approved type solderless connectors and lugs.

## 2.8 DISPENSING EQUIPMENT AND INTEGRATED FUEL MANAGEMENT SYSTEM

- A. The Contractor shall provide two (2) electronic, dual hose, dual product suction dispensers with under dispenser containment in accordance with the construction drawings. Dispensers shall be equipped with an integrated fuel management system and ethernet switch.
- B. The dispenser shall each be supplied with in-dispenser HID card readers and associated fuel management system controllers. Fuel management pedestal configurations are not authorized.
- C. The dispensers shall have stainless steel cabinets and doors.
- D. The dispensers shall be equipped with a dual-pulse output board.
- E. The fuel management system and dispenser shall be supplied from the same manufacturer.
- F. Manufacturers:
  - 1. Wayne, iX Fuel Management System (Basis of Design)
  - 2. Gasboy, Atlas Prime Fuel Management System
- G. Note: The Wayne iX is the basis of design. The drawings depict diagrams required for this system. Alternate systems may require different design elements, equipment, wiring, materials, and/or configuration. The Contractor shall be responsible for providing all necessary alternate design and installation documents required, and shall submit to the Owner for approval, should an alternate be selected and approved.
- H. The fuel management system shall be a standalone unit that does not require additional software subscriptions, cloud services, or any other connection to the internet to operate.
- I. The fuel management system shall have the capability for remote monitoring.
- J. Supply fuel management system with 125 kHz HID proximity readers capable of reading HID ProxCard II and ProxCard Plus, and the same HID protocols used by other Owner HID readers. HID readers shall be mounted within the dispenser cabinet and supplied

with the dispenser from manufacturer as factory installed. There shall be one (1) dedicated HID card reader for each nozzle (i.e., two HID readers for every 2-hose dispenser). Each HID reader is associated with a single nozzle.

- K. Supply 300 ProxCard II HID Cards with the system.
- L. Provide one (1) Fuel Management/Revenue Controller (supplied with the Fuel Management and Revenue Control System). This is a dedicated terminal for the Fuel Management and Revenue Control System only. Only one controller shall be required. The controller shall have the following requirements:
  - 1. Controller shall be designed for industrial applications & include a fan-less SBC (single board computer) with 4 gig RAM, 1.86 GHz dual core processor, 120GB solid state drive.
  - 2. Controller shall use SQL Server database and all necessary software shall be pre-installed on the controller.
  - 3. Controller shall include battery back-up for managed shutdown under power loss conditions.
  - 4. Controller shall include Windows Imbedded Industry Pro 8.1 operating system
  - 5. Controller shall include 19" color LCD monitor, keyboard, & mouse; 5 USB ports (4 in back, 1 in front); & (2) two Ethernet ports
  - 6. USB printer will be supplied by site owner or network printer will be available.
  - 7. Controller shall be designed to be either desk or wall-mounted.
  - 8. Controller shall communicate to the dispensers via a direct LAN cable connection or over a local area network.
  - 9. Controller shall be managed from a remote computer at the facility (within the facility LAN) or be managed remotely from a computer over the internet.
  - 10. Data for authorizing & controlling fueling transactions shall be entered at the controller & downloaded to each dispenser.
  - 11. Each dispenser shall independently authorize the fuel transactions without communicating to the system controller.
  - 12. Controller & dispensers shall communicate automatically on a periodic basis (e.g. every 5 minutes), or on demand, to exchange data.
  - 13. Vehicle controls shall include:
    - a) Authorized fuel dispensers(s)
    - b) Maximum fuel per transaction
    - c) Maximum fuelings per day
    - d) Odometer reasonability minimum and maximum miles
  - 14. Employee controls shall include:
    - a) Authorized fuel dispensers(s)
    - b) Authorized vehicle types
    - c) Maximum fuelings per day
  - 15. Data shall be able to be entered directly into the database, or optionally through an excel template.
  - 16. System shall be able to handle a minimum of 2500 employee attendants
  - 17. Software shall include a management dashboard showing the status of all fueling sites on a single screen.
  - 18. Dashboard shall provide alerts of equipment, inventory, or communication issues; & transaction errors.

19. Controller shall allow for central control of fueling at the entire facility, collectively or on an individual dispenser basis. That is, the manager, from the control computer, shall be able to immediately “turn-on” or “turn-off” any fueling position, or any individual card, at the facility at any time by allowing or dis-allowing the system to authorize any particular position or employee card.
20. Dashboard shall include key graphs and tables for monitoring fueling activity.
21. An ad hoc report generator shall be included to create custom transaction reports with up to 5 sort levels.
22. Reports shall be able to be filtered for specific or ranges of data and time/date range.
23. Transaction data in reports shall include:
  - a) Site number and name
  - b) Transaction number
  - c) Date/Time
  - d) Department number and name
  - e) Vehicle number and name
  - f) Employee number and name
  - g) Fueling point number
  - h) Product number and name
  - i) Quantity of fuel dispensed accurate to 0.1 gallon
  - j) Odometer or hours
  - k) Miles traveled or hours used
  - l) Unit price or cost
  - m) Total price or cost
  - n) Miles per gallon
  - o) Cost per mile or hour
  - p) Errors
  - q) Subtotals and grand totals
24. A transaction export file in XML format shall be created for use by third party software or Excel.
25. Warranty: One year parts and labor.
26. Standards/Approvals: C-UL-US listed, FCC approval

## 2.9 CAST-IN-PLACE CONCRETE

- A. Unless otherwise specified on the construction drawings, concrete mix shall be 4,000 psi minimum, Class AA, 658 lbs. and 3.0 bags per cubic yard with fiber mesh (complying with ASTM C 1116 Type III 4.1.3). Conform to NHDOT Standard Specifications Division 500 Section 520.
- B. All concrete shall be coated with a water repellent sealer in accordance with NHDOT Standard Specifications Section 534.
- C. Reinforcing: As specified in the construction drawings and conforming to NHDOT Standard Specifications Section 544.

## 2.10 ADDITIONAL EQUIPMENT

- A. Alarm Lights. The Contractor shall furnish and install alarm lights and alarm signs in accordance with the construction drawings.
- B. Signage. The Contractor shall add static discharge and no smoking signs as specified on the construction drawings.

## 2.11 FIRE EXTINGUISHERS

- A. The Contractor shall provide fire extinguishers and associated cabinets as specified in the construction drawings. Supply and install identification stickers on both sides of the outside of the cabinets.

## PART 3 EXECUTION

### 3.1 EARTHWORK

- A. Excavation
  - 1. Excavate earth as required for the work and as specified in the construction drawings.
  - 2. Maintain sides, slopes, and shoring of excavations in a safe condition until completion of backfilling. All excavations shall comply with Code of Federal Regulations Title 29-Labor, Part 1926 (OSHA).
  - 3. Stockpile excavated materials classified as suitable material so as not to interfere with the progression of the work, until required for fill. Place, grade, and shape stockpiles for proper drainage as specified under the Environmental Considerations section of this document.
  - 4. Excavated materials classified as unsuitable material shall be immediately removed from the Site and transported to an approved facility.
  - 5. Excavation Limits: Conform to elevations, lines, and limits as indicated on the construction drawings. Excavate vertically and shore as directed. Extend excavation a sufficient lateral distance to provide clearance to execute all required work activities.
  - 6. The Contractor shall notify the City and/or the City's representative upon completion of excavation operations. Work activities shall not proceed until the City has inspected the excavation and provided clearance to execute work.
- B. Dewatering
  - 1. The Contractor shall provide dewatering services in accordance with the following specifications:
    - a. Prevent surface and subsurface water from flowing into excavations and trenches and from flooding the Site and surrounding areas.
    - b. Do not allow water to accumulate in excavations or trenches. Remove water from all excavations immediately to prevent softening of foundation bottoms, undercutting footings, and soil changes detrimental to the stability of subgrades and foundations. Furnish and maintain

pumps, sumps, suction and discharge piping systems, and other system components necessary to convey the water away from the excavation. If groundwater is uncontaminated, all dewatering is included in this scope. It groundwater treatment is being provided under another item, pumping of all groundwater to the frac tank or treatment system is included in this scope.

- c. If required, the Contractor shall apply for and obtain a Temporary Groundwater Discharge Permit issued by the New Hampshire Department of Environmental Services in the event that the discharge of groundwater is required for the installation of the Underground Storage Tanks. The contractor shall be responsible for securing all samples required to apply for the permit.

C. Settlement.

1. The Contractor shall maintain surveillance to detect any settlement of structures, concrete, or pavement and notify the Owner immediately if settlement occurs. Immediate action shall be taken by the Contractor to prevent further settlement.

D. Placing Fill and Backfill

1. Excavations and trenches shall be backfilled as promptly as work permits, but not until completion of the following:
  - a. Acceptance by the City of final excavation limits.
  - b. Inspection, testing, approval, and recording locations of underground utilities.
  - c. Removal of all trash and debris.
  - d. Acceptance by NHDES to backfill. A copy of the Backfill Approval form received from the NHDES must be submitted as part of closeout documentation.
2. Place backfill materials in layers not more than 12 inches thick in loose depth (6 inches for confined areas such as trenches) unless otherwise specified or approved. Before compaction, moisten or aerate each layer as necessary to facilitate compaction to the required density. Do not place backfill or fill material on surfaces that are muddy, frozen, or covered with ice.
3. Additional excavation resulting from the removal of unsuitable material and not specified on the construction drawings shall be backfilled with compacted structural granular material.

E. Compaction

1. Compact each layer of fill and backfill for the following area classifications to 95 percent of maximum density, and at a moisture content suitable to obtain the required densities, but at not less than 3 percent drier or more than 2 percent wetter than the optimum content as determined by ASTM D 698.
2. When the existing ground surface to be compacted has a density less than that specified for the particular area classification, break up and pulverize, and moisture condition to facilitate compaction to the required percentage of maximum density.
3. Where fill or backfill must be moisture conditioned before compaction, uniformly apply water to the surface and to each layer of fill or backfill. Prevent



- ponding or other free water on surface subsequent to, and during compaction operations.
4. Remove and replace, or scarify and air dry, soil that is too wet to permit compaction to specified density. Soil that has been removed because it is too wet to permit compaction may be stockpiled or spread and allowed to dry. Assist drying by disking, harrowing or pulverizing, until moisture content is reduced to a value which will permit compaction to the percentage of maximum density specified.
- F. Subgrade Surface for Concrete Pavement
1. Shape and grade subgrade surface as follows:
    - a. Concrete: Shape the surface of areas under concrete to required line, grade and cross section, with the finished surface not more than 1 inch above or below the required subgrade surface elevation.
    - b. Pavement: Shape the surface of areas under pavement to required line, grade and cross section, with the finished surface not more than 1/2 inch above or below the required subgrade surface elevation.
  2. Grade Control: During construction, maintain lines and grades including crown and cross-slope of subbase course.
  3. Thoroughly compact subgrade surface for concrete and pavement by mechanical rolling, tamping, or with vibratory equipment as approved to the density specified.
  4. Finish surfaces free from irregular surface changes, and as follows:
    - a. Concrete: Place and compact subbase material as specified. Shape surface of areas under walks to required line, grade and cross section, with the finished surface not more than 1/2 inch above or below the required subbase elevation.
    - b. Pavements: Place and compact subbase material as specified. Shape surface of areas under pavement to required line, grade and cross section, with the finished surface not more than 1/2 inch above or below the required subbase elevation.
- G. Maintenance and Restoration
1. Restore grades to indicated levels where settlement or damage due to performance of the work has occurred. Correct conditions contributing to settlement. Remove and replace improperly placed or poorly compacted fill materials.
  2. Restore pavements, walks, curbs, lawns, and other exterior surfaces damaged during performance of the work to match the appearance and performance of existing corresponding surfaces as closely as practicable.
- H. Field Quality Control.
1. Compaction Testing: The Contractor shall notify the City in advance of all phases of filling and backfilling operations. Compaction testing will be performed on the fill and backfill as determined by the City's representative. If a compaction layer fails to meet the specified percentage of maximum density, the layer shall be recompacted and will be retested. No additional material may be placed over a compacted layer until the specified density is achieved.



- I. Protection.
  - 1. The Contractor shall protect graded areas from traffic and erosion, and keep them free of trash and debris.
  
- J. Shoring
  - 1. ***The Contractor shall install engineered shoring for the installation of the new underground storage tanks.***
  - 2. The Contractor shall furnish all labor, materials, equipment, tools, and appurtenances required to complete the work of sheeting, shoring and bracing as necessary to complete the installation and/or removal of underground storage tanks, and as required by OSHA and other applicable regulatory agencies for any trenching or similar excavation. The required construction shall meet all applicable federal, state, and local regulations. All shoring materials used shall be in good, serviceable condition, and carried down as the excavation progresses. ***All shoring shall be installed with corner sheet piles or other means to minimized groundwater intrusion into the excavation.***
  - 3. All material shall conform to the minimum requirements of applicable Federal, State, and local codes and/or regulations.
  - 4. Pressures on sheeting and the stability of the sheeting and bottom of the excavation are dependent not only on soil conditions but on many procedures and options available to the Contractor, such as dewatering, staging of excavation, installation of bracing, flexibility of sheeting, construction equipment used, and time of completing the work. All such factors shall be considered in the design of the sheeting and bracing.
  - 5. The Contractor shall submit drawings, computations and substantiating data prepared, signed, and sealed by a professional engineer licensed in the State of New Hampshire, and shall be submitted to the City within 30 days of contract award, but in no case later than 14 days prior to the commencement of excavation work. The plans shall show the proposed sheeting design and method of construction. Any review or comments by the City shall not relieve the Contractor of his responsibility for proper sheeting and bracing.
  - 6. During the installation of the shoring and bracing and as long as the excavation is open, the Contractor shall monitor the work to ensure that it is carried out in accordance with the design and procedures.
  - 7. Before commencing work the Contractor shall check and verify all dimensions and elevations. The Contractor shall be solely responsible for the proper alignment and fit of the proposed tank installation.
  - 8. The Contractor shall remove all shoring and bracing material at the completion of work.
  - 9. Because dewatering and groundwater treatment will occur in conjunction with the sheeting and shoring operation, it is the Contractor's responsibility to ensure that such dewatering activities do not adversely impact upon the sheeting and shoring. Any movement in the sheeting and shoring shall be corrected immediately, and corrective measures enacted to ensure no further movement.

### 3.2 UNDERGROUND STORAGE TANKS

- A. Underground storage tanks and associated equipment shall be installed in strict accordance with the construction drawings and manufacturer requirements.
- B. The Contractor shall provide and install the appropriate breaker, conduit and wiring from a power source to the panel, and from the panel to the overfill alarm and tank locations as specified on the construction drawings. All wiring shall be in accordance with the NEC, paying particular attention to Chapter 514.
- C. The Contractor shall install an overfill alarm, warning lights, and signs approximately in the location shown on the construction drawings. The contractor shall install the emergency stop switch, sign, and circuitry in strict accordance with the construction drawings.
- D. Rigidly adhere, step by step, to manufacturer's installation instructions for excavation, bedding, tank setting, anchoring, and backfill. Backfill with pea stone as specified by the tank manufacturer.
- E. STORAGE TANK TESTS - Provide air pressure tests in accordance with the construction drawings and tank manufacturer's instructions. Repair or replace tanks as required to eliminate leaks and retest as specified to demonstrate compliance. The Contractor shall submit, as part of the closeout documentation, a copy of all tank test results.
- F. The USTs shall be located as shown on the construction drawings.
- G. Manholes shall be installed where indicated. See construction drawings for crowning specifications around manholes.
- H. Brine filled interstitial space systems are specified for all new tanks on this project. Brine levels shall be monitored by the Contractor for a minimum of 120 days after final inspection and acceptance. During this period, the Contractor shall add additional brine to the tank as necessary to maintain proper liquid level. The Contractor shall also provide five (5) gallons of brine to the City within 30 days of final inspection and acceptance. The contractor is responsible for including a signed receipt of the brine solution by City personnel. The receipt shall include printed name, signature and phone number.
- I. The Contractor shall submit a request for initial fuel delivery to the Owner in writing. That request should include the NHDES authorization to store product for each tank, the tank capacity chart, the final tank manufacturer "cut sheet" with final tank dimensions, a copy of the posted tank certificate, and each tank serial number. A copy of the NHDES Authorization to Use System should also be submitted as part of the closeout documentation.
- J. The Contractor shall post a tank certificate, per NHDES requirements, listing all information regarding the tank that was submitted on the tank registration form. The

Contractor shall submit, as part of the closeout documentation, a copy of the tank certificate posted on-site.

- K. The Contractor shall complete and submit to the manufacturer the UST installation/warranty checklist. A copy of the completed checklist as well as confirmation of delivery of the checklist to the manufacturer shall be submitted as part of the closeout documentation.

### 3.3 PIPING

- A. The Contractor shall install product and vent piping in accordance with manufacturer's requirements. Piping shall be installed in trenches as indicated on the construction drawings using backfill and spacing as required by the manufacturer.
- B. All product pipes shall be horizontal and slope down toward the piping sump at a minimum of 1/8-inch per foot, and terminate within the piping sumps and the dispenser sumps. All joints and sump entries shall be made with piping manufacturer supplied fittings and be liquid tight.
- C. Product piping shall be connected to the tanks and fueling dispensers in accordance with manufacturer's requirements and applicable codes.
- D. All vent pipes shall be horizontal and slope down to the piping sump at a minimum of 1/4-inch per foot, and terminate within the piping sump at the UST and as shown on the construction drawings at the vent riser location. All joints and sump entries shall be made with piping manufacturer supplied fittings and be liquid tight.
- E. The Contractor shall install vertical galvanized carbon steel vent piping to 12-feet above grade in accordance with the construction drawings.
- F. A diesel vent cap shall be installed on the diesel vent pipe in accordance with applicable codes. A pressure vacuum vent cap shall be installed on the gasoline vent pipe in accordance with applicable codes.
- G. PIPING TESTS: Test gasoline and diesel piping in accordance with requirements on the construction drawings, manufacturer's instructions, and Env-Or 400. Repair or replace piping as required to eliminate leaks and retest as specified to demonstrate compliance. Piping must be tested prior to being secured in flexible ducting and buried. The Contractor shall submit, as part of the closeout documentation, a copy of all piping test results.
- H. The Contractor shall submit manufacturer's technical product data and installation instructions for piping systems materials and products.
- I. The Contractor shall complete and submit to the manufacturer, the APT Installation Checklist & Warranty Start-up Form. A copy of the completed checklist as well as confirmation of delivery of the checklist to the manufacturer shall be submitted as part of the closeout documentation.

### 3.4 TANK TOP EQUIPMENT

- A. Install tank top equipment in accordance with manufacturer instructions and NHDES requirements.

### 3.5 CONTAINMENT SUMPS

- A. Install containment sumps in accordance with manufacturer instructions and NHDES requirements.

### 3.6 ELECTRICAL

- A. General
  1. All circuits and systems shall be grounded in accordance with applicable sections of Articles 250 and 500 of the NEC.
  2. All power conductors shall be THHN or THWN, with Oil and Gas Resistant option.
  3. All Communications cabling shall be vapor tight, and Oil and Gas Resistant
  4. The contractor shall complete all electrical work in accordance with all provisions of the NEC and New Hampshire Building and Electrical Codes, paying particular attention to Sections 500 and Chapter 514.
  5. All control devices, motors or other apparatus, including non-current carrying enclosures, frames, and conduit for power and control, are to be permanently and effectively grounded.
  6. All wiring shall be labeled and color-coded to identify each wire from the point of origin, intermediate junction points, and point of termination. In enclosures containing numbered terminal boards, a directory of the purpose of the wire connected to each terminal board shall be sufficient. An as-built drawing of the color-coded wires identifying each as actually installed shall be provided to the City upon completion of the project.
  7. The Contractor shall furnish and install an emergency electrical disconnect switch that provides a means to disconnect all electrical power to the motor fuel dispensing equipment and all associated power, control, signal circuits and other electrical equipment in hazardous/classified areas during an emergency, as specified on the construction drawings. The Contractor shall label all emergency stop circuit relays for function and provide a breaker lock for the emergency stop circuit breaker.
  8. The Contractor shall be responsible for sizing and specifying all circuit breakers and conductors when not specified on the construction drawings. All conductors shall be sized to meet the recommendations for maximum voltage drop in the NEC.
  9. The emergency electrical disconnect switch shall be located not less than 20 feet or more than 100 feet from the fuel dispenser.
  10. All control systems shall be in proper operating condition and approval must be given by the control system apparatus manufacturer, as well as by the City, before any final acceptance is made.
  11. The Contractor shall thoroughly test all wiring for shorts and grounds before current is turned on.

12. All panel boards shall include a circuit directory or circuit identification in accordance with the NEC/New Hampshire Electric Code. In addition, the inside panel of all enclosures shall include a diagrammatic depiction of the purpose of each device in that enclosure, as shown on the construction drawings. For example, each enclosure containing relays shall be labeled with a quick reference diagram showing the location of each relay and its purpose. Text associated with the diagram shall be Arial Font, or equivalent, no smaller than 18 point.
13. All conduits shall be labeled as indicated on the construction drawings. Labels shall be included on all interior and exterior conduits at the point of exit from a panel board or enclosure and at the point the conduit enters the ground, realizing that some or all conduits may be labeled more than once. Labels shall be affixed with a permanent paint marking pen. Adhesive paper/tape labels are not acceptable.

B. Conduit

1. The Contractor shall securely fasten conduits to outlet boxes, panel-boards, etc., with two nuts and one bushing or thread hub. Conduits shall have ends butted inside couplings.
2. All below-grade conduit shall be bedded with suitable material, free from muck, asphalt, deleterious material, broken concrete or debris of any kind. The backfill material shall be compacted to a minimum of 95% of maximum dry density.
3. All fittings on underground rigid metal conduits shall be steel. Aluminum conduit fittings shall not be permitted underground.

C. Environmental Monitoring System

1. The Contractor's monitoring system installer shall be a certified manufacturer technician and installer.
2. The system shall be configured in strict accordance with the construction drawings.
3. The Contractor shall install all monitoring equipment, including monitor console and communications module, magnetostrictive probes, leak sensors, and hydrostatic sensors, in strict accordance with manufacturer installation instructions. All sump sensors shall be installed in an accessible location so as to facilitate future testing. Sensors shall be secured as shown on the construction drawings. Do not secure sensors to test boots.
4. The Contractor, as part of the initial startup and testing, shall perform the appropriate tests and complete an NHDES Annual Leak Monitoring Test Form. The Contractor shall be responsible for submitting the completed form to the NHDES and providing a copy with proof of delivery to the NHDES as part of the closeout documentation.
5. The system must be programmed with, at a minimum, the following parameters:
  - a. Proper tank size, product, and gallonage.
  - b. Water level warning at 1.5".
  - c. High water alarm at 1.5".
  - d. Overfill Alarm – 90%.
  - e. High-High Level – 95%
  - f. Delivery needed – 30%.
  - g. Low Product level – 15%.

- h. Tank profile shall be programmed with 20 points.
  - i. Tank tilt (if any).
  - j. The audible timer shutoff on the overfill alarms shall be set at 60 seconds.
  - k. All liquid sensors shall be identified as to their location. The Contractor shall post a laminated drawing adjacent to the monitor to indicate the location of the sensors by name and number. In addition, the Contractor shall fabricate and mount a sign stating "Tank Monitoring System" adjacent to the Environmental Monitoring Console. Liquid sensors shall be programmed as follows:
    - L1 GAS INTERSTITIAL SENSOR
    - L2 GAS PIPING SUMP SENSOR
    - L3 DIESEL INTERSTITIAL SENSOR
    - L4 DIESEL PIPING SUMP SENSOR
    - L5 PUMP #1 SUMP SENSOR
    - L6 PUMP #2 SUMP SENSOR
  - l. The system shall be programmed to send an output signal to the red alarm light.
  - m. The gasoline tank shall be programmed and labeled as Tank #1 and the diesel tank shall be programmed and labeled as Tank #2.
- 6. The Contractor shall provide, as part of the closeout documentation, the final setup print-out.
  - 7. The Contractor shall locate all monitoring equipment, including the console and all sensors, in accordance with the construction drawings.
  - 8. The Contractor shall be responsible for the provision of an authorized technician for system start-up and training of the on-site manager and other key personnel. The Contractor shall supply as part of the closeout documentation a list of the individuals/personnel trained on the system signed by each individual.
  - 9. The Contractor shall complete and submit to the manufacturer the Installation and Intrinsic Safety Checklist. A copy of the completed checklist as well as confirmation of delivery of the checklist to the manufacturer shall be submitted as part of the closeout documentation.
  - 10. The Contractor shall supply, as part of the closeout documentation, any instruction bulletins, preventative maintenance schedules, operational instructions and parts lists associated with the system.

D. Fuel Management System

- 1. The Contractor shall supply and install the Fuel Management System (FMS) in accordance with the Construction Drawings and as outlined site-specifically below. The Contractor shall furnish and install conduit and manufacturer cable from the FMS to the internet router/switch as shown on the Construction Drawings. Additionally, the Contractor shall install fuel management disconnect relays and all supporting electrical and telecommunications equipment as shown on the construction drawings.
- 2. Alarm Lights. The Contractor shall install one (1) alarm light on the exterior of the building or on a unistrut mount in accordance with the construction drawings. The alarm light will indicate if the Environmental Monitoring Console is



indicating an environmental sensor alarm. Do not activate red light on high or low product level indications.

3. Testing. The Contractor shall test all emergency, fire alarm, and monitoring switches, systems, and lights. Correct all discrepancies.

### 3.7 DISPENSING EQUIPMENT

- A. The Contractor shall install two (2) dual hose, dual product suction dispensers in accordance with the construction. Dispensers shall be equipped with an integrated fuel management system.
- B. Dispensers shall be provided with appropriate manufacturer installed product label branded appropriately as "diesel" or "gasoline".
- C. The Contractor shall install the fuel management systems in accordance with manufacturer instructions. Supply all cards to the owner upon installation.
- D. The Contractor shall furnish and install a liquid-tight containment sump below the dispensing pump in accordance with the Construction Drawings and the manufacturer's installation instructions. The containment sump shall be liquid tight and shall be hydrostatically tested before being backfilled. The Contractor shall submit, as part of the closeout documentation, a copy of all sump testing results.
- E. The Contractor shall furnish and install filters for two (2) gasoline and two (2) diesel dispenser/pumps. Activate the dispenser and inspect filter for leaks. Allow approximately 100 gallons of product to flow through the filter, then remove and replace filter again.
- F. The Contractor shall calibrate and "seal" new dispensing meters in accordance with State of New Hampshire Weights and Measures regulations. Set the delivery calibration as close to "zero" as possible. The Contractor must return all motor fuel used in the calibration of the dispensing pump meters back to the storage tank. The Contractor must provide written documentation on the flow rate of the nozzle. The contractor shall complete and submit to the Bureau of Weights and Measures a Placed In Service/Inspection Report Form and provide a weights and measures certification sticker on the dispenser. The yellow owner/operator copy of the Placed In Service/Inspection Report form shall be submitted as part of the closeout documentation.
- G. The Contractor shall perform the following electrical circuit test for the facility dispenser:
  1. Turn off all circuit breakers controlling the pump and check to assure that the pump is not running.
  2. Confirm that the nozzle is in the dispenser boot with the boot electrical switch off.
  3. Turn on circuit breaker controlling the pump and on the dispensing pump:
    - a. Remove nozzle, turn operating handle on, and dispense product to confirm hose is pressurized.
    - b. Assure that only the correct pump turns on.

4. If circuit disconnection or other problems are detected using the above procedure, make correction and repeat entire system checkout.
- H. The Contractor shall add, where applicable, ULSD (15 ppm sulfur), 87 Octane, and ethanol (10%) stickers to the appropriate dispensers, as well as other stickers, signs and decals as depicted on the Construction Drawings.
- I. The Contractor shall label the dispenser with the appropriate pump number (i.e., 1,2,3, etc.). The Contractor shall ensure that the pump number label is not affixed to the removable dispenser doors.
- J. The Contractor shall provide the City with two (2) dispenser keys for the dispenser.
- K. The Contractor shall ensure that the hose retractor wire is properly finished so as to avoid any frayed edges.
- L. The Contractor shall supply, as part of the closeout documentation, any instruction bulletins, preventative maintenance schedules, operational instructions and parts lists provided with the pumps/dispensers.

### 3.8 CAST-IN-PLACE CONCRETE

- A. Cast-in-place concrete shall be in accordance with Section 520 of the NHDOT Standard Specifications.
- B. The work includes, but is not necessarily limited to the following:
  1. Install concrete tank pads as indicated on the Construction Drawings. The tank pads shall be installed with a raised curb around manholes with a 6" average reveal from grade.
  2. Install concrete fueling pads as indicated on the Construction Drawings. The fueling pads shall be sloped to 1 inch above finished grade.
  3. Install tank deadmen as indicated on the construction drawings.
- C. All concrete material and workmanship shall include reinforcing steel, anchor bolts, form work, etc. and furnishing and finishing of the concrete structure.
- D. All concrete shall be ready mixed as produced by a plant acceptable to the City.
- E. Forms or screeds shall be used for all concrete and shall be so constructed and placed that the resulting concrete will be of the shape, lines, dimensions, and to the elevations indicated on the Construction Drawings.
- F. No concrete shall be placed until reinforcing anchors, etc. and other work required to be built into the concrete have been inspected and approved by the City.
- G. Reinforcing shall be formed and spaced, secured in place by rebar chairs to withstand all construction shocks. Other methods for securing rebar are not acceptable.



- H. Consolidate placed concrete using mechanical vibrating equipment with hand-rodding and tamping, so that concrete is worked around reinforcement and other embedded items and into parts of all forms.
- I. The top face of concrete slabs shall be given a broom finish. Slabs shall be kept wet during the curing period and be covered with curing paper. Concrete shall be sealed within 24 hours of the pour.
- J. The Contractor shall not drive on or allow others to drive on the concrete until sufficiently cured.
- K. All grouting and repair work shall be done using an approved non-shrink grout mixed and applied in accordance with manufacturer's directions.

### 3.9 FIELD QUALITY CONTROL

- A. Test all tanks, piping systems, sumps, interstitial spaces in accordance with manufacturer requirements and guidelines, local requirements and PEI RP100. All test results shall be submitted to the Owner within 24 hours of completion. The primary and secondary chambers of all product carrying vessels (pipes and tanks) shall be tested prior to and after final backfill. The test pressure on the interstitial piping space shall be maintained through the final backfill process and verified after backfill is complete.
- B. After completion of the gasoline system installation, and after backfilling and setting concrete, test all underground piping and tanks with a precision method capable of detecting leaks of 0.005 gallons per hour. The precision test shall be performed by a third party independent testing company and shall provide a certified report of tightness to the Owner within 5 days of completion. Also complete a precision test of all piping prior to pouring concrete protective slab.
- C. Pressure test piping in accordance with NFPA 30A, NFPA 30, and ASME B31.3.
- D. In addition to the requirements outlined above, hydrostatically test all dispenser containment sumps, tank sumps, turbine enclosures, and other containment structures by filling each sump with water in accordance with NHDES requirements. This test shall be conducted by a testing agency and the results reported to the Owner within 24 hours of completion.
- E. Provide documentation of all tests signed by certified personnel to the Owner prior to the operation of the facility and in the closeout documents.
- F. Test all safety devices, including but not limited to emergency valves, emergency stop devices, and leak detection devices, in the presence of the Owner. Provide a written report of all tests.
- G. Test all leak detection sensors and level probes. Report results on State required forms that document annual test for these devices. Tests shall be in accordance with manufacturer requirements for startup tests and in accordance with State requirements for annual testing.

- H. Commission and calibrate the fuel dispensers using the services of a manufacturer certified service organization. Provide a report of startup and calibration from that agency.
- I. Perform Static Pressure Performance Test using CARB Test Method TP-201.3 on all USTs/UST systems.
- J. Perform Pressure Vacuum Vent Valve Test using CARB Test Method TP-201.1E on all USTs/UST systems.
- K. Perform other vapor recovery tests as required by New Hampshire Regulation.
- L. Test the flow rate of fuel at each dispenser in the presence of the Owner. Flow rate shall be 9-10 gallons per minute (gasoline) and 9 gallons per minute minimum (diesel).

### 3.10 COMMISSIONING

- A. The Contractor shall commission the gasoline fuel system. Commissioning shall include all testing, start-up, calibration, programming, and documentation. At the conclusion of the commissioning, the facility shall be ready for the Owner to conduct unrestricted operations and use all systems to their full intended and designed capacity.
- B. Provide Closeout documents at completion of commissioning.

### 3.11 TRAINING

- A. The Contractor shall provide a minimum of 8 hours of training to field operating personnel, including fuel management system, monitoring system, safety system and dispenser operation. Additionally, the Contractor shall provide a detailed system “walk thru” to facility maintenance personnel. The Contractor shall supply, as part of the closeout documentation, a list of the individuals/personnel trained at each location, signed by each individual.

END OF SECTION

## SECTION 132005

### REMOVAL OF UNDERGROUND STORAGE TANKS

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. Perform work and provide material and equipment as shown on Drawings and as specified or indicated in this Section of the Specifications. Completely coordinate work of this Section with work of other trades.
- B. Give notices, file plans, obtain permits and licenses, pay fees and backcharges, and obtain necessary approvals from authorities that have jurisdiction as required to perform work in accordance with all legal requirements and with the contract documents.
- C. In general, the work of this Section includes furnishing labor, equipment and materials necessary to perform the excavation, trenching, and off-site disposal of excess and unsuitable materials during removal of fuel piping, underground storage tanks, transition sump pits, fuel related electrical conduit, duct banks and all other related utilities specified or indicated in the Contract Documents.

##### 1.2 REFERENCES

- A. American Petroleum Institute:
  - 1. API 1604 - Closure of Underground Petroleum Storage Tanks
  - 2. API 2003 - Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents
- B. National Fire Protection Association:
  - 1. NFPA 30 - Flammable and Combustible Liquids Code
- C. Underwriters Laboratories Inc.:
  - 1. UL 913 - Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II, and III, Division 1, Hazardous Locations.
- D. Env-Or 400, Underground Storage Tank Facilities, New Hampshire Department of Environmental Services and related NHDES UST removal guidance documents.

##### 1.3 SUBMITTALS

- A. Refer to General Requirements for submittal requirements and Section 132000 Motor Fuel Storage and Dispensing System.

##### 1.4 CLOSEOUT SUBMITTALS

- A. Comply with Section 132000 Motor Fuel Storage and Dispensing System.

- B. A written receipt or disposal documentation shall be submitted in the Closeout Documents. The receipt should include the name (printed/signed), facility, phone/address, and list all materials disposed of. Photographs documenting the destruction of all removed tanks shall be included.
- C. Copies of all manifests, bills of lading, and all other waste disposal documents shall be submitted to the owner for review prior to disposal. Submit copies of all final waste disposal documents within 24 hours of waste removal and as part of the closeout documents.

#### 1.5 QUALITY ASSURANCE

- A. Qualifications: Use adequate numbers of skilled, licensed individuals who are thoroughly trained and experienced in the installation and testing of the specified systems and who are completely familiar with the requirements and the methods needed for proper performance of the work of this Section.
- B. Materials and Equipment shall be manufactured, installed, and tested as specified in latest editions of applicable publications, standards and ruling of:
  - 1. Local and State building, plumbing, mechanical, electrical, fire and health department codes.
  - 2. National Fire Protection Association (NFPA).
  - 3. Occupational Safety and Health Act (OSHA).
  - 4. Factory Mutual Association (FM).
  - 5. Underwriter's Laboratories (UL).
  - 6. American Petroleum Institute (API).
- C. The most recent editions of applicable specifications and publications of the following organizations form part of the Contract Documents:
  - 1. American National Standards Institute (ANSI).
  - 2. American Society of Mechanical Engineers (ASME).
  - 3. National Electric Manufacturers Association (NEMA).
  - 4. American Society for Testing of Materials (ASTM).
  - 5. American Welding Society (AWS).
  - 6. Manufacturers Standardization Society of the Valve and Fitting Industry (MSS).

#### 1.6 QUALIFICATIONS

- A. UST Removal: Company specializing in performing Work of this section with minimum five years documented experience.
- B. The Contractor shall employ a ICC Certified UST Removal Technician, and the person holding that certification shall be present during the entire removal process.

#### 1.7 GENERAL CONDITIONS

- A. All permanent benchmarks shall be protected from disturbance or destruction. Any point disturbed or destructed shall be immediately replaced by a qualified surveyor at this

Contractor's expense. Documentation of any such relocation or replacement shall be given to the State.

- B. Disposition of Utilities
  - 1. Adequately protect from damage all active utilities and remove or relocate only as indicated, specified or directed.
  - 2. Report inactive and abandoned utilities encountered in excavating and grading operations to the State. Remove, plug or cap as directed by the State.
  - 3. Provide a minimum of a 72 hour notice to the State and receive written notice to proceed before interrupting any utility.
- C. Stockpiling of topsoil and other excavated materials will be permitted on-site within the project limits on a case by case basis provided the stockpiles are constructed and maintained in a manner that does not create a foreign object damage risk or adversely affect any other ongoing construction or operation at the site.
- D. During windy or wet conditions and at the conclusion of each day's work period, cover all excavated material to prevent it from becoming saturated or being displaced by wind or rain. Anchor all sides of covering as required to hold the covering firmly in place. In all cases, provide additional measures as necessary to prevent erosion, sedimentation and wind-borne displacement of excavated materials from their stockpiled location.
- E. Before beginning any work specified in this Section, the Contractor shall make certain that all applicable soil erosion and sediment control requirements are compiled with and the proper authorities have been informed of the construction schedule.
- F. Seek a demolition permit, if required, from the City of Portsmouth.
- G. Segregate and cover all soil identified as contaminated or potentially contaminated by the Owner's environmental consultant conducting closure sampling activities.

#### 1.8 ENVIRONMENTAL REQUIREMENTS

- A. Comply with Section 132000 Motor Fuel Storage and Dispensing System.
- B. Work shall comply with all applicable environmental regulations and those of the governing agencies in their most recent version are applicable. It is the Contractor's responsibility to know, understand, and abide by all such regulations and requirements.

#### 1.9 COORDINATION

- A. Comply with Section 132000 Motor Fuel Storage and Dispensing System.
- B. ***The contractor shall provide a minimum of 30 days notice to the Owner's designated tank removal oversight (environmental) consultant, the Owner, and the Portsmouth Fire Department prior to tank removal.***

- C. *The contractor shall provide the required 14 days notice to the NHDES prior to commencing removal activities.*
- D. The Owner will be providing an environmental consultant to perform tank closure sampling activities. The contractor shall cooperate with and provide whatever support is necessary for the Owner supplied consultant's field staff to obtain soil and water samples during and after the removal evolution.

## PART 2 PRODUCTS

### 2.1 EARTHWORK

- A. Excavation
  - 1. The area under new concrete slabs and/or footings, concrete and/or asphalted paving, and concrete walkways shall be excavated to the depth indicated on the Contract documents. Unless otherwise directed, all excavated native soil must be replaced with approved backfill material. Allowance must be made for the required base and sand or gravel cushion-leveling course. The area of the foundations and footings shall be proof rolled to detect any soft zones. All soft zones must be removed and replaced with select material compacted to 95% maximum dry density (ASTM D 1557), as tested by the Contractor.
  - 2. Structures and utilities located within the excavated area shall not be disturbed without prior approval by the Owner. The Contractor shall protect all structures and utilities to remain so as to prevent disruption of facility operations.
  - 3. The Contractor shall provide the necessary shoring, sheeting or bracing as required by OSHA and other applicable regulatory agencies for any trenching or similar excavation. All shoring materials used shall be in good, serviceable condition, and carried down as the excavation progresses.
- B. Sheeting and Shoring
  - 1. Engineered excavation support shall be required if necessary to maintain stable slopes and protect structures when excavating for underground storage tank removals.
  - 2. The Contractor shall furnish all labor, materials, equipment, tools and appurtenances required to complete the work of sheeting, shoring and bracing as necessary to complete the installation and/or removal of underground storage tanks, and as required by OSHA and other applicable regulatory agencies for any trenching or similar excavation. The required construction shall meet all applicable federal, state, and local regulations. All shoring materials used shall be in good, serviceable condition, and carried down as the excavation progresses.
  - 3. All material shall conform to the minimum requirements of applicable federal, state, and local codes and/or regulations.
  - 4. Pressures on sheeting and the stability of the sheeting and bottom of the excavation are dependent not only on soil conditions but on many procedures and options available to the Contractor, such as dewatering, staging of excavation, installation of bracing, flexibility of sheeting, construction equipment used, and

time of completing the work. All such factors shall be considered in the design of the sheeting and bracing.

5. The Contractor shall submit drawings, computations and substantiating data prepared, signed, and sealed by a professional engineer licensed in the State of New Hampshire, and shall be submitted to the State a minimum of thirty (30) days prior to work taking place. The plans shall show the proposed sheeting design and method of construction. Any review or comments by the State shall not relieve the Contractor of his responsibility for proper sheeting and bracing.
6. During the installation of the shoring and bracing and as long as the excavation is open, the Contractor shall monitor the work to ensure that it is carried out in accordance with the design and procedures.
7. Before commencing work the Contractor shall check and verify all dimensions and elevations. The Contractor shall be solely responsible for the proper alignment and fit of the proposed tank installation.
8. Dewatering and groundwater treatment may occur in conjunction with the sheeting and shoring operation. It is the Contractor's responsibility to ensure that such dewatering activities do not adversely impact upon the sheeting and shoring. Any movement in the sheeting and shoring shall be corrected immediately, and corrective measures enacted to ensure no further movement.
9. The Contractor shall make every effort to reduce noise, vibration, and other adverse conditions which may result from the installation of the sheeting and shoring.
10. If the excavation is to be left unattended, the Contractor shall erect and maintain solidly constructed fencing to restrict unauthorized access. The use of orange construction fence, flashing barriers, or similar measures will not be allowed.

C. Dewatering

1. The Contractor shall not allow water to accumulate in excavations. Surface water must be prevented from flowing into excavations and from flooding the Project site. The Contractor shall be responsible for all equipment and labor necessary for the removal of all surface water that enters the excavation. Remove water from excavations to prevent softening of foundation bottoms, undercutting of footings, and soil changes detrimental to stability of subgrades and foundations. Provide and maintain portable holding tanks, pumps, well points, sumps, suction and discharge water lines, and other dewatering system components to convey water away from excavations. Maintain erosion control measures to prevent sediment from leaving the work area.
2. Unless authorized by the Owner, bulk transportation and disposal of excavation water at an off-site facility will not be allowed.
3. The Contractor shall be responsible for the proper permitting of all surface and groundwater discharges and for the disposal of all groundwater removed from the tank holes in accordance with all Federal, State and Local requirements.

D. Material Disposal

1. The Contractor shall dispose of all excess and/or unsuitable excavated material. Since a disposal area is not available on-site, the Contractor will be responsible for off-site disposal.



2. IN THE EVENT THAT CONTAMINATED SOIL, WATER OR HAZARDOUS WASTE MATERIAL IS ENCOUNTERED IN ANY EXCAVATION, THE CONTRACTOR SHALL SECURE THE EXCAVATION AND NOTIFY THE OWNER IMMEDIATELY. UNDER NO CIRCUMSTANCES SHALL ANY CONTAMINATED SOIL, WATER OR HAZARDOUS MATERIALS BE REMOVED WITHOUT AUTHORIZATION BY THE OWNER.
  3. The contractor is responsible for the disposal of all unused fuels and sludge remaining in the tanks in accordance with all Federal, State and Local requirements.
  4. The contractor is responsible for the removal of all tanks, piping, and fuel system equipment, including existing concrete hold down pads.
- E. Subgrade Preparation
1. The Contractor shall finely grade all improvement areas indicated on the contract documents to the finish elevation indicated less the depth of the slab, footing, paving, and/or walkways and their base. Any required fill must conform to specifications set forth in Paragraph F.4.a. All subgrades shall be compacted to 95% Maximum Dry Density (ASTM D 1557) as tested by the Contractor.
- F. Fill, Backfill, and Base
1. The Contractor shall not commence placement of fill, backfill, or base materials until the subgrade has been inspected and approved by the Owner. Excavations resulting from underground storage tank (UST) removals shall not be backfilled until the Owner has reviewed the results of post-excavation soil sample analysis and advised Contractor to proceed.
  2. The Contractor shall provide a minimum of a 6-inch compacted gravel cushion below all new concrete slabs, (including replacement), footings, paving, and walkways, or as shown on the construction drawings. Backfill around concrete shall be of materials not subject to expansion or contraction (non-cohesive), and shall be sloped away from the concrete work. Sand shall not be placed above any gravel used as backfill in an area undergoing installation of concrete slabs, footings, paving, and walkways.
  3. Deep excavations resulting from removed tanks (and not within the excavation for new tanks) may be backfilled and compacted in one foot lifts with clean existing material up to a level of three (3) feet below final grade. The remainder of the excavation shall be approved new fill material.
  4. Trench or excavation backfill shall be compacted to 95% maximum dry density, as tested by the Contractor, with a mechanical tamper in lifts not to exceed 6 inches. Surface material and finish must be replaced to match that of adjacent grade surface, including any base material required.
  5. All new fill shall be compacted to at least 95% Maximum Dry Density at Optimum Moisture Content according to ASTM D-1557, as tested by the Contractor.
    - a. Granular Fill.
      - 1) Crushed stone and similar base materials shall be material that will compact and adequately bond under watering and rolling. Base course materials are to be placed in one or more layers, rolled thoroughly, and compacted until the material does not



creep or wave ahead of the roller. All coarse aggregates shall be removed and the finish surface of the base must be firm and free of loose material.

- 2) Crushed gravel or crushed rock shall be 1-1/2" minus, free from dirt, clay balls, and organic material, well graded from coarse to fine, containing sufficient finer material for proper compaction, and less than 8% by weight passing the No. 200 sieve.

## PART 3 EXECUTION

### 3.1 PROTECTION

#### A. Shoring and Sheeting

1. Provide shoring, bracing, cribbing, trench boxes, underpinning and sheeting if required to perform safe excavation. Include provisions in the shoring and sheeting plan that will accomplish the following:
  - a. Prevent undermining of pavements, foundations and slabs.
    - 1) Sloping the faces of the excavation in lieu of shoring will be allowed for the tank **removal** excavations only. In such cases, the following criteria shall be met:
      - a) The excavation is less than 20 feet in depth.
      - b) There are no adjacent structures, roads or pavements that will affect the excavation.
      - c) No equipment, stored material, or overlying material will affect the excavation.
      - d) Vibration from equipment, traffic, or blasting will not affect the excavation.
      - e) There will be no ground water problems.
      - f) Surcharges will not affect the excavation.
  - b. Prevent slippage or movement in banks or slopes adjacent to the excavation.

### 3.2 DRAINAGE AND DEWATERING

- A. Provide for the collection and disposal of surface and subsurface water encountered during construction.
- B. Drainage
  1. So that construction operations progress successfully, completely drain the construction site during periods of construction to keep soil materials sufficiently dry. The Contractor shall establish/construct storm drainage features (ponds/basins) at the earliest stages of site development, and throughout construction grade the construction area to provide surface water runoff away from the construction activity and/or provide temporary ditches, dikes, swales and other drainage features and equipment as required to maintain dry soils and prevent erosion. When unsuitable working platforms for equipment operation and unsuitable soil support for subsequent construction features develop, remove

unsuitable material and provide new soil material as specified herein. It is the responsibility of the Contractor to assess the soil and ground water conditions presented by the plans and specifications and to employ necessary measures to permit construction to proceed. Excavated slopes and backfill surfaces shall be protected to prevent erosion. Excavation shall be performed so that the site, the area immediately surrounding the site, and the area affecting operations at the site shall be continually and effectively drained.

- C. Dewatering
  - 1. Groundwater flowing toward or into the excavations shall be controlled to prevent sloughing of excavation slopes and walls, boils, uplift and heave in excavation and to eliminate interference with orderly progress of construction.
  - 2. A geotechnical report is available. The Contractor shall be responsible for all dewatering of the tank excavation necessary to complete tank removal. All dewatering and removal of water shall be accomplished in accordance with all applicable Federal, State and Local requirements.

### 3.3 EXAMINATION

- A. Comply with Section 132000 Motor Fuel Storage and Dispensing System.
- B. Verify excavations are to required grade, dry, and not over-excavated.

### 3.4 REMOVAL AND TEMPORARY STORAGE OF FUELS AND WASTE DISPOSAL

- A. The Contractor shall provide fuel removal, transfer, and storage services, during UST removal. All fuel transfers shall be discussed with the City prior to executing any work. The Contractor shall report the quantity of fuel before and after any transfer activities. Fuel removal services shall be conducted in accordance with National Fire Protection Association (NFPA) codes, Occupational Safety and Health Administration (OSHA) regulations, and all applicable Federal, State, and local regulations. If fuel storage is required during the construction period, the Contractor shall provide a secondarily contained UL-listed container that is compatible with the type of fuel being stored. Any permits required for temporary fuel storage shall be obtained by the Contractor at his/her expense.
- B. The Contractor shall contact the Owner to discuss waste disposal options for any waste fuels and/or sludge generated during this project. No waste fuel shall be disposed of until a determination has been made regarding the appropriate disposal method. All efforts shall be made to dispose of fuel for recycle or reuse rather than disposal as waste. In all cases, the Contractor is responsible for compliance with all applicable Federal, State, and Local requirements.
- C. The Contractor is responsible, at the contractor's expense, for the removal of all residual/waste fuels and sludges remaining in the tanks in accordance with all applicable Federal, State and Local requirements. The Contractor shall assume that 500-gallons of sludge will remain in each tank for Contractor removal.

- D. The Owner shall provide the Contractor with the site address and project contacts. The Contractor shall make all efforts to manage the off-specification waste fuel and sludge as a fuel for energy recovery per NH Code of Administrative Rules Env-Hw 803-03(c). The Contractor shall confirm with the City and the Engineer-of-Record, their schedule for waste generation and disposal and follow the procedures described below.
1. Activate the site's EPA ID Number by contacting the NHDES Waste Management Division RIMS with the information required per NH Code of Administrative Rules Env-HW 504 no later than 30-days prior to waste generation activities. Specify that the waste generation activities are for a non-recurrent one time tank removal event. If an EPA ID number does not exist for the site, the Contractor shall obtain a temporary EPA ID number for the work per NH Code of Administrative Rules Env-Wm 505.03. Specify that the waste generation activities are for a non-recurrent one time tank removal event. When activating the existing EPA ID number or obtaining a temporary number, the Contractor must notify NHDES RIMS as to the anticipated waste generation as either a Small Quantity Generator (SQG) or Full Quantity Generator (FQG), and immediately notify NHDES RIMS of any deviation from this initial estimate. Once an EPA ID number has been activated for the site, the Contractor shall contact the City to report that the number has been activated.
  2. Coordinate the hazardous waste removal schedule with the Engineer to be present or can arrange for another designated representative to be present, to sign and assist the transporter in the proper distribution of any hazardous waste manifest(s) when the hazardous waste is transported off site. The Contractor shall ensure that the generator name and mailing address on all manifests appears as specified by the Owner
  3. Deactivate the site's EPA ID number by contacting NHDES Waste Management Division RIMS immediately after the waste has been removed from the site, and notifying them that the waste has been successfully removed from the site and that, as the Contractor, you will no longer be generating waste from the project site. Once the EPA ID number has been deactivated, the Contractor shall contact the Owner to report that the number has been deactivated.
- 3.5 REMOVAL - UNDERGROUND TANKS AND ASSOCIATED CANOPY AND COMPONENTS – GENERAL REQUIREMENTS
- A. All electrical service to the tank system shall be turned off and locked out.
  - B. All existing fuel system components, including the canopy, dispensers, electrical equipment, and conduits not indicated for reuse.
  - C. Remove existing canopy foundations.
  - D. All product, liquid, and wastes shall be removed from the UST system (including piping and dispensers) and properly disposed as directed by the Owner.
  - E. All piping shall be disconnected and removed to the greatest extent possible.

- F. The UST system shall be tested by the Contractor for hazardous and explosive vapors and rendered vapor free or inerted of such vapors. The UST system shall be tested periodically during removal and handling to ensure safe conditions are maintained at all times.
- G. The UST and all additional appurtenances shall be removed.
- H. All concrete hold down pads, poly liners, and concrete anchor deadmen associated with the removed tanks shall be removed.

### 3.6 FLAMMABILITY AND COMBUSTIBILITY

- A. Document that all underground utilities have been clearly marked. The Contractor is responsible for maintaining the utility mark-out with DigSafe for the duration of the project. Additionally, locate all underground fuel piping prior to beginning work.
- B. Eliminate all potential sources of ignition from the project limits (i.e., smoking materials, non-explosion proof electrical and internal combustion equipment).
- C. Prevent discharge of static electricity during venting of flammable vapors by minimizing agitation and static producing movement, if possible, by providing a conductive path for the continuous, "safe" discharge of electricity by either bonding or grounding equipment and vehicles.
- D. Secure the work area from all pedestrians and vehicular traffic.
- E. Prevent the accumulation of vapors at ground level and in the excavations.
- F. Refer to API Recommended Practice 2003 for required precautionary measures to ensure vapor-free working conditions.
- G. The Contractor shall use a combustible gas indicator (CGI) to periodically check for hazardous vapor concentrations in the work area. All CGI readings shall be recorded and provided to the State's on-site representative. Open flame and spark-generating equipment shall NOT be used in the vapor hazard area. Electrical equipment used in this area must be explosion-proof and approved for use in potentially explosive atmospheres. **SMOKING WILL STRICTLY BE PROHIBITED AT ALL TIMES.**

### 3.7 TANK PREPARATION

- A. Concrete, asphalt and backfill materials above the tank top shall be carefully removed prior to tank cleaning and removal. ***The Contractor shall excavate with extreme caution and avoid puncturing the tank, its associated piping, and any tank hold-down stays. If necessary, the Contractor shall remove fill materials directly above the tank top by hand using spark-free tools.***
- B. Prior to tank removal, all piping and wiring shall be disconnected from the tank. Lock out or make safe all electrical circuits serving the area. The Contractor shall avoid

spillage when disconnecting and draining product piping. All exposed piping ends shall be capped after draining. Any soil impacted by spillage shall be excavated immediately and properly disposed at a certified disposal facility at the Contractor's expense.

- C. The Contractor shall remove all liquids and solids encountered in the tank and its interstitial space prior to handling the tank. Explosion-proof or air driven pumps shall be used when removing product and residues from the UST. If a vacuum truck is used, the truck should be located outside the vapor hazard area and shall be properly grounded. Plastic (PVC) pick-up tubes shall NOT be used on the stripping lines of vacuum trucks, as they are prone to accumulating static charges. Use a hand pump to remove the bottom few inches of liquid, if necessary, while observing appropriate grounding and bonding procedures. Tank bottoms, sludges, and materials used to clean the UST shall be disposed of at the Contractor's expense.
- D. If the purging method is used to eliminate vapors in the tank, the Contractor shall continuously test the tank with a CGI to measure the reduction in the concentration of flammable vapors. Readings shall be collected from the bottom, middle, and top of the tank at each end and the middle (i.e., a minimum of 9 testing locations per tank). Prior to tank handling, CGI readings shall remain between 10-20% of the lower explosive limit (LEL) for gasoline and diesel. If CGI readings are above 10-20% LEL, the Contractor shall continue purging and testing the system.
- E. If the inerting method is used to eliminate oxygen in the tank, the Contractor shall continuously monitor the tank with an oxygen indicator. Readings shall be collected from the bottom, middle, and top of the tank at each end and the middle (i.e., a minimum of 9 testing locations per tank). Prior to tank handling, oxygen indicator readings shall be maintained at 50% of the lowest level of oxygen necessary to support combustion, or 6-7%. The tank shall NOT be entered after inerting.

### 3.8 TANK AND MATERIAL DISPOSAL

- A. All USTs shall be properly disposed of regardless of their condition unless otherwise directed by the State. Sufficient holes shall be made in the tanks to render them unfit for future use. Reuse of the tanks, or the sale of the tanks for reuse, is prohibited. The Contractor shall provide the State with a minimum of six (6) photographs of each tank, in the disposal condition, for verification within two (2) weeks of tank removal.
- B. The Contractor is responsible for removing and disposing all tank appurtenances (unless otherwise directed by the State) including:
  - Tank;
  - Canopy (including all footers and foundations)
  - Piping;
  - Cover pad/drive pad;
  - Bottom pad or deadmen;
  - Liner surrounding the tank;
  - Electrical wiring and conduit (to breaker);
  - Monitoring equipment; and
  - Pumps/dispensers.

#### Removal of Underground Storage Tanks

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- C. The Contractor is responsible for checking current Federal, State, and local regulations and applicable consensus codes for special procedures or preparations that are required before the transport and disposal of any tank or appurtenances.
- D. A written receipt or disposal documentation shall be submitted in the Closeout Documents. The receipt should include the name (printed/signed), facility, phone/address, and list all materials disposed of.

### 3.9 MANUFACTURER'S FIELD SERVICES

- A. The Contractor's field superintendent supervising the removal of all underground petroleum carrying components shall be carry any State or Local certifications to remove underground tanks and petroleum components.

END OF SECTION

## SECTION 132010

### RIGID METAL FUEL SYSTEM CANOPY

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. Work under this section is subject to the requirements of the Contract Documents.
- B. Furnish and install a rigid metal fuel system canopy as shown on the Contract Drawings and as specified herein.
- C. Related Sections:
  - 1. Section 132000 – Motor Fuel Storage and Dispensing System.

##### 1.2 REFERENCES:

- A. NFPA 30A – Motor Fuel Dispensing Facilities and Repair Garages.
- B. NFPA 70 – National Electric Code, with New Hampshire Amendments
- C. International Building Code with New Hampshire Amendments.
- D. New Hampshire State Fire Code (Saf-C 6000).
- E. Project Geotechnical Report

##### 1.3 PERFORMANCE

- A. Perform work and provide material and equipment as shown on Drawings and as specified or indicated in this Section of the Specifications. Completely coordinate work of this Section with work of other trades and provide a complete and fully functional installation.
- B. Give notices, file plans, obtain permits and licenses, pay fees and back charges, and obtain necessary approvals from authorities that have jurisdiction as required to perform work in accordance with all legal requirements and with the contract documents.
- C. The Contractor shall furnish, assemble and install a fueling canopy, including concrete footings and lighting, in accordance with the size and lines indicated on the construction drawings and in strict accordance with manufacturer's specifications.
- D. The gross dimensions of the canopy, including length, width, overhead clearance, and number of columns, shall be in accordance with the construction drawings.



#### 1.4 SUBMITTALS

- A. Shop Drawings: Submit original copies of product data submittals for materials and equipment in Part 2 of this section including, but not limited to:
  - 1. Fuel system canopy (Sealed by a Professional Engineer licensed in the State of New Hampshire)
- B. Contractor's certificates certifying that installers are licensed and qualified to install equipment as required by the Project.
- C. At no expense to the City, the Contractor must obtain City of Portsmouth, and other authorities having jurisdiction, permits and certificates required for canopy installation.
- D. Manufacturer's Field Reports: Submit report of each visit of manufacturer's representative to provide technical assistance during installation.
- E. Record Drawings: Submit record drawings in accordance with the General Requirements.

#### 1.5 QUALITY ASSURANCE

- A. Regulatory requirements from the following agencies must be followed as minimum requirements for equipment required by the Project. Stricter requirements indicated in the Contract Drawings or the Specifications must have precedence over the requirements listed below:
  - 1. Materials and Equipment shall be manufactured, installed, and tested as specified in latest editions of applicable publications, standards and ruling of:
    - a. Local and State building, plumbing, mechanical, electrical, fire and health department codes.
    - b. National Fire Protection Association (NFPA).
    - c. Occupational Safety and Health Act (OSHA).
    - d. Factory Mutual Association (FM).
    - e. Underwriter's Laboratories (UL).
    - f. Manufacturer recommendations and requirements.
  - 2. The most recent editions of applicable specifications and publications of the following organizations form part of the Contract Documents:
    - a. American National Standards Institute (ANSI).
    - b. National Electric Manufacturers Association (NEMA).
    - c. American Society for Testing of Materials (ASTM).
- B. Specific reference is made to the following Standards of the National Fire Protection Association (NFPA) which shall govern provision of work as specified and as required by codes and authorities:
  - 1. NFPA 1 – Fire Code.
  - 2. NFPA 30A – Code for Motor Fuel Dispensing Facilities.
  - 3. NFPA 70 – National Electric Code
- C. Qualifications: Use adequate numbers of skilled, licensed individuals who are thoroughly trained and experienced in the installation of the specified systems and who



are completely familiar with the requirements and the methods needed for proper performance of the work of this Section.

- D. Substitutions: Comply with General Requirements.
- E. Tests of all Contractor secured materials and products being submitted for approval to determine conformance with all requirements of the Contract Documents, including borrow materials proposed for use, shall be performed by an independent testing laboratory retained and compensated by this Contractor.
- F. The Contractor is responsible for all Quality Control associated with the Canopy design and installation as required by the canopy design documents, industry standards, and applicable codes. In addition, the Owner reserves the right to perform on-site and off-site quality control tests during construction to determine conformance with the Contract Documents by an independent testing laboratory.
- G. Complete the canopy installation in accordance with the requirements of the New Hampshire Building and Electrical Codes.
- H. Qualifications:
  - 1. Manufacturer: Utilize companies specializing in manufacturing products specified in this section with minimum five years documented experience.
  - 2. Canopy Installer: Company specializing in performing Work of this section with minimum ten years documented experience.

## 1.6 PERMITS AND SUBMISSIONS

- A. The Contractor shall be responsible for all permits and notifications required by State and Local codes and regulations.
- B. Copies of all submissions and permits/registrations received shall be provided as part of the closeout documentation.

## PART 2 PRODUCTS

### 2.1 FUEL SYSTEM CANOPY

- A. The Contractor shall design and furnish a pre-manufactured fueling canopy and associated appurtenances in accordance with manufacturer's specifications and with the approved shop drawings. The Contractor is responsible for submitting three (3) sets of design drawings including footing design, signed and sealed by a NH Licensed Professional Engineer, for approval within 21 days of the contract award. The canopy shall be designed and constructed in accordance with the New Hampshire Building Code. The canopy and foundation design shall be based on the geotechnical report provided in the bid documents.
- B. All steel canopy materials, including beams, angles, plates, supports, and deck panels shall meet applicable American Society for Testing and Materials (ASTM) standards.

- C. The canopy shall be furnished with factory applied primer and paint. The color shall be white.
- D. The Contractor shall furnish and install canopy with a drip edge-drainage system as depicted on the construction drawings. Do not provide downspouts or drainage piping.
- E. Provide LED under canopy lighting fixtures in accordance with the construction drawings. All fixtures shall be UL listed and be supplied with an integral photo cell and motion sensor that has a minimum of seven (7) low level settings and seven (7) high level settings. Coordinate with other section.
- F. Provide enabling conduit and electrical lighting circuitry in accordance with the construction drawings.

### PART 3 EXECUTION

#### 3.1 CANOPY INSTALLATION

- A. The Contractor shall pour all canopy footings in accordance with the canopy manufacturer requirements and the sealed design drawings. All footings shall be poured to the same top elevation.
- B. Concrete canopy footings shall be constructed in accordance with manufacturer requirements, the sealed structural plans, and with the Cast in Place section of these Specifications.
  - 1. Canopy footings shall be poured to a minimum depth below finished grade as required by local codes and ordinances.
- C. The design of the canopy footers shall be designed to avoid conflict with the traffic protection bollards and the underground dispenser containment sumps.
- D. The Contractor shall mastic coat all steel bolts in accordance with manufacturer recommendations.
- E. The Contractor shall paint steel canopy in the following manner and in accordance with NHDOT Standard Specifications:
  - 1. Spot prime all scratched or damaged areas of factory installed primer and paint.
  - 2. Touch-up all primed steel with two (2) coats of exterior enamel to match factory applied paint.
  - 3. Do not prime or paint pre-finished fascia. Contractor shall supply fascia in color acceptable to the City.
  - 4. Complete all painting touch ups prior to attaching signage or other appurtenances to the canopy. Do not paint around signs and appurtenances.
  - 5. Any unpainted areas of structural steel shall be primed and painted, including the ends of the canopy columns.

- F. Install under canopy lighting in accordance with the New Hampshire Electric Code. Connect to lighting switch in building. Install electrical conduits in accordance with the electrical sections. Coordinate with other sections.

END OF SECTION

## **Geotechnical Report**

Fuel System Replacement  
Portsmouth, New Hampshire



Prepared for:  
City of Portsmouth  
Department of Public Works  
680 Peverly Hill Road  
Portsmouth, NH 03801

Prepared by:  
Stantec Consulting Service, Inc.  
5 Dartmouth Drive, Suite 200  
Auburn, New Hampshire 03032


February 11, 2022

## Sign-off Sheet

This document entitled Geotechnical Report was prepared by Stantec Consulting Services Inc. for the City of Portsmouth Department of Public Works. The material in it reflects Stantec's best judgment in light of the information available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions made based on it, are the responsibilities of such third parties. Stantec Consulting Services Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

Prepared by   
(signature)

**Brian Foley, EIT**

Reviewed by   
(signature)

**Trey Dykstra, PE**

# GEOTECHNICAL REPORT

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# GEOTECHNICAL REPORT

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## 1.0 Introduction

Stantec Consulting Services, Inc. (Stantec) has performed a subsurface exploration program and prepared this geotechnical report for the design of the relocated underground fuel storage tank (UST) system and canopy at 680 Peverly Hill Road in Portsmouth, New Hampshire (Site). The scope of the exploration program consisted of the drilling of two test borings with associated field sampling. This report presents our findings of the site observations, explorations, and general recommendations for design and construction of the USTs and canopy.

## 2.0 Site and Project Information

The Site is located on Peverly Hill Road just west of Route 1. The surrounding area is developed with commercial and light industrial facilities. The Site is relatively flat with the surface being entirely paved with asphalt.

An active fuel pump station with a canopy, island, dispensers and concrete pads currently occupies the Site. Existing buried 12,000-gallon diesel and 5,000-gallon gasoline fuel tanks supply the dispensers on the Site. The Site is shown in Figure 1 – Site Location Plan.

## 3.0 Project Information

The existing fuel tanks, canopy, fuel island, fuel dispenser and associated piping and wiring are to be removed. Replacement structures will include two dispensers, a canopy, fueling apron, and two underground 8-foot diameter 10,000-gallon fuel tanks. The replacement structure will be in the same general area as the existing structures.

## 4.0 Exploration and Testing Procedures

The subsurface investigation consisted of two test borings drilled by New England Boring Contractors of Derry, New Hampshire on January 12 and January 13, 2022. The soil borings, designated as B-1 and B-2 were observed and logged by Stantec personnel. Details of drilling and sampling methods are indicated on the borehole logs and presented in Appendix A of this report. The borings were located in the field by referencing existing site features. The as-drilled boring locations are presented on Figure 2 – Boring Location Plan.

Borings B-1 and B-2 were drilled to a depth of 19.5 and 20 feet below ground surface, respectively. The borings were drilled using a truck mounted Mobile B-48 drill rig. The borings were advanced using 4-inch inside diameter flush jointed steel casing. Boring locations were pre-cleared by vacuum excavation to a depth of 5 feet to verify utility clearance. Descriptions of the soils encountered, sampling, and the testing are indicated on the Borehole Logs. Soil samples from the test borings were visually classified in the field in accordance with the Burminster soil classification system.



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Standard Penetration Tests (SPTs) were performed in each boring in accordance with ASTM D1586. The SPT consists of driving a 1-3/8 inch inside diameter split spoon sampler with a 140 pound hammer falling 30-inches. The number of blows for each 6 inches of penetration is recorded for a total of 24 inches. The sum of the blows required to drive the sampler from 6 to 18 inches penetration is referred to as the Standard Penetration Resistance, or N-value, which is an index of measure of in-situ soil density or consistency. In granular, non-cohesive soils N values less than 4 are considered to be very loose; between 4 and 10 loose; between 10 and 30 medium dense; between 30 and 50 dense; and great than 50 very dense. In cohesive soils N values less than 2 are considered to be very soft; between 2 and 4 soft; between 4 and 8 medium stiff; between 8 and 15 stiff; between 15 and 30 very stiff; and greater than 30 hard.

All soil samples recovered were stored in sealed containers and returned to our office for verification of soil classification. Samples remaining after testing will be stored for a period of 180 days, at which time they will be disposed of unless we have been notified otherwise.

## 5.0 Summarized Subsurface Conditions

The subsurface conditions encountered at the boring locations are described in detail on the Borehole Logs prepared by Stantec in Appendix A of this report and are summarized in the paragraphs below. The conditions encountered are based on widely spaced explorations and variations in conditions should be anticipated.

### 5.1 FILL

The test borings were drilled completely within fill material. The fill was granular and generally described as a dark gray coarse to fine sand with varying lesser amounts of silt and gravel. Concrete, asphalt and cobbles were observed throughout the fill with greater amounts in the top 14 feet. Materials such as plastic and Styrofoam were observed during the vacuum excavation in the top 5 feet and may be present throughout the fill material. The recorded N-values ranged from 6 to 93 blows per foot, indicating a variable loose to very dense consistency.

### 5.2 GROUNDWATER

Groundwater was not encountered in either boring above the terminal depths of 19.5 and 20 feet below ground surface. Actual groundwater levels may vary over time due to seasonal changes in precipitation and temperature, snowmelt, and surrounding and on-site drainage characteristics.



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## 6.0 Foundation Recommendations

The subsurface conditions encountered in the test borings generally consist of fill material. Because the existing fill soils contain various amounts of debris (e.g. wood, concrete and asphalt), the proposed Underground Storage Tanks (USTs) and canopy foundations should not bear directly on the fill material. The fill should be over-excavated and replaced with a crushed stone pad to provide a firm bearing surface and reduce settlement. A geosynthetic separation fabric is also needed between the bottom of the crushed stone and the fill subgrade. Details are provided in the paragraphs below.

### 6.1 UNDERGROUND STORAGE TANKS

The proposed USTs are typically installed in pea stone underlain by native soil. The pea stone extends to a depth of 12 inches below the bottom of the and is completely wrapped in a geosynthetic filter fabric.

As indicated above, we recommend that a crushed stone pad be constructed below the USTs. This pad would be in addition to the typical proposed USTs construction. The crushed stone pad should extend a minimum of 2 feet horizontal beyond the tanks or the deadman anchors. The pad should consist of the following:

- Over-excavate the existing fill to a depth of 2 feet below the footing bearing grade;
- Proof compact the surface of the existing fill with a vibratory plate compactor;
- Place a Mirafi 500X woven filter fabric (or equivalent) on the bottom and sides of subgrade;
- Place 24 inches of compacted Crushed Stone (NHDOT Item 304.5) in two 12-inch thick lifts; and
- Place the typical geosynthetic filter fabric and pea stone on the compacted Crushed Stone pad.

### 6.2 CANOPY

The canopy can be founded on a spread footing bearing on a 2-foot-thick crushed stone pad overlaying the fill. The crushed stone pad should extend a minimum of 2 feet horizontally beyond the limits of the footing and should consist of the following:

- Over-excavate the existing fill to a depth of 2 feet below the footing bearing grade;
- Proof compact the surface of the existing fill with a vibratory plate compactor;
- Place a Mirafi 500X woven filter fabric (or equivalent) on the bottom and sides of the compacted subgrade;  
Place 24 inches of compacted Crushed Stone (NHDOT Item 304.5) in two 12-inch thick lifts; and
- Construct the footing on the compacted Crushed Stone pad.

The spread footing should be designed for a maximum net allowable bearing pressure of 1,000 pounds per square foot (psf). Total settlement of the proposed structure is expected to be less

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than 1 inch. Differential settlement over the length of the footing is expected to be less than ½ inch.

The footing should be founded at least 4 feet below ground surface for frost protection. The backfill above the footing should meet the requirements of Structural Fill (NHDOT Item 508).

### 6.3 LATERAL SLIDING RESISTANCE

For structures subject to lateral forces and bearing on compacted crushed stone, an ultimate coefficient of friction ( $\tan \delta$ ) equal to 0.50 is recommended for cast-in-place concrete footings bearing on compacted structural fill. A factor of safety of 1.5 against sliding is recommended for static conditions.

### 6.4 SEISMIC DESIGN PARAMETERS

The seismic site classification was evaluated in accordance with the 2015 International Building Code (IBC). In accordance with Section 1613.3.2 of the 2015 IBC, the site classification for seismic design of the structure, based upon the average N values for the upper 100 feet of the soil profile, is Site Class "D" (stiff soil). Based on IBC 2015 the following acceleration parameters should be used:

$$S_s = 0.269 \text{ g}$$

$$S_1 = 0.08 \text{ g}$$

$$S_{DS} = 0.285 \text{ g}$$

$$S_{D1} = 0.127 \text{ g}$$

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## 7.0 Construction Considerations

### 7.1 EXCAVATION SUPPORT

A temporary excavation support system will be required for the removal and replacement of the fuel tanks. The excavation depth will be on the order of 16 feet below the existing ground surface. The temporary earth support system should be designed such that it allows the proposed USTs and canopy foundations to be safely constructed in-the-dry and prevents damage to the surrounding structures and utilities. The type and design of the temporary earth support system should be the responsibility of the Contractor with design plans submitted to Stantec for review.

It should be noted that the presence of debris within the fill will make driving sheet piles difficult. Pre-excavation along the alignment of the sheet piles to remove obstruction may be necessary.

Open cut excavation slopes, if used, should be checked regularly for signs of instability and flattened as required. Temporary slopes should be protected from surface water run-off erosion by means of berms and swales located along the top of the slope.

All excavations and support systems should be designed, constructed and maintained in accordance with current OSHA requirements under the observation and responsibility of the Contractor. Temporary shoring systems should be inspected periodically for excessive movement.

### 7.2 CONSTRUCTION DEWATERING

Groundwater was not encountered within the proposed depth of excavation. A dewatering system is not anticipated to be required to complete the excavation in-the-dry. However, if dewatering is required, the Contractor is responsible for selecting and installation a dewatering system that will maintain a stable bearing surface at the bottom of the excavation. The specifications should require surface water to be diverted away from excavations. Precipitation that results in standing water in the excavation should be removed immediately.

### 7.3 MATERIAL REUSE

Due the debris associated with the on-site soils the excavated materials are not expected to be suitable for reused as engineered fill but can be used as common fill outside of the construction footprint once the debris has been culled from the fill. Any deleterious materials and miscellaneous debris that may be encountered during excavation activities within the fill should be removed from the site. On-site materials placed as backfill material should be sealed on a daily basis using a smooth drum roller to promote drainage and prevent ponding of storm water. Alternatively, imported fill materials may be used to attain the desired grades and expedite earthwork operations during wet weather periods.

## GEOTECHNICAL REPORT

Fuel System Replacement  
February 11, 2022

### 7.4 STRUCTURAL FILL, PLACEMENT AND COMPACTION

Structural Fill and Crushed Stone (Coarse) should meet the requirements of New Hampshire Department of Transportation (NHDOT), Standard Specifications for Road and Bridge Construction, 2016, Item No. 508 and Item No. 304.5. Any imported material placed as structural fill or backfill to raise elevations or restore design grades should consist of clean soil and/or aggregate, free of organics, clay lumps, deleterious materials, ice, snow, and waste of any kind, and meet the following gradation:

**Table 1 - Structural Fill Gradation**

Sieve Size	% Passing by Weight
3-inch	100
2-inch	95 – 100
1-inch	55 – 85
No. 4	27 – 52
No. 200 (Based on the fraction passing the No. 4 sieve)	0 – 12

**Table 2 – Crushed Stone Gradation**

Sieve Size	% Passing by Weight
3.5-inch	100
3-inch	85 – 100
1.5-inch	60 – 90
3/4	40 – 70
No. 4	15 – 40
No. 200	0 – 5

Imported fill soils should be placed in uniform lifts not exceeding 12 inches loose thickness compacted to at least 95% of Maximum Dry Density as determined by ASTM D1557 (Modified Proctor). The soil moisture content range should be  $\pm 3$  percent of its optimum moisture content. The percent compaction is determined in the field by ASTM D-6938 (nuclear moisture-density gage). A minimum of two in place density tests should be performed for each lift of fill placed.

### 7.5 BACKFILL TESTING

The project specifications should require the Contractor to submit test results provided by an approved soil testing laboratory along with a sample of the imported fill material or any on-site material proposed for reuse as Structural Fill for backfill. As noted under Structural Fill analyses, the proposed materials should include gradation (ASTM D6913) and moisture-density relationships

## GEOTECHNICAL REPORT

Fuel System Replacement  
February 11, 2022

(ASTM D1557) and be submitted for approval by the project Geotechnical Engineer. The placement of all fill and backfill should be monitored by a qualified soils technician to observe and make accurate records regarding proof-rolling operations of the subgrade prior to backfill placement, types of materials used, thickness of lifts, densities, percent compaction, type of compaction equipment and number of passes, etc.

# GEOTECHNICAL REPORT

Fuel System Replacement  
February 11, 2022

## 8.0 Limitations

### 8.1 USE OF REPORT

This report has been prepared for the exclusive use of the City of Portsmouth Department of Public Works and their respective assigns and designees. This report is not intended for the use or reliance of other (third) parties, without the express consent of Stantec and City of Portsmouth Department of public Works. Any use, which a third party makes of this report, or any reliance on decisions made based on this report, is the responsibility of such third parties. Further, the findings of this study apply only to the specific Site and project described herein. The findings herein are inapplicable to other Sites, and to developments of different grading, layout, loading, and performance requirements. Stantec accepts no responsibility for damages, real or perceived, suffered by parties as a result of decisions made or actions based on the unintended and/or inappropriate use of this report.

The Geotechnical Report provides recommendations, and is intended for informational use, requiring interpretation by the owner, design team, and contractor for the design and construction of the project, and interpretation of final quantities and construction costs. The Geotechnical Report is not intended, or suitable, by itself, for use as a technical specification or to determine quantities. Anticipated quantities and/or costs may be provided in the Geotechnical Report; such information is an Engineer's interpretation, and may vary dramatically from contractor bids, which are based on potentially differing interpretations, and several other variables not available or considered by the Engineer.

### 8.2 SUBSEQUENT INVOLVEMENT

The geotechnical process incorporates initial exploration and recommendations as summarized herein, and is followed by continuous involvement during key design and construction benchmarks. The recommendations provided herein are based on preliminary information and assumptions regarding proposed site grading, structural loading and performance requirements. It is recommended that Stantec review final foundation, grading, and other applicable plans to assess whether or not these recommendations require modification.

During construction, additional soil samples should be analyzed in the laboratory for moisture content, gradation, and moisture density relationship tests to evaluate the reuse of onsite soils (existing fill and natural sand strata) as backfill material.

Stantec should be retained to observe excavations and subgrade preparation to assess whether the intent of these recommendations is followed during construction, and whether or not other appropriate and/or cost-effective solutions may be warranted based on the actual conditions encountered. Further, a soil exploration is a random sampling of a Site. Should any conditions at the Site at any point during the project be encountered that differ from those summarized in the report, Stantec should be notified immediately in order to permit reassessment of these conditions and the recommendations contained in the report.

# GEOTECHNICAL REPORT

Fuel System Replacement  
February 11, 2022

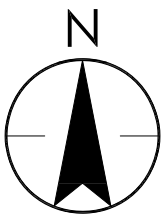
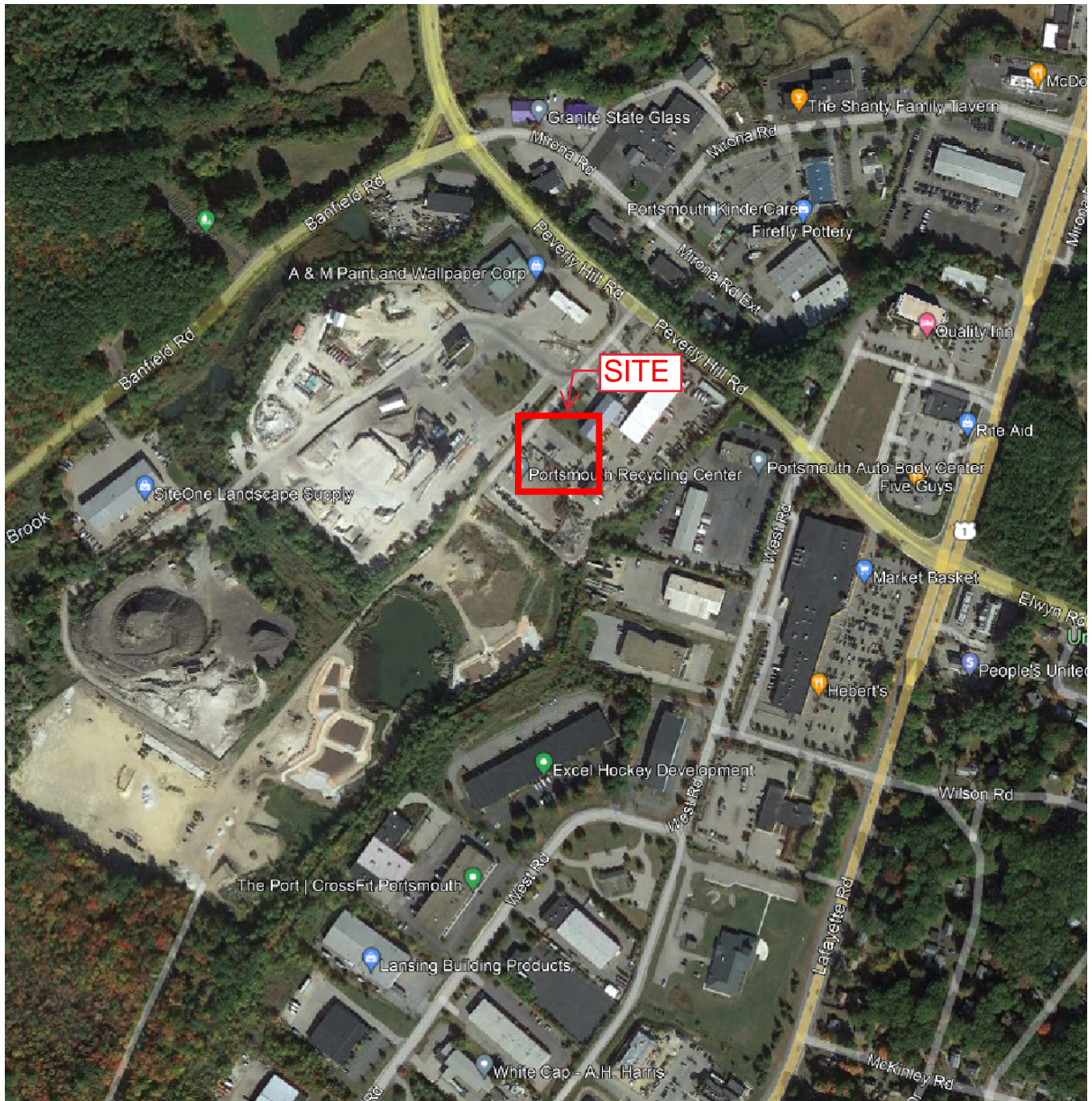
## 8.3 REPRESENTATION AND INTERPRETATION OF DATA

Surficial and subsurface information presented herein is based on field measurements obtained during the course of the exploration and site reconnaissance. The precision and accuracy of surficial data is a function of the references, benchmarks, methods and instruments employed, as summarized in the report. Subsurface data is based on measurements within the borehole or test pit using the sampling methods described on the exploration logs. The completeness, precision, and accuracy of such data is a function of the frequency and type of exploration and sampling employed, as well as the precision and accuracy of the surface location and elevation of the borehole, and may vary from actual conditions encountered during excavations. Subsurface conditions between, beyond and below explorations, may vary dramatically from the nearest exploration, due to natural geologic action, deposition and weathering, or man-made activities.

Groundwater levels were recorded during the time periods and frequencies noted on the explorations. It is important to note that groundwater levels are disrupted by the exploration, and require equilibration periods to determine actual hydrostatic levels, which exceed the duration of the measurement period. Multiple hydrostatic groundwater levels may exist, including perched or trapped water, which may not necessarily be accurately represented by one water level reading. Groundwater levels fluctuate due to seasonal variations, adjacent surface water bodies, precipitation, and on-Site and nearby land use.

## Figures





JANUARY, 2022  
195602217

ORIGINAL SHEET - ANSI A



5 DARTMOUTH DRIVE  
AUBURN, NH  
www.stantec.com

Client/Project

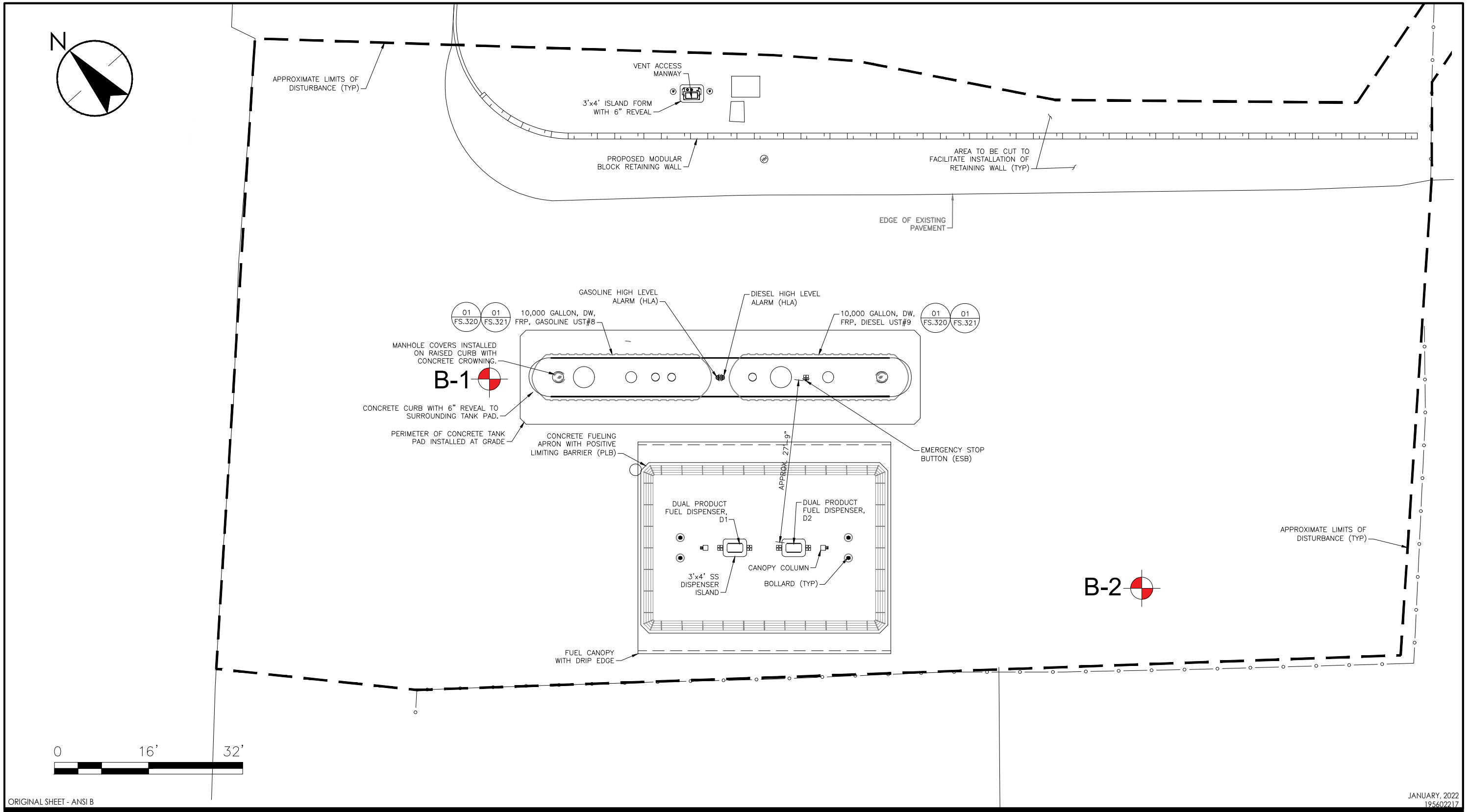
CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS  
FUEL SYSTEM REPLACEMENT  
PORTSMOUTH, NH

Figure No.

1

Title

SITE LOCATION PLAN



## **Appendix A**

### Test Boring Logs



CLIENT City of Portsmouth DPW

PROJECT No. 195602217

LOCATION 680 Pervery Hill Road Portsmouth, NH

EXPLORATION No. B-1

EXPLORATION DATE 1/12/2022 to 1/13/2022

WATER LEVEL NE

DATUM NAVD88

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES					PID Reading (PPM)	Undrained Shear Strength - tsf																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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CLIENT City of Portsmouth DPW

PROJECT No. 195602217

LOCATION 680 Pervery Hill Road Portsmouth, NH

EXPLORATION No. B-2

EXPLORATION DATE 1/12/2022 to 1/13/2022

WATER LEVEL NE

DATUM NAVD88

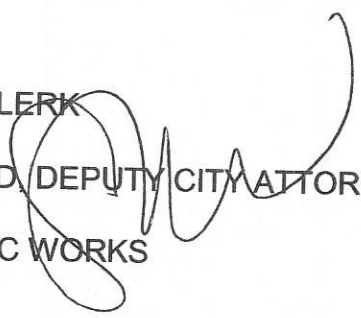
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**CITY OF PORTSMOUTH**

**LEGAL DEPARTMENT**

**MEMORANDUM**

DATE: December 9, 2016  
TO: KELLI BARNABY, CITY CLERK  
FROM: SUZANNE M. WOODLAND, DEPUTY CITY ATTORNEY  
RE: DEPARTMENT OF PUBLIC WORKS



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Attached for permanent filing please find an Amended Notice of Activity & Use Restriction for the Public Works Department located at 680 Peverly Hill Road which has been recorded at the Rockingham County Registry of Deeds at Book 5772, Page 2250.

attachment

cc: ~~Peter H. Rice, Public Works Director~~  
Jacob Levenson, Solid Waste Sustainability Coordinator  
Jamie McCarty, GIS Manager

**AMENDED NOTICE OF ACTIVITY & USE RESTRICTION**

Site: Former Iafolla Property (Department of Public  
Works) 680 Peverly Hill Road  
Portsmouth, New Hampshire 03801  
Map 254, Lot 8

NHDES Site No.: 199706017

This Amended Notice of Activity and Use Restriction ("Notice") is made on this  
10 day of November, 2016 by the City of Portsmouth, 1 Junkins, Avenue,  
Portsmouth, New Hampshire together with its successors and assigns (collectively  
"Owner") and supercedes that Notice which was recorded at the Rockingham County  
Registry of Deeds on March 23, 2007 at Book 4779, Page 0613.

WITNESSETH

**WHEREAS**, the City of Portsmouth is the Owner in fee simple of that certain parcel of land located in Portsmouth, New Hampshire with the buildings and improvements thereon ("Property") and recorded at the Rockingham County Registry of Deeds at Book 3276, Page 2986; and,

**WHEREAS**, within the Property a certain portion comprises an industrial site where disposal of primary sludge from the municipal wastewater treatment plant occurred over an approximate four-year period beginning in 1983; and,

**WHEREAS**, the portion of property where disposal of sludge occurred being more particularly bounded and described as follows:

Starting from a point that is S12°21'04"W and 432.06' from the railroad spike marking the starting point of the parcel boundary as described in RCRD deed book 3276 on page 2987, this point also being within a foot of the south most corner of the current garage building, thence proceeding N59°38'52"E, 69.72 feet, thence proceeding S84°56'43"E, 20.23 feet, thence proceeding S23°13'06"E, 11.28 feet, thence proceeding S09°54'08"W, 37.88 feet, thence proceeding S34°52'26"W,

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ROCKINGHAM COUNTY  
REGISTRY OF DEEDS



92.77 feet, thence proceeding S35°54'34"W, 32.27 feet, thence proceeding S73°22'16"W, 75.20 feet, thence proceeding S88°22'05"W, 133.73 feet, thence proceeding N75°34'20"W, 53.56 feet, thence proceeding N38°45'10"W, 103.72 feet, thence proceeding N06°36'30"E, 41.15 feet, thence proceeding N57°33'19"E, 19.31 feet, thence proceeding S76°11'31"E, 69.59 feet, thence proceeding S70°06'42"E, 74.07 feet, thence proceeding N79°12'35"E, 134.26 feet, thence proceeding N63°27'47"E, 29.15 feet to the point of beginning. Meaning and intending to describe an easement of 41,383 square feet in size and as shown on RCRD record plan #D-34222.

A survey map detailing the site is attached as exhibit A; and

**WHEREAS**, antimony and lead were detected in two surficial soil samples within the sludge disposal area at levels above the New Hampshire Department of Environmental Services ("NHDES") Code of Administrative Rules, Env-Or 600, Soil Remediation Standards, as filed with the NHDES; and,

**WHEREAS**, the sludge disposal area of the Property having antimony and lead above the aforementioned Soil Remediation Standards in the surficial soil has been capped with bituminous pavement; and,

**WHEREAS**, in accordance with the NHDES Code of Administrative Rules, Env-Or 600, *Contaminated Site Management*, has required assurances that activities and uses of the sludge disposal area will be restricted so as to minimize risks to human health and the environment; and,

**WHEREAS**, the NHDES has reviewed and approved this Notice, and has approved the continued use of the sludge disposal area subject to the restrictions set forth in this Notice.

**NOW, THEREFORE**, notice is hereby given that the Activity and Use Restrictions ("AUR") set forth below apply to the sludge disposal area;

1. **Permitted Activities and Uses Set Forth in the AUR.** The AUR provides that, pursuant to Env-Or 600, no significant risk exists to human health, safety, or welfare or to the environment, under current conditions and for any foreseeable period of time, so long as the following activities and uses occur on the sludge disposal area:

- (a) Commercial or industrial uses as permitted by the City of Portsmouth Zoning Ordinances or otherwise by the City of Portsmouth to include walkways and parking.
- (b) Short term (three months or less) underground utility and/or construction activities including, but not limited to, excavations (including emergency repair or underground utilities), which are likely to disturb contaminated soil, provided that such activities are conducted in accordance with Obligations/Conditions (a), (b), (c) and (d) of Section 3 of this AUR, and all applicable worker and safety practices pursuant to OSHA Standards and 29 CFR 1910.120.



- (c) Such other activities and uses, with concurrence by NHDES, shall present no greater risk or harm to human health, safety, or welfare or to the environment than the permitted activities and uses set forth herein.
2. **Restricted Activities and Uses Set Forth in the AUR.** Activities and uses which are inconsistent with the AUR, and which, if implemented at the Property, may result in a significant risk of harm to human health, safety, or welfare or to the environment or presents a substantial hazard, are as follows:
- (a) Any activity, including, but not limited to, excavation associated with underground utility or construction work which is likely to disturb the lead and/or antimony contaminated soil beneath the bituminous pavement barrier without prior development and implementation of the NHDES approved Soil Management Plan and a site specific Health and Safety Plan in accordance with Obligations/Conditions (a) and (b) of Section 3 of this AUR.
  - (b) Use of the Property as a residence, school, nursery, recreational areas (such as parks or athletic fields) or any other use at which a child's presence is likely or intended.
  - (c) Any activity including, but not limited to, relocation of lead and/or antimony contaminated soil beneath the bituminous pavement barrier unless such activity is first evaluated and approved by NHDES.
3. **Obligations/Conditions.** Obligations and/or Conditions to be undertaken and/or maintained at the Property to maintain a condition of no significant risk as set forth in the AUR shall include the following:
- (a) A Soil Management Plan approved by NHDES prior to commencement of any subsurface activity that may involve impact to lead and/or antimony contaminated soil below the bituminous pavement barrier or that would result in direct contact to humans or present a greater risk to the environment.
  - (b) A site specific Health and Safety Plan prepared by a Certified Hygienist or other qualified health and safety professional in accordance with 29 CFR 1910.120. The plan must clearly identify the location of the lead and/or antimony contaminated soils and specifically identify the types of personal protective equipment, monitoring devices, and engineering controls necessary to ensure that workers and others at the Property are not exposed to lead and/or antimony through dermal contact, ingestion, and/or inhalation of particulate dusts.
  - (c) The bituminous pavement barrier must be maintained to ensure that lead and/or antimony contaminated soils beneath the barrier remain inaccessible.
  - (d) Lead and/or antimony contaminated soil may not be relocated or moved unless first evaluated and approved by the NHDES. Of which, the evaluation shall render an

opinion that such relocation or movement of the soil is in accordance with maintaining a condition that is protective of human health and the environment.

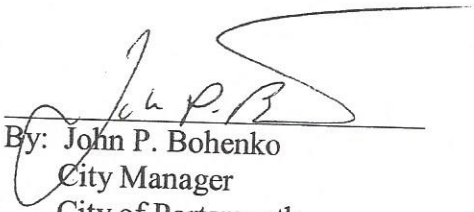
4. **Emergency Procedures.** In the event of any emergency or condition that may result in significant risk or harm to human health from exposure to lead and/or antimony contaminants, Property Owner shall:
  - (a) Promptly notify NHDES of such emergency or condition.
  - (b) Limit disturbance of lead and/or antimony contaminated media to the minimum reasonably necessary to adequately respond to such emergency or condition.
  - (c) Implement appropriate precautions to reduce exposures to lead and/or antimony contaminated media by workers at the Property and neighbors to the Property.
  - (d) Engage the services of an Environmental Consulting Firm to supervise the preparation and implementation of a written plan for review and approval by NHDES for restoring the property to a condition consistent with the AUR.
  - (e) Take precautions to limit disturbance of contaminated media to the minimum necessary to respond to the emergency condition.
5. **Proposed Changes in Activities and Uses.** The AUR may be amended or modified by Owner of the Property upon application to and approval by the NHDES. Any proposed changes in activities and uses at the Property that may result in a greater risk to exposure of lead and/or antimony than currently at the Property shall be evaluated, by an Environmental Consulting Firm, which shall render an opinion as to whether the proposed changes will present an unacceptable level of risk to human health and the environment. Said opinion shall accompany the application. Any and all requirements set forth in the opinion or by NHDES as part of the approval process to insure a condition of no significant risk in the implementation of the proposed activity or use shall be satisfied before such activity or use is commenced.
6. **Duration of Activity and Use Restrictions.** The AUR shall run with the land, become binding upon successive owners of the Property or portions of the Property and shall remain in effect until the lead and/or antimony soil contamination at the Property meets applicable background standards.
7. **Termination of Activity and Use Restrictions.** The AUR may be terminated in accordance with the following procedures:
  - (a) Owner of Property shall submit to NHDES a written request to terminate this AUR with an explanation as to why such restrictions are no longer necessary to maintain the protection of human health and the environment.



- (b) Owner shall provide such supporting documentation as outlined in Env-Or 600 or as NHDES may deem necessary to justify the termination of the AUR.
8. **Recordation.** This Notice of AUR and any modifications or amendments to this Notice of AUR, or Notice of Termination of AUR or termination of this Notice are effective upon recordation of the Notice of AUR in the chain of Title for the Property at the Rockingham County, New Hampshire Registry of Deeds. All recordation costs shall be the responsibility of the Property Owner. Owner shall provide certified copies of all AUR recorded instruments to NHDES within 60 days of recordation.
9. **Incorporation Into Deeds, Mortgages, Leases, and Instruments of Transfer.** This Notice shall be incorporated either in full or by reference into the chain of title of all deeds, easements, mortgages, leases, licenses, occupancy agreements or any other instrument of transfer, whereby an interest in and/or a right to use the Property of a portion thereof is conveyed. The Activity and Use Restrictions and the proposed deed language shall be submitted to NHDES for review and approval prior to recordation.
10. **Violation of Activity and Use Restriction.** The property owner shall notify NHDES in writing within 30 days of discovery of a violation of any condition of the NHDES approved and recorded Amended AUR. Within 60 days of discovery of a violation, a property owner shall submit recommendations to correct the violation to NHDES for approval, including a corrective action plan and schedule for implementing the plan.
11. **Self-Certification.** The property owner shall self-certify compliance with the AUR every 2 years in the month of June, beginning in the year 2018 on a form provided by the NHDES. Within 30 days of receipt of a self-certification form from NHDES, the property owner at the time of notice shall: 1) sign the form to certify that all conditions of the NHDES-approved AUR are being met, and 2) return the signed form to NHDES.

Owner hereby authorizes and consents to the filing and recordation of the Amended Notice, which shall become effective upon approval of NHDES and recordation of this instrument at the Rockingham County New Hampshire Registry of Deeds in the chain of Title for the Property.

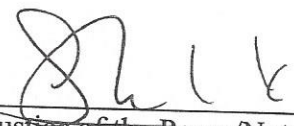
WITNESSETH the execution hereof under seal this 10 day of November, 2016.

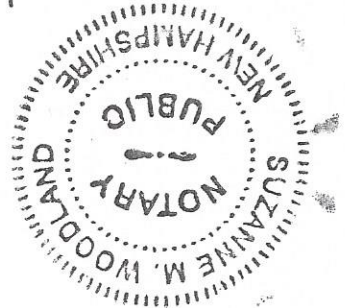
  
By: John P. Bohenko  
City Manager  
City of Portsmouth

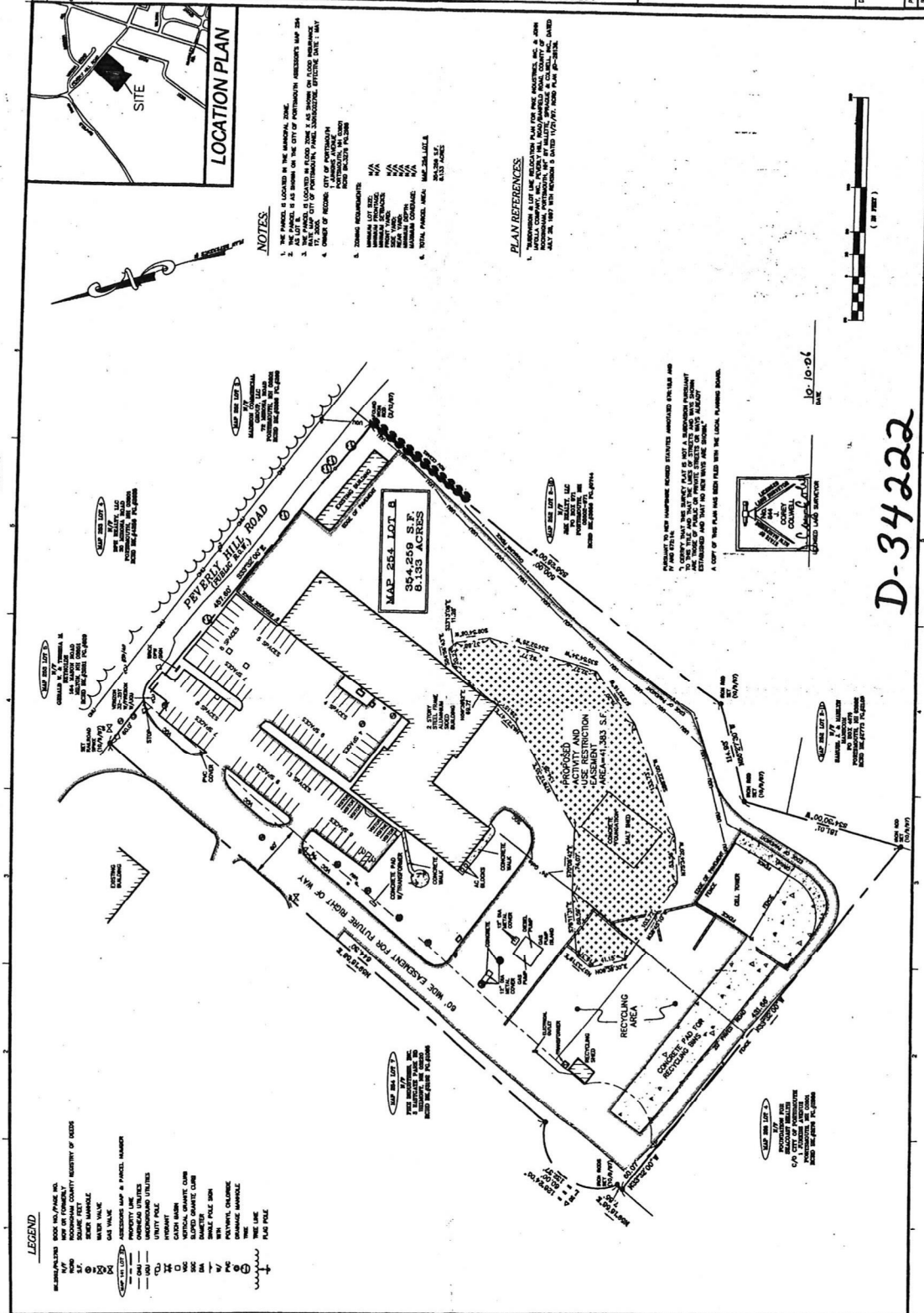
**NOTARY BLOCK**

STATE OF NEW HAMPSHIRE  
COUNTY OF ROCKINGHAM

The foregoing instrument was acknowledged before me this 10 day of November, 2016, by John P. Bohenko, City Manager, City of Portsmouth.

  
Justice of the Peace/Notary Public  
Printed Name: Suzanne Woodard  
My Commission Expires:  
Nov 14 2017







The State of New Hampshire  
**Department of Environmental Services**



**Robert R. Scott, Commissioner**

EMAIL ONLY

August 2, 2022

PETER RICE  
CITY OF PORTSMOUTH  
DEPARTMENT OF PUBLIC WORKS  
680 PEVERLY HILL ROAD  
PORTSMOUTH, NH, 03801

**Subject: UST Conditional Construction Approval**

**Subject Site: Portsmouth, Department of Public Works, 680 Peverly Hill Road**  
NHDES Site #199706017, UST Facility ID #0113665

**Reference: UST System Construction Plan** prepared by Stantec Consulting Services, Inc.

Dear Peter Rice:

The New Hampshire Department of Environmental Services, Waste Management Division (NHDES) has completed its review of the subject plans forwarded to us by your engineer for the proposed underground storage tanks (USTs) #8 and #9 system installations. NHDES conditionally approves the application revised July 22, 2022, plan sheets 1 through 26 of 26 last revised July 22, 2022, for construction in accordance with the requirements of Env-Or 407.04 of the New Hampshire Code of Administrative Rules, Env-Or 400, Underground Storage Tank Facilities (UST Rules).

**The approval is subject to the conditions listed below:**

- A. The **facility owner** is responsible for proper installation of the new or substantially modified UST system. Ensure that the certified tank installer receives a copy of this document and a copy of the NHDES approved plans as referenced above by page number and revision date.
- B. Closure and site assessment:
  - i. A [Closure Notification Form](#) shall be submitted to NHDES **at least 14 days prior to closure** of the existing system and a closure report shall be submitted to NHDES within 30 days of the site assessment required for both tank and piping closures.
  - ii. Closure and site assessment requirements shall be performed in accordance with Env-Or 408.04 through Env-Or 408.10 for tank and piping removals, sump replacements, and piping replacements (including placed in existing ducts).
  - iii. Any indication of contamination requires immediate notification to NHDES pursuant to the requirements of Env-Or 604.06.
  - iv. Closure shall be supervised by a certified tank remover as described in Env-Or 402.09.
  - v. This construction approval in no way alleviates the owner's responsibility to perform adequate contamination cleanup acceptable to NHDES, prior to installation of the new system.

[www.des.nh.gov](http://www.des.nh.gov)

PO Box 95, 29 Hazen Drive, Concord, NH 03302-0095

Telephone: (603) 271-3899 Fax: (603) 271-2181 TDD Access: Relay NH 1-800-735-2964

- C. The approval is valid for one year from the date of issuance, per Env-Or 407.04(f). If construction pursuant to the approval has not commenced within one year, the approval shall be void, per Env-Or 407.04(g). If construction has commenced but is not completed within one year, the owner shall notify NHDES and may request a one-year extension if meeting the conditions of Env-Or 407.04(h)(1) and (h)(2).
- D. An owner shall not cause or allow any construction or other activity that is not in accordance with the NHDES approved plans and all terms and conditions of this approval, per Env-Or 407.04(e). The construction of the system shall strictly comply with the NHDES approved plans and specifications. No construction changes will be allowed without prior approval from the New Hampshire licensed professional engineer who stamped the approved plans and NHDES.
- E. Installation of a UST or UST system component shall only be performed by a certified tank installer per Env-Or 407.05(a). A certified tank installer shall be certified by the International Code Council in UST system/retrofitting (certification category U1), **be a qualified installer by the manufacturer of the equipment being installed for every component of the system** and understand federal UST regulations and industry codes and practice, per Env-Or 407.05(b). Installations shall comply with applicable standards and fire codes, per Env-Or 407.05(c) and (d).
- F. The **certified tank installer** is not identified on the application. Prior to starting any UST construction at the site, the owner shall provide written notice to the NHDES plan approval engineer noted below on the projects ICC certified installer. This written notice shall include all Information as required per Env-Or 407.02(m).
- G. The certified tank installer shall perform applicable **tightness testing** after installation and prior to backfill to determine tightness of the primary piping, secondary containment piping, vent piping, and all spill containment equipment in accordance with Env-Or 406.05 through Env-Or 406.08, per Env-Or 407.08(a) and (b). The certified tank installer shall certify the results of all tightness performed and provide the certified results to NHDES and the owner at the time of backfill inspection of the system, per Env-Or 407.08(c).
- H. The certified tank installer shall test all installed sumps for tightness in accordance with Env-Or 406.15. The certified tank installer shall certify and provide the certified test results to NHDES and owner at the time of the backfill inspection of system, per Env-Or 407.08(c).
- I. **The new system shall not be backfilled or placed into service until NHDES has performed an inspection**, per Env-Or 407.07(e) and (f). The owner shall notify NHDES of the completion of installation for a new or substantially modified system at least 5 NHDES business days prior to backfilling the tank top and/or piping, to arrange for an inspection, in accordance with 407.07(b).
- J. The owner shall submit to NHDES a **letter prepared and stamped by a New Hampshire licensed professional engineer** (NH P.E.) at least 8 NHDES working hours prior to an inspection by NHDES, stating that the installed UST system has been inspected by a NH P.E. to verify that the system was constructed in accordance with the NHDES approved plans and specifications, per Env-Or 407.07(c). If the NH P.E.'s inspection reveals any discrepancies between the system as installed and the approved plans and specifications, the owner shall submit to NHDES as-built record drawings prepared and stamped by a NH P.E., per Env-Or 407.07(d).



- K. All **line leak detectors** shall be tested in accordance with the manufacturer's requirements. The certified tank installer shall certify that all line leak detectors passed a functionality test and submit the certified test results to NHDES before any regulated substance is dispensed or used for consumption, as applicable, per Env-Or 407.08(d).
- L. All **primary containment systems**, as defined in Env-Or 406.17, for a motor fuel dispensing UST system shall be tested for tightness per Env-Or 406.17(b). This includes any motor fuel dispensing UST system dispensing gasoline, diesel, kerosene, jet fuel or Avgas. The certified tank installer shall provide the passing test results to NHDES, per Env-Or 406.17(e), before any regulated substance is dispensed. **This facility doesn't require the test to be witnessed by a NHDES inspector.**
- M. In addition to the certified tightness testing results required at the backfill inspection per Env-Or 407.08(c), per Env-Or 407.08(e)(2), following the completion of a new or substantially modified existing system and *prior* to dispensing or consumption **the certified tank installer shall submit** to NHDES certified test results for all tests indicated in Env-Or 407.08(e)(1), as applicable to the installation:
- i. All line leak detectors passed a functionality test.
  - ii. All overfill devices passed a functionality test.
  - iii. All spill containment passed integrity testing.
  - iv. All containment sumps passed integrity testing.
  - v. All leak monitoring system components pass a functionality test; and
  - vi. All motor fuel dispensing tank systems passed primary containment testing.
- N. An [UST Registration Form](#), for new systems or substantial modifications of existing systems, shall be filed with NHDES at the time of the final inspection of the system, per Env-Or 404.01(f).
- O. As part of the UST Registration Form and prior to NHDES authorizing an underground storage tank system to be placed into service, the owner shall submit to NHDES final certification by a New Hampshire licensed professional engineer or the certified tank installer that the installation has been completed and is in accordance with the **NHDES approved plans, or as-built record drawings** and all terms and conditions of this approval, per Env-Or 404.04(i).
- P. An underground storage facility shall not be operated without designating **Class A, B, and C operators** who have been trained and certified by a training program approved by NHDES, per RSA 146-C:17. Information can be obtained by contacting the Oil Compliance Section Operator Training Specialist, Suzanne Picone, by dialing (603) 271-0673 or by email at [Suzanne.M.Picone@des.nh.gov](mailto:Suzanne.M.Picone@des.nh.gov). Additional information, including approved operator training programs, upcoming class dates, operator training forms and more can be found by visiting the [Underground Storage Tank Operator Training website](#).
- Q. The State of New Hampshire and NHDES shall incur no liability by reason of this plan review for this proposed facility. The comments in this letter are based on plans and specifications supplied by the site owner or responsible party. **This plan review does not guarantee the adequacy of the approved plan, nor does it supersede any federal, state, or local ordinances or regulations.**



- R. **State law does not preempt local authority.** The owner must notify the appropriate local officials and comply with any local ordinances and permitting requirements. This includes building permits, notification to the fire department, and any approvals and inspections.
- S. This approval in no way constitutes an endorsement or approval of any material, design, or workmanship, but only that the plans and specifications, as submitted, appear to fulfill the requirements of the UST Rules. Nor does the approval relieve the owner of the responsibility to install the system according to acceptable engineering design and construction practices.
- T. A permit to temporarily discharge groundwater, pursuant to Env-Wq 402 may be required prior to dewatering necessary for the installation of an UST system. Applications and permitting information can be obtained by calling (603) 271-2858 or (603) 271-2513.

The owner shall also be responsible for any damages and regulatory fines due to spilled or leaked petroleum caused by non-compliance, faulty design, or poor workmanship. The State of New Hampshire shall not incur any liability as the result of any spill, leak, failure, or damage of any kind related to the UST facility.

Please contact me should you have any questions regarding this conditional construction approval.

Sincerely,



Emily Szmyt  
Oil Remediation and Compliance Bureau  
Tel: (603) 271-2790  
Fax: (603) 271-2181  
Email: [Emily.Szmyt@des.nh.gov](mailto:Emily.Szmyt@des.nh.gov)

Enclosures: [Closure Notification Form](#) (hyperlink only)  
[UST Registration Form](#) (hyperlink only)

ec: Portsmouth Fire Chief  
Ronald B. Laurence Jr P.E., Stantec Consulting Services, Inc.  
Robert Stockman, NHDES  
Matt Jones, NHDES