

Great Dam Removal and Exeter River Restoration

Exeter,
New Hampshire

Prepared for



Town of Exeter
10 Front Street
Exeter, NH 03833

Prepared by



101 Walnut Street
PO Box 9151
Watertown, MA 02471

March 23, 2016

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B. Geotechnical Report and Boring Logs titled "Geotechnical Design Basis Report, Proposed Removal of Great Dam, Exeter River, Exeter, New Hampshire". Prepared by PARE Corporation, dated December 2014	
C. Access Agreement for Peter Olney Property located at 23 Water Street. Prepared by Exeter Public Works Department. Signed by Peter Olney on May 26, 2015.	

Attached Contract Documents

Site Plans titled "Great Dam Removal and Exeter River Restoration", prepared by VHB, and dated March 23, 2016. The plan set consists of 13 sheets of drawings

SECTION 00030
ADVERTISEMENT FOR BIDS

Great Dam Removal and Exeter River Restoration
Town of Exeter
Exeter, NH

ARTICLE 1 – ADVERTISEMENT

1.01 BID DUE DATE

- A. Sealed bids for Great Dam Removal and Exeter River Restoration will be received at the Exeter Public Works Complex at 13 Newfields Road in Exeter, NH until **2:00PM** local time on **April 18, 2016**. Bids received after this time will not be accepted.

1.02 PROJECT DESCRIPTION

- A. OWNER: Town of Exeter
ENGINEER: Vanasse Hangen Brustlin, Inc.
- B. The project involves the removal of the Great Dam, concrete abutments, low level outlet, fish weir, and fish ladder and subsequent restoration of the Exeter River. The project also involves the installation of a dry hydrant in the river upstream of the dam and modifications to the Town of Exeter River Pump Station.
- C. The project will require coordination with the String Bridge Project located downstream of the dam.
- D. The anticipated project schedule is to start construction about July 1, 2016 and reach substantial completion by October 30, 2016.

1.03 PREQUALIFICATIONS

- A. All General Contractors must be prequalified by the OWNER and ENGINEER prior to the invitation to bid, or they will not be eligible to submit a bid. Any Contractor may be prequalified through satisfactory completion of the prequalification procedures. A Notice of Pre-Qualification for this project was distributed on February 11, 2016.
- B. Pre-qualification statements from interested Contractors were accepted by the Town of Exeter until 2:00 pm local time on March 9, 2016. Pre-qualification statements/forms received after this time will not be accepted.

- C. Copies of the prequalification forms are available from:

Town of Exeter Public Works Complex
13 Newfields Road
Exeter, NH 03833
Phone: 603-773-6157
Fax: 603-772-1355

1.04 PROCUREMENT OF DOCUMENTS

- A. Bidding Documents may be examined at the following locations:

Vanasse Hangen Brustlin, Inc.

2 Bedford Farms Drive, Suite 200
Bedford, NH 03110

Town of Exeter Public Works

13 Newfields Road
Exeter, NH 03833

Associated General Contractors

48 Grandview Road #1
Bow, NH 03304

- B. Electronic copies of complete Bidding Documents are available online at the Town of Exeter Website at www.exeternh.gov/rfps.
- C. Copies of complete Bidding Documents may also be obtained from the ENGINEER, Vanasse Hangen Brustlin, Inc. for a non-refundable fee of \$100.00 per set with an additional fee of \$15.00 per set for shipping and handling if requested for mailing within the continental United States. Fee may be cash, company check, certified check or money order drawn from a U.S. bank, payable to: "Vanasse Hangen Brustlin, Inc."

1.05 PRE-BID CONFERENCE

- A. A *mandatory* pre-bid meeting will be held on **March 30, 2016** at the Exeter Library next to the Great Dam at **10:00AM** local time. Information presented could be significant. Therefore, all interested bidders are required to attend in order to prepare acceptable bid submissions.

1.06 BID SECURITY AND BOND

- A. Bidders will be required to furnish bid security in accordance with the Instruction to Bidders in the form of a Bid Bond or certified check in the amount of 5% of the total bid. The successful bidder will be required to furnish a Performance Bond and a Payment Bond each in the amount of 100% of the Contract Price.

- B. The Owner reserves the right to reject any or all bids, to accept any bid, to waive any informality or irregularity on bids received.

1.07

OPENING OF BIDS

- A. Bids will be reviewed only from those contractors or contractor / subcontractor teams deemed qualified by the Engineer. Bids will be opened on April 18, 2016 at the Exeter Board of Selectmen meeting.
- B. If such circumstances arise which would delay certain aspects of the described schedule and availability of documents, the Town or their Engineer, will notify prospective bidders, as necessary, and required bid dates and opening bid dates may be adjusted accordingly. Notice to Contractors will be put on the town website at: www.exeternh.gov/rfps.

END OF SECTION

SECTION 01000
INSTRUCTIONS TO BIDDERS
(EJCDC Form C-200, Modified)

ARTICLE 1 – DEFINED TERMS

- 1.01 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 which are applicable to both the singular and plural thereof:
- A. *Issuing Office* – The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered. For this project, the Issuing Office will be the Town of Exeter Public Works Department located at 13 Newfields Road, Exeter NH 03833.

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

- 2.01 Complete sets of the Bidding Documents may be obtained from the Issuing Office for the sum as stated in the Advertisement for Bids.
- 2.02 Complete sets of Bidding Documents, obtained from the ENGINEER or the OWNER's website, must be used in preparing Bids; neither OWNER nor ENGINEER assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents. Failure of Bidder to obtain authorized bidding documents from the ENGINEER or OWNER may be cause for rejection of a bid.
- 2.03 OWNER and ENGINEER, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

ARTICLE 3 – QUALIFICATIONS OF BIDDERS

- 3.01 All bidders shall be prequalified in accordance with procedures outlined in the Notice of Prequalification issued on February 11, 2016 and made due on March 9, 2016 at 2:00PM. Bids from contractors not prequalified shall not be accepted.

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

- 4.01 *Subsurface and Physical Conditions*
- A. The Supplementary Conditions identify:
1. Those reports of explorations and tests of subsurface conditions at or contiguous to the Site that ENGINEER has used in preparing the Bidding Documents.

2. Those drawings of physical conditions in or relating to existing surface and subsurface structures at or contiguous to the Site (except Underground Facilities) that ENGINEER has used in preparing the Bidding Documents.
- B. Copies of reports and drawings referenced in Paragraph 4.01.A will be made available by OWNER to any Bidder for review on request. Those reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which Bidder is entitled to rely as provided in Paragraph 5.03 of the General Conditions has been identified and established in Paragraph 5.03 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any "technical data" or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

4.02 *Underground Facilities*

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

4.03 *Hazardous Environmental Condition*

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

4.04 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated conditions appear in Paragraphs 5.03, 5.04, and 5.05 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work, appear in Paragraph 5.06 of the General Conditions.

4.05 On request, OWNER may provide Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies as Bidder deems necessary for submission of a Bid. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies, to the satisfaction of the OWNER. All costs for such examinations and coordination of such with OWNER are the sole responsibility of the Bidder.

4.06 Reference is made to Article 8 of the Standard General Conditions for the identification of the general nature of other work, if any, that is to be performed at the Site by OWNER or others (such as utilities and other prime contractors) that relates to the Work for which a Bid is to be submitted. On request, OWNER will provide to each Bidder for examination access to or copies of Contract Documents (other than portions thereof related to price) for such other work.

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

- A. examine and carefully study the Bidding Documents, including any Addenda and the other related data identified in the Bidding Documents;
 - B. visit the Site and become familiar with and satisfy Bidder as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
 - C. become familiar with and satisfy Bidder as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work;
 - D. carefully study all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in Paragraph 5.03 of the General Conditions, and (2) carefully study all reports and drawings of a Hazardous Environmental Condition, if any, at the Site which have been identified in the Supplementary Conditions as provided in Paragraph 5.06 of the General Conditions;
 - E. obtain and carefully study (or accept consequences of not doing so) all examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents, and safety precautions and programs incident thereto;
 - F. agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price bid and within the times and in accordance with the other terms and conditions of the Bidding Documents;
 - G. become aware of the general nature of the work to be performed by OWNER and others at the Site that relates to the Work as indicated in the Bidding Documents;
 - H. correlate the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents;
 - I. promptly give ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by ENGINEER is acceptable to Bidder; and
 - J. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.
- 4.08 The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article 4, that without exception the Bid is premised upon performing and furnishing the Work required by the Bidding Documents and applying any specific means, methods, techniques, sequences, and procedures of construction that may be shown or indicated

or expressly required by the Bidding Documents, that Bidder has given ENGINEER written notice of all conflicts, errors, ambiguities, and discrepancies that Bidder has discovered in the Bidding Documents and the written resolutions thereof by ENGINEER are acceptable to Bidder, and that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work.

ARTICLE 5 – PRE-BID CONFERENCE

- 5.01 A mandatory pre-bid conference will be held for this project and is identified in the Advertisement for Bids. 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 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.
- 5.02 Only bids from those bidders in attendance of the mandatory pre-bid meeting will be accepted by the owner.

ARTICLE 6 – SITE AND OTHER AREAS

- 6.01 The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

ARTICLE 7 – INTERPRETATIONS AND ADDENDA

- 7.01 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 mailed or delivered to all parties recorded by ENGINEER as having received the Bidding Documents. Questions received less than **seven** calendar 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.
- 7.02 Addenda may be issued to clarify, correct, or change the Bidding Documents as deemed advisable by OWNER or ENGINEER.

ARTICLE 8 – BID SECURITY

- 8.01 A Bid must be accompanied by Bid security made payable to OWNER in an amount of 5% of Bidder's maximum Bid price and in the form of a certified or bank check or a Bid bond (on the unbound form provided) issued by a surety meeting the requirements of Paragraphs 6.01 and 6.02 of the General Conditions.
- 8.02 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 annul the Notice of Award and the Bid security of that Bidder will be forfeited. 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 60 days after the Bid opening, whereupon Bid security furnished by such Bidders will be returned.

- 8.03 Bid security of other Bidders whom OWNER believes do not have a reasonable chance of receiving the award will be returned within seven days after the Bid opening.

ARTICLE 9 – CONTRACT TIMES

- 9.01 The number of days within which, or the dates by which, the Work is to be substantially completed and ready for final payment are set forth in the Agreement.
- 9.02 Bidder shall set forth in the Bid the time by which Bidder shall achieve Substantial Completion. The Owner will take Bidder's time commitment regarding Substantial Completion into consideration during the evaluation of Bids, and it will be necessary for the apparent Successful Bidder to satisfy Owner that it will be able to achieve Substantial Completion within the time such Bidder has designated in the Bid. The Successful Bidder's time commitments will be entered into the Agreement (or incorporated in the Agreement by reference to the specific terms of the Bid).

ARTICLE 10 – LIQUIDATED DAMAGES

- 10.01 Provisions for liquidated damages, if any, for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement

ARTICLE 11 – SUBSTITUTE AND "OR-EQUAL" ITEMS

- 11.01 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.
- 11.02 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, and those "or-equal" or substitute or materials and equipment subsequently approved by Engineer prior to the submittal of Bids and identified by Addendum. No item of material or equipment will be considered by Engineer as an "or-equal" or substitute unless written request for approval has been submitted by Bidder and has been received by Engineer at least 15 days prior to the date for receipt of Bids. Each such request shall comply with the requirements of Paragraphs 7.04 and 7.05 of the General Conditions. The burden of proof of the merit of the proposed item is upon Bidder. Engineer's decision of approval or disapproval of a proposed item will be final. If Engineer approves any such proposed item, such approval will be set forth in an Addendum issued to all prospective Bidders. Bidders shall not rely upon approvals made in any other manner.
- 11.03 All prices that Bidder sets forth in its Bid shall be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of "or-equal" or substitution requests are made at Bidder's sole risk.

ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS AND OTHERS

- 12.01 If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, individuals, or entities to be submitted to OWNER in advance of a specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to OWNER a list of all such Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, individual, or entity if requested by OWNER. If OWNER or ENGINEER, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, OWNER may, before the Notice of Award is given, request apparent Successful Bidder to submit a substitute, in which case apparent Successful Bidder shall submit an acceptable substitute, Bidder's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and OWNER may consider such price adjustment in evaluating Bids and making the Contract award.
- 12.02 If apparent Successful Bidder declines to make any such substitution, OWNER may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, individuals, or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which OWNER or ENGINEER makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to OWNER and ENGINEER subject to revocation of such acceptance after the Effective Date of the Agreement as provided in Paragraph 7.06 of the General Conditions.

ARTICLE 13 – PREPARATION OF BID

- 13.01 The Bid Form is included with the Bidding Documents. A separate unbound copy of the Bid Form is included. Bidder shall submit a bid using the unbound original Bid Form provided. Failure of Bidder to use original forms authorized from the ENGINEER will be cause for rejection of a bid. Additional unbound copies may be obtained from the ENGINEER.
- 13.02 All blanks on the Bid Form shall be completed by printing in ink or by typewriter and the Bid signed. A Bid price shall be indicated for each Bid item, alternative, adjustment unit price item, and unit price item listed therein, or the words "No Bid," "No Change," or "Not Applicable" entered.
- 13.03 A Bid by a corporation shall be executed in the corporate name by the president or a vice-president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown below the signature.
- 13.04 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be shown below the signature.
- 13.05 A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown below the signature.

- 13.06 A Bid by an individual shall show the Bidder's name and official address.
- 13.07 A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid Form. The official address of the joint venture shall be shown below the signature.
- 13.08 All names shall be printed in ink below the signatures.
- 13.09 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.
- 13.10 The address and telephone number for communications regarding the Bid shall be shown.
- 13.11 The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located or covenant to obtain such qualification prior to award of the Contract. Bidder's state contractor license number, if any, shall also be shown on the Bid Form.

ARTICLE 14 – BASIS OF BID; EVALUATION OF BIDS

14.01 Unit Price

- A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the Bid schedule.
- B. The total of all estimated prices will be determined as the sum of the products of the estimated quantity of each item and the unit price Bid for the item. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.
- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.
- 14.02 The Bid price shall include such amounts as the Bidder deems proper for overhead and profit on account of cash allowances, if any, named in the Contract Documents as provided in paragraph 13.02 of the General Conditions.

ARTICLE 15 – SUBMITTAL OF BID

- 15.01 With each copy of the Bidding Documents, a Bidder is furnished one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the other required documents.
- 15.02 A Bid shall be submitted no later than the date and time prescribed and at the place indicated in the Advertisement for Bids and shall be enclosed in an opaque sealed envelope plainly marked with the Project title, the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate envelope plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid shall be addressed to the party as indicated in the Advertisement for Bids. Bids submitted by electronic means will not be accepted.

ARTICLE 16 – MODIFICATION AND WITHDRAWAL OF BID

- 16.01 A Bid may be modified or withdrawn by an appropriate document duly executed in the manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids.
- 16.02 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with OWNER and promptly thereafter demonstrates to the reasonable satisfaction of OWNER that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

ARTICLE 17 – OPENING OF BIDS

- 17.01 Bids will be opened at the time and place indicated in the Advertisement for Bids 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, only to Bidders that have submitted a bid, and only after the opening of Bids. Bids will only be opened from contractors who are prequalified and attended the pre-bid conference.

ARTICLE 18 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE

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

ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT

- 19.01 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.
- 19.02 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.
- 19.03 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.
- 19.04 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.

19.05 OWNER may conduct such investigations as OWNER deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities to perform the Work in accordance with the Contract Documents.

19.06 If the Contract is to be awarded, OWNER will award the Contract to the lowest responsive, responsible Bidder on the Basis of Award, as defined in Article 6 – Basis of Award of the Bid Form.

ARTICLE 20 – CONTRACT SECURITY AND INSURANCE

20.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth OWNER's requirements as to performance and payment Bonds and insurance. When the Successful Bidder delivers the executed Agreement to OWNER, it shall be accompanied by such Bonds.

ARTICLE 21 – SIGNING OF AGREEMENT

21.01 When OWNER gives a Notice of Award to the Successful Bidder, it shall be accompanied by the required number of unsigned counterparts of the Agreement along with the other Contract Documents which are identified in the Agreement as attached thereto. Within **15** 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.

END OF SECTION

SECTION 00300
BID FORM
(EJCDC Form C-410, Modified)

PROJECT IDENTIFICATION: Great Dam Removal and Exeter River Restoration

ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

Town of Exeter
10 Front Street
Exeter, NH 03883

A. Please note that the Bid Form is to be delivered to the Exeter Public Works Complex at 13 Newfields Road in Exeter, NH at the time and location noted in Section 00030 – Advertisement for Bids, Article 1.01 Bid Due Date.

1.02 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

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days 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

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the 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 visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

- C. Bidder 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.
- D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.
- E. Bidder has considered the information known to Bidder itself; 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 any 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; and (3) Bidder's safety precautions and programs.
- F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- G. 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.
- H. 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.
- I. The payment items listed herein and in the Form of General Bid are intended to provide full payment for the Work shown on the Contract Drawings and specified herein. Any work called for or inferred in the Contract Documents but not listed as a payment item shall be considered incidental to the overall project, which includes mobilization and demobilization of any equipment and materials, dust control, and any equipment and temporary controls. To the extent that there is no Pay Item for an item that is detailed in the Construction Plans and Specifications, the Bidder shall notify the Engineer, and shall not hold the Owner or Engineer responsible. The Bidder shall include all costs required to perform the full nature of work within the Final Bid Price. Not including an item within the Final Bid Price will not be justification for a change in Contract Price.
- J. It is the intent of these Specifications to provide a finished product as shown on the Construction Documents and specified herein.
- K. The Bidding Documents are sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this bid is submitted.

- L. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.
- M. The Contractor shall not be compensated for costs incurred due to weather conditions.

ARTICLE 4 – BIDDER’S CERTIFICATION

4.01 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. 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 any thing 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 Basis of Bid.

ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following prices:

BASE BID ITEMS

The Bidder agrees to perform all the work, including all incidental labor, materials and equipment for the satisfactory completion of the work in full compliance with the content and intent of the specifications and plans of the work, for the following prices. Bid prices listed are based on performance of the Work as specified in these Specifications and shall include all overhead, profit, handling, taxes and all other related charges.

Item No.	Quantity		Description (unit price in words)	Unit Price	Extended Total
105.20	1	Unit	Control of Work	\$ _____	\$ _____
			_____ Dollars Unit	Unit	
202.11	1	Unit	Dam Removal and Disposal	\$ _____	\$ _____
			_____ Dollars Unit	Unit	
202.8	1	Unit	Site Staging	\$ _____	\$ _____
			_____ Dollars Unit	Unit	
207.1	1500	CY	Common Channel Excavation	\$ _____	\$ _____
			_____ Dollars Per CY	Per CY	
207.2	20	CY	Rock Channel Excavation	\$ _____	\$ _____
			_____ Dollars Per Unit	Per Unit	

Item No.	Quantity		Description (unit price in words)	Unit Price	Extended Total
211.11	1	Unit	Vibration Monitoring	\$ _____	\$ _____
			_____ Dollars Unit	Unit	
503.101	1	Unit	Cofferdam and Water Diversion	\$ _____	\$ _____
			_____ Dollars Unit	Unit	
572.4	1	Unit	Stone Wall (Reinforced Concrete Masonry Unit Wall)	\$ _____	\$ _____
			_____ Dollars Unit	Unit	
585.2	80	CY	Stone Fill, Class B	\$ _____	\$ _____
			_____ Dollars Per Unit	Per CY	
585.25	1000	CY	Stone Fill (Cobble-Boulder Mix)	\$ _____	\$ _____
			_____ Dollars Per CY	Per CY	
587.1	380	Ton	Keyed Stone Fill	\$ _____	\$ _____
			_____ Dollars Per Ton	Per Ton	
587.4	180	Ton	Granite Revetment	\$ _____	\$ _____
			_____ Dollars Per Ton	Per Ton	

Item No.	Quantity		Description (unit price in words)	Unit Price	Extended Total
646.51	1	Unit	Turf Establishment with Mulch, Tackifiers and Loam		
			_____	\$ _____	\$ _____
			_____ Dollars LS	Unit	
692.1	1	Unit	Mobilization and Demobilization		
			_____	\$ _____	\$ _____
			_____ Dollars LS	Unit	
699	1	Unit	Miscellaneous Temporary Erosion and Sediment Control		
			_____	\$ _____	\$ _____
			_____ Dollars LS	Unit	
			Total of All Base Bid Items		

			_____ Dollars	\$ _____	

ADDITIVE BID ITEMS

In order to fit the scope of work to available funds, the Owner may elect to include Additive Bid Items A through C. Bidders are required to fill out Additive Bid Items A through C below which will be considered as part of the basis of award.

Additive Bid Item	Item No.	Quantity		Description (unit price in words)	Unit Price	Extended Total
A	612.0	1	Unit	Pump House Modifications		
				_____	\$ _____	\$ _____
				_____ Dollars	Unit	Unit
B	692.2	1	Unit	Second Mobilization and Grading Adjustments in Year 2		
				_____	\$ _____	\$ _____
				_____ Dollars	Unit	Unit
C	611.0	1	Unit	Dry Hydrant Installation		
				_____	\$ _____	\$ _____
				_____ Dollars	Unit	Unit

BID ITEM TOTALS

Total of Base Bid

_____ Dollars \$ _____

Total of Base Bid + Alternative Bid Item A

_____ Dollars \$ _____

Total of Base Bid + Alternative Bid Items A & B

_____ Dollars \$ _____

Total of Base Bid + Alternative Bid Items A & B & C

_____ Dollars \$ _____

ARTICLE 6 – BASIS OF AWARD

6.01 The Contract will be awarded based on a tiered approach dependent on available funding for the project. The Contract will be awarded based on the lowest Total Bid Price of one of four scenarios, as outlined below. The four scenarios which will be evaluated are as follows:

- A. Scenario 1: Total of All Base Bid Items + Additive Bid Items A, B & C
- B. Scenario 2: Total of All Base Bid Items + Additive Bid Items A & B
- C. Scenario 3: Total of All Base Bid Items + Additive Bid Items A
- D. Scenario 4: Total of All Base Bid Items (only)

The order of preference of Scenarios for the basis of award is Scenario 1, Scenario 2, Scenario 3 and lastly Scenario 4. The Bid Recipient will award the Contract to the lowest Bidder of the highest preferred scenario that is within the available funding of the project.

ARTICLE 7 – TIME OF COMPLETION

7.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before October 30, 2016 or within the Contract Times.

7.02 Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the work within contract times.

ARTICLE 8 – ATTACHMENTS TO THIS BID

8.01 The following documents are submitted with and made a condition of this Bid:

- A. Required Bid security;
- B. List of Proposed Subcontractors;
- C. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such licenser within the time for acceptance of Bids

ARTICLE 9 – DEFINED TERMS

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

ARTICLE 10 – BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

By:

[Signature] _____

[Printed Name] _____

(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:

[Signature] _____

[Printed Name] _____

Title: _____

Submittal Date: _____

Address for giving notices: _____

Telephone Number: _____

Fax Number: _____

E-mail address: _____

Bidder's License No.: _____

(where applicable)

Contract Affidavit

I/We declare under penalty of perjury under the laws of the United States and the State of New Hampshire that, in accordance with the provisions of Title 23 USC, Section 112(c), have not either directly or indirectly entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this Proposal.

Dated: _____

(If a firm or individual)

Signature of Bidder _____

By _____

Address of Bidder _____

Names and Address of Members of the Firm:

(If a Corporation)

Signature of Bidder _____

Title _____

By _____

Business Address _____

Incorporated under the laws of the State of _____

Names and addresses of Officers:

President _____

Secretary _____

Treasurer _____

Section 00410
BID Bond
(EJCDC Form C-430, modified)

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

BIDDER (Name and Address):

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

OWNER (Name and Address):

BID

Bid Due Date: _____

Description (Project Name and Include Location):

BOND

Bond Number: _____

Date: _____

Penal sum _____ \$ _____

(Words)

(Figures)

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

BIDDER

SURETY

(Seal)

(Seal)

Bidder's Name and Corporate Seal

Surety's Name and Corporate Seal

By: _____

By: _____

Signature

Signature (Attach Power of Attorney)

Print Name

Print Name

Title

Title

Attest: _____

Attest: _____

Signature and Title

Signature and Title

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

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.

END OF SECTION

SECTION 00500
AGREEMENT
(EJCDC FORM C-520, Modified)

THIS AGREEMENT is by and between _____ Town of Exeter _____ (“Owner”) and

_____ (“Contractor”).

Owner and Contractor, in consideration of the mutual covenants hereinafter set forth, agree as follows:

ARTICLE 1 – WORK

- 1.01 CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:
- A. The project involves the removal of the Great Dam, concrete abutments, low level outlet, fish weir, and fish ladder and subsequent restoration of the Exeter River. The project also involves the installation of a dry hydrant in the river upstream of the dam and modifications to the Town of Exeter River Pump Station.

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:
- A. The Great Dam Removal and Exeter River Restoration.

ARTICLE 3 – ENGINEER

- 3.01 The Project has been designed by Vanasse Hangen Brustlin, Inc., 101 Walnut Street, Watertown, MA 02471, who is hereinafter called ENGINEER and who 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 Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.
- 4.02 *Dates for Substantial Completion and Final Payment*
- A. The Work will be substantially completed on or before October 30, 2016, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before November 15, 2016.

4.03 *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 and other losses if the Work is not completed and Milestones not achieved within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with the Contract. 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):
1. Substantial Completion: Contractor shall pay Owner \$500.00 for each calendar day that expires after the time (as duly adjusted pursuant to the Contract) specified in Paragraph 4.02.A above for Substantial Completion until the Work is substantially complete.
 2. Completion of Remaining Work: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner \$500.00 for each day that expires after such time until the Work is completed and ready for final payment.
 3. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive and will not be imposed concurrently.

ARTICLE 5 – CONTRACT PRICE

5.02 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents the amounts that follow, subject to adjustment under the Contract:

- A. For all Work other than Unit Price Work, a lump sum of : \$ _____
- B. For all Unit Price Work, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the estimated quantity of that item as indicated in the Bid Schedule of the executed Bid Form:

TOTAL OF ALL UNIT PRICES: _____
(use words)
\$ _____(dollars)

As provided specific in Paragraph 13.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by ENGINEER as provided in paragraph 10.06 of the General Conditions. Unit prices have been computed as provided in paragraph 13.03 of the General Conditions.

ARTICLE 6 – PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

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

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. The CONTRACTOR shall submit payment applications to the ENGINEER by the 7th day of each month during performance of the Work. All such payments will be measured by the schedule of values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of unites 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 the Contract
 - a. 95 percent of Work completed (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. 95 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).
 - 2. Following Substantial Completion of Year 1 work (excluding Second Mobilization and Grading Adjustments in Year 2 (Bid Item 692.2) but prior to project completion, 2 percent of Contract Price will be held as retainage.

6.03 *Final Payment*

- A. Upon final completion and acceptance of the Work following Year 1 (substantial completion by October 30, 2016) in accordance with Paragraph 15.06 of the General Conditions, OWNER shall pay 97 percent of the Contract Price as recommended by Engineer as provided in said Paragraph 15.06. This includes payment of 3 percent out of the remaining 5 percent retainage held by the Owner.
- B. The Owner will hold 2 percent of the Contract Price as final retainage until Second Mobilization and Grading Adjustments in Year 2 (Bid Item 692.2) and warranties on plans and other products as outlined in the Specifications are complete and met. Upon completion of Second Mobilization and Grading Adjustments in Year 2 and acceptance of required warranties as outlined in the Specifications by the Engineer, Owner shall pay the remainder of the Contract Price as recommended by Engineer.

ARTICLE 7 – INTEREST

7.01 All moneys not paid when due as provided in Article 15 of the General Conditions shall bear interest at the maximum rate allowed by law in the state where the project is located.

ARTICLE 8 – CONTRACTOR’S REPRESENTATIONS

- 8.01 In order to induce OWNER to enter into this Agreement, CONTRACTOR makes the following representations:
- A. CONTRACTOR has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.
 - B. 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.
 - C. 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.
 - D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.
 - E. Contractor has considered the information known to Contractor itself; 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; and (3) Contractor’s safety precautions and programs.
 - F. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no 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.
 - G. 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.
 - H. 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.
 - I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

- J. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 *Contents*

- A. The Contract Documents consist of the following:
1. This Agreement (pages 00500-1 to 00500-7, inclusive).
 2. Performance bond (pages 00610-1 to 00610-4, inclusive).
 3. Payment bond (pages 00620-1 to 00620-3, inclusive).
 4. General Conditions (pages 00700-1 to 00700-65, inclusive).
 5. Supplementary Conditions (pages 00800-1 to 00800-15, inclusive).
 6. Special Conditions (pages 00850-1 to 00850-2, inclusive);
 7. Specifications as listed in the table of contents of the Project Manual.
 8. Drawings consisting of 13 sheets with each sheet bearing the following general title: Great Dam Removal and Exeter River Restoration Project;
 9. Exhibits to this Agreement (enumerated as follows):
 - a. Contractor's Bid.
 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
 - b. Work Change Directives.
 - c. Change Orders.
 - d. Field Orders.
- B. The documents listed in Paragraph 9.01.A are not attached to but made part of 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 the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 *Terms*

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

10.02 *Assignment of Contract*

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

10.03 *Successors and Assigns*

- A. A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

10.04 *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.

10.05 *Contractor's Certifications*

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:
 1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process or in the Contract execution;
 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract 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.

IN WITNESS WHEREOF, OWNER and CONTRACTOR have signed this Agreement. One counterpart each has 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:

CONTRACTOR

By: _____

By: _____

Title: _____

Title: _____

Address for giving notices:

Address for giving notices:

License No.: _____

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

(Where applicable)

Agent for service of process:

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

END OF SECTION

SECTION 00610
PERFORMANCE BOND
(EJCDC Form C-610, Modified)

CONTRACTOR (Name and Address):

SURETY (Name and Principal Place of Business):

OWNER (Name and Address):

Town of Exeter
10 Front Street
Exeter, New Hampshire, 03833

CONSTRUCTION CONTRACT

Effective Date of this Agreement:

Amount:

Description (*Name and Location*):

BOND

Bond Number:

Date (Not earlier than Contract Date):

Amount:

Modification to this Bond Form:

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

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal (seal)

Surety's Name and Corporate Seal (seal)

By: _____
Signature

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

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

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 Contract, which is incorporated herein by reference.
2. If the Contractor performs the Contract, the Surety and the Contractor have no obligation under this Bond, except to participate in conferences as provided in Paragraph 3.
3. If there is no Owner Default, the Surety's obligation under this Bond shall arise after:
 - 3.1 Owner has notified Contractor and Surety, at the address described in Paragraph 10 below, that Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with the Contractor and Surety to be held not later than 15 days after receipt of such notice to discuss methods of performing the Contract. If the Owner, the Contractor, and Surety agree, Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive Owner's right, if any, subsequently to declare a Contractor Default; and
 - 3.2 Owner has declared a Contractor Default and formally terminated Contractor's right to complete the Contract. Such Contractor Default shall not be declared earlier than 20 days after the Contractor and the Surety have received notice as provided in Paragraph 3.1; and
 - 3.3 The Owner has agreed to pay the Balance of the Contract Price to:
 1. Surety in accordance with the terms of the Contract; or
 2. Another Contractor selected pursuant to Paragraph 4.3 to perform the Contract.
4. When Owner has satisfied the conditions of Paragraph 3, Surety shall promptly, and at the Surety's expense, take one of the following actions:
 - 4.1 Arrange for the Contractor, with consent of the Owner, to perform and complete the Contract; or
 - 4.2 Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or
 - 4.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by Owner and contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Contract, and pay to Owner the amount of damages as described in Paragraph 6 in excess of the Balance of the Contract Price incurred by the Owner resulting from the Contractor's default; or
 - 4.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:
 1. After investigation, determine the amount for which it may be liable to Owner and, as soon as practicable after the amount is determined, tender payment therefore to Owner; or

2. Deny liability in whole or in part and notify the Owner citing reasons therefore.
5. If the Surety does not proceed as provided in Paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond 15 days after receipt of an additional written notice from Owner to Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to Owner. If the Surety proceeds as provided in Paragraph 4.4, and the Owner refuses the payment tendered or the Surety has denied liability, in whole or in part, without further notice Owner shall be entitled to enforce any remedy available to Owner.
6. After Owner has terminated the Contractor's right to complete the Contract, and if the Surety elects to act under Paragraph 4.1, 4.2, or 4.3 above, then the responsibilities of Surety to Owner shall not be greater than those of Contractor under the Contract, and the responsibilities of Owner to Surety shall not be greater than those of Owner under the Contract. To a limit of the amount of this Bond, but subject to commitment by Owner of the Balance of the Contract Price to mitigation of costs and damages on the Contract, the Surety is obligated without duplication for:
 - 6.1 The responsibilities of Contractor for correction of defective Work and completion of the Contract;
 - 6.2 Additional legal, design professional, and delay costs resulting from Contractor's Default, and resulting from the actions or failure to act of Surety under Paragraph 4; and
 - 6.3 Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of Contractor.
7. Surety shall not be liable to Owner or others for obligations of 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 Owner or its heirs, executors, administrators, or successors.
8. Surety hereby waives notice of any change, including changes of time, to the Contract or to related subcontracts, purchase orders, and other obligations.
9. 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 Contractor Default or within two years after Contractor ceased working or within two years after 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 period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
10. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the address shown on the signature page.
11. When this Bond has been furnished to comply with a statutory other legal requirement in the location where the Contract 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 requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

12. Definitions.

- 12.1 Balance of the Contract Price: The total amount payable by Owner to Contractor under the Construction Contract after all proper adjustments have been made, including allowance to Contractor of any amounts received or to be received by the Owner in settlement of insurance or other Claims for damages to which Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Contract.
- 12.2 Construction Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.
- 12.3 Contractor Default: Failure of Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.
- 12.4 Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract or to perform and complete or comply with the other terms thereof.

END OF SECTION

SECTION 00620
PAYMENT BOND
(EJCDC Form C-615, Modified)

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

CONTRACTOR (*Name and Address*):

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

OWNER (*Name and Address*):

Town of Exeter
10 Front Street
Exeter, NH 03833

CONTRACT

Effective Date of Agreement:
Amount:
Description (*Name and Location*):

BOND

Bond Number:
Date (*Not earlier than Effective Date of Agreement*):
Amount:
Modifications to this Bond Form:

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

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal (Seal)

Surety's Name and Corporate Seal (Seal)

By: _____
Signature

By: _____
Signature (Attach Power of Attorney)

Print Name

Print Name

Title

Title

Note: Provide execution by additional parties, such as joint ventures, if necessary.

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner to pay for labor, materials, and equipment furnished by Claimants for use in the performance of the Contract, which is incorporated herein by reference.
2. With respect to Owner, this obligation shall be null and void if Contractor:
 - 2.1 Promptly makes payment, directly or indirectly, for all sums due Claimants, and
 - 2.2 Defends, indemnifies, and holds harmless Owner from all claims, demands, liens, or suits alleging non-payment by Contractor by any person or entity who furnished labor, materials, or equipment for use in the performance of the Contract, provided Owner has promptly notified Contractor and Surety (at the address described in Paragraph 12) of any claims, demands, liens, or suits and tendered defense of such claims, demands, liens, or suits to Contractor and Surety, and provided there is no Owner Default.
3. With respect to Claimants, this obligation shall be null and void if Contractor promptly makes payment, directly or indirectly, for all sums due.
4. Surety shall have no obligation to Claimants under this Bond until:
 - 4.1 Claimants who are employed by or have a direct contract with Contractor have given notice to Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.
 - 4.2 Claimants who do not have a direct contract with Contractor:
 1. Have furnished written notice to Contractor and sent a copy, or notice thereof, to Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials or equipment were furnished or supplied, or for whom the labor was done or performed; and
 2. Have either received a rejection in whole or in part from Contractor, or not received within 30 days of furnishing the above notice any communication from Contractor by which Contractor had indicated the claim will be paid directly or indirectly; and
 3. Not having been paid within the above 30 days, have sent a written notice to Surety and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to Contractor.
5. If a notice by a Claimant required by Paragraph 4 is provided by Owner to Contractor or to Surety that is sufficient compliance.
6. When a Claimant has satisfied the conditions of Paragraph 4, the Surety shall promptly and at Surety's expense take the following actions:
 - 6.1 Send an answer to that Claimant, with a copy to Owner, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.
 - 6.2 Pay or arrange for payment of any undisputed amounts.
7. Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by Surety.
8. Amounts owed by Owner to Contractor under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any performance bond. By Contractor furnishing and Owner accepting this Bond, they agree that all funds earned by Contractor in the performance of the Contract are dedicated to satisfy obligations of Contractor and Surety under this Bond, subject to Owner's priority to use the funds for the completion of the Work.

9. Surety shall not be liable to Owner, Claimants, or others for obligations of Contractor that are unrelated to the Contract. Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.
10. Surety hereby waives notice of any change, including changes of time, to the Contract or to related subcontracts, purchase orders, and other obligations.
11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Paragraph 4.1 or Paragraph 4.2.3, 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 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.
12. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, Owner, or Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.
13. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted here from and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory Bond and not as a common law bond.
14. Upon request of any person or entity appearing to be a potential beneficiary of this Bond, Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.
15. Definitions
 - 15.1 Claimant: An individual or entity having a direct contract with Contractor, or with a first-tier subcontractor of Contractor, to furnish labor, materials, or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of Contractor and 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.
 - 15.2 Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.
 - 15.3 Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract, or to perform and complete or otherwise comply with the other terms thereof.

END OF SECTION

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

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by



Issued and Published Jointly by



Endorsed by



These General Conditions have been prepared for use with the Agreement Between Owner and Contractor for Construction Contract (EJCDC® C-520, Stipulated Sum, or C-525, Cost-Plus, 2013 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other.

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

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

has declined to address. A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. (“CERCLA”); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5101 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. (“RCRA”); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
12. *Contract*—The entire and integrated written contract between the Owner and Contractor concerning the Work.
13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents. .
15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
17. *Cost of the Work*—See Paragraph 13.01 for definition.
18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
20. *Engineer*—The individual or entity named as such in the Agreement.
21. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
22. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, does not establish a Hazardous Environmental Condition.
23. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

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

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

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

1.02 Terminology

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

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

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

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

2.02 *Copies of Documents*

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

2.03 *Before Starting Construction*

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise specifically required by the Contract Documents), Contractor shall submit to Engineer for timely review:
 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
 2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

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

2.05 *Initial Acceptance of Schedules*

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

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may transmit, and shall accept, Project-related correspondence, text, data, documents, drawings, information, and graphics, including but not limited to Shop Drawings and other submittals, in electronic media or digital format, either directly, or through access to a secure Project website.
- B. If the Contract does not establish protocols for electronic or digital transmittals, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the recipient's use of software application packages, operating systems, or

computer hardware differing from those used in the drafting or transmittal of the items, or from those established in applicable transmittal protocols.

ARTICLE 3 – DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

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

3.02 *Reference Standards*

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

3.03 *Reporting and Resolving Discrepancies*

- A. *Reporting Discrepancies:*
 - 1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict,

error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract Documents issued pursuant to Paragraph 11.01.

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

B. *Resolving Discrepancies:*

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

3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work thereunder.
- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly give written notice to Owner and Contractor that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

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

ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

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

4.02 *Starting the Work*

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

4.03 *Reference Points*

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

4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Times and Contract Price. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
1. severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 2. abnormal weather conditions;
 3. acts or failures to act of utility owners (other than those performing other work at or adjacent to the Site by arrangement with the Owner, as contemplated in Article 8); and
 4. acts of war or terrorism.
- D. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5.
- E. Paragraph 8.03 governs delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.
- F. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor.

- G. Contractor must submit any Change Proposal seeking an adjustment in Contract Price or Contract Times under this paragraph within 30 days of the commencement of the delaying, disrupting, or interfering event.

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

5.01 *Availability of Lands*

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

5.02 *Use of Site and Other Areas*

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

- 1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
- 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.12, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or at law; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part

by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

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

5.03 *Subsurface and Physical Conditions*

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

5.04 *Differing Subsurface or Physical Conditions*

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

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

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine the necessity of Owner's obtaining additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A above; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Possible Price and Times Adjustments:*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
 - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,

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

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or adjacent to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:
 1. Owner and Engineer do not warrant or guarantee the accuracy or completeness of any such information or data provided by others; and
 2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents as being at the Site;
 - c. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 - d. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, then Contractor shall, promptly after

becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer.

- C. *Engineer's Review:* Engineer will promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the Underground Facility in question; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and advise Owner in writing of Engineer's findings, conclusions, and recommendations. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question, addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Possible Price and Times Adjustments:*
 - 1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, or both, to the extent that any existing Underground Facility at the Site that was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated the existence or actual location of the Underground Facility in question;
 - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
 - c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times; and
 - d. Contractor gave the notice required in Paragraph 5.05.B.
 - 2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
 - 3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

5.06 *Hazardous Environmental Conditions at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
1. those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
 2. Technical Data contained in such reports and drawings.
- B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off.
- H. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.
- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6 – BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

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

6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this Article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Contractor shall deliver to Owner, with copies to each named insured and additional insured (as identified in this Article, in the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Contractor has obtained and is

maintaining the policies, coverages, and endorsements required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies and endorsements, and documentation of applicable self-insured retentions and deductibles. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.

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

6.03 *Contractor's Insurance*

- A. *Workers' Compensation:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance for:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts.
 - 2. United States Longshoreman and Harbor Workers' Compensation Act and Jones Act coverage (if applicable).
 - 3. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees (by stop-gap endorsement in monopolist worker's compensation states).

4. Foreign voluntary worker compensation (if applicable).
- B. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against:
1. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees.
 2. claims for damages insured by reasonably available personal injury liability coverage.
 3. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- C. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy shall be written on a 1996 (or later) ISO commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Products and completed operations coverage:
 - a. Such insurance shall be maintained for three years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
 2. Blanket contractual liability coverage, to the extent permitted by law, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
 3. Broad form property damage coverage.
 4. Severability of interest.
 5. Underground, explosion, and collapse coverage.
 6. Personal injury coverage.
 7. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together); or CG 20 10 07 04 and CG 20 37 07 04 (together); or their equivalent.
 8. For design professional additional insureds, ISO Endorsement CG 20 32 07 04, "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.
- D. *Automobile liability:* Contractor shall purchase and maintain automobile liability insurance against claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy shall be written on an occurrence basis.
- E. *Umbrella or excess liability:* Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the paragraphs above. Subject to industry-standard exclusions, the coverage afforded shall follow form as to each and every one of the underlying policies.
- F. *Contractor's pollution liability insurance:* Contractor shall purchase and maintain a policy covering third-party injury and property damage claims, including clean-up costs, as a result

of pollution conditions arising from Contractor's operations and completed operations. This insurance shall be maintained for no less than three years after final completion.

- G. *Additional insureds*: The Contractor's commercial general liability, automobile liability, umbrella or excess, and pollution liability policies shall include and list as additional insureds Owner and Engineer, and any individuals or entities identified in the Supplementary Conditions; include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds; and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby (including as applicable those arising from both ongoing and completed operations) on a non-contributory basis. Contractor shall obtain all necessary endorsements to support these requirements.
- H. *Contractor's professional liability insurance*: If Contractor will provide or furnish professional services under this Contract, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance shall provide protection against claims arising out of performance of professional design or related services, and caused by a negligent error, omission, or act for which the insured party is legally liable. It shall be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. If such professional design services are performed by a Subcontractor, and not by Contractor itself, then the requirements of this paragraph may be satisfied through the purchasing and maintenance of such insurance by such Subcontractor.
- I. *General provisions*: The policies of insurance required by this Paragraph 6.03 shall:
 - 1. include at least the specific coverages provided in this Article.
 - 2. be written for not less than the limits of liability provided in this Article and in the Supplementary Conditions, or required by Laws or Regulations, whichever is greater.
 - 3. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least 10 days prior written notice has been given to Contractor. Within three days of receipt of any such written notice, Contractor shall provide a copy of the notice to Owner, Engineer, and each other insured under the policy.
 - 4. remain in effect at least until final payment (and longer if expressly required in this Article) and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract Documents.
 - 5. be appropriate for the Work being performed and provide protection from claims that may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable.
- J. The coverage requirements for specific policies of insurance must be met by such policies, and not by reference to excess or umbrella insurance provided in other policies.

6.04 *Owner's Liability Insurance*

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

6.05 *Property Insurance*

- A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the full insurable replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
 - 1. include the Owner and Contractor as named insureds, and all Subcontractors, and any individuals or entities required by the Supplementary Conditions to be insured under such builder's risk policy, as insureds or named insureds. For purposes of the remainder of this Paragraph 6.05, Paragraphs 6.06 and 6.07, and any corresponding Supplementary Conditions, the parties required to be insured shall collectively be referred to as "insureds."
 - 2. be written on a builder's risk "all risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire; lightning; windstorm; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; flood; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; water damage (other than that caused by flood); and such other perils or causes of loss as may be specifically required by the Supplementary Conditions. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; or flood, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance may be provided through other insurance policies acceptable to Owner and Contractor.
 - 3. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.
 - 4. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects).

5. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).
 6. extend to cover damage or loss to insured property while in transit.
 7. allow for partial occupation or use of the Work by Owner, such that those portions of the Work that are not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
 8. allow for the waiver of the insurer's subrogation rights, as set forth below.
 9. provide primary coverage for all losses and damages caused by the perils or causes of loss covered.
 10. not include a co-insurance clause.
 11. include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions.
 12. include performance/hot testing and start-up.
 13. be maintained in effect, subject to the provisions herein regarding Substantial Completion and partial occupancy or use of the Work by Owner, until the Work is complete.
- B. *Notice of Cancellation or Change:* All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 6.05 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured.
- C. *Deductibles:* The purchaser of any required builder's risk or property insurance shall pay for costs not covered because of the application of a policy deductible.
- D. *Partial Occupancy or Use by Owner:* If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide notice of such occupancy or use to the builder's risk insurer. The builder's risk insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy; rather, those portions of the Work that are occupied or used by Owner may come off the builder's risk policy, while those portions of the Work not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
- E. *Additional Insurance:* If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.05, it may do so at Contractor's expense.
- F. *Insurance of Other Property:* If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, such as tools, construction equipment, or other personal property owned by Contractor, a Subcontractor, or an employee of Contractor or a Subcontractor, then the entity or individual owning such property item will be responsible for deciding whether to insure it, and if so in what amount.

6.06 *Waiver of Rights*

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

6.07 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of insurance required by Paragraph 6.05 will be adjusted and settled with the named insured that purchased the

policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.

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

ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

7.01 *Supervision and Superintendence*

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

7.02 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.03 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and

guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.04 "Or Equals"

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment, or items from other proposed suppliers under the circumstances described below.
 - 1. If Engineer in its sole discretion determines that an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer shall deem it an "or equal" item. For the purposes of this paragraph, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
 - 3) it has a proven record of performance and availability of responsive service; and
 - 4) it is not objectionable to Owner.
 - b. Contractor certifies that, if approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense:* Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal", which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.

- D. *Effect of Engineer's Determination:* Neither approval nor denial of an "or-equal" request shall result in any change in Contract Price. The Engineer's denial of an "or-equal" request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents.
- E. *Treatment as a Substitution Request:* If Engineer determines that an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer considered the proposed item as a substitute pursuant to Paragraph 7.05.

7.05 *Substitutes*

- A. Unless the specification or description of an item of material or equipment required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of material or equipment under the circumstances described below. To the extent possible such requests shall be made before commencement of related construction at the Site.
 - 1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of material or equipment from anyone other than Contractor.
 - 2. The requirements for review by Engineer will be as set forth in Paragraph 7.05.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.
 - 3. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - a. shall certify that the proposed substitute item will:
 - 1) perform adequately the functions and achieve the results called for by the general design,
 - 2) be similar in substance to that specified, and
 - 3) be suited to the same use as that specified.
 - b. will state:
 - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times,
 - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and
 - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
 - c. will identify:
 - 1) all variations of the proposed substitute item from that specified, and

- 2) available engineering, sales, maintenance, repair, and replacement services.
 - d. shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
 - C. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
 - D. *Reimbursement of Engineer's Cost:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
 - E. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
 - F. *Effect of Engineer's Determination:* If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.05.D, by timely submittal of a Change Proposal.

7.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner.
- B. Contractor shall retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable, during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within five days.

- E. Owner may require the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors, Suppliers, or other individuals or entities for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor, Supplier, or other individual or entity so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity.
- F. If Owner requires the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, or both, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.
- H. On a monthly basis Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions.
- J. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors, Suppliers, and all other individuals or entities performing or furnishing any of the Work.
- K. Contractor shall restrict all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed herein.
- L. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- M. All Work performed for Contractor by a Subcontractor or Supplier shall be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer.
- N. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by the particular Subcontractor or Supplier.

- O. Nothing in the Contract Documents:
1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier, or other individual or entity; nor
 2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

7.07 *Patent Fees and Royalties*

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

7.08 *Permits*

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

7.09 *Taxes*

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

7.10 *Laws and Regulations*

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

7.11 *Record Documents*

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

7.12 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify Owner; the owners of adjacent property, Underground Facilities, and other utilities; and other contractors and utility owners performing work at or adjacent to the Site, when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
 - C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
 - D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
 - E. All damage, injury, or loss to any property referred to in Paragraph 7.12.A.2 or 7.12.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
 - F. Contractor's duties and responsibilities for safety and protection shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 15.06.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).
 - G. Contractor's duties and responsibilities for safety and protection shall resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.13 *Safety Representative*

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

7.14 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or

exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

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

7.16 *Shop Drawings, Samples, and Other Submittals*

A. *Shop Drawing and Sample Submittal Requirements:*

1. Before submitting a Shop Drawing or Sample, Contractor shall have:
 - a. reviewed and coordinated the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - c. determined and verified the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that submittal, and that Contractor approves the submittal.
3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be set forth in a written communication separate from the Shop Drawings or Sample submittal; and, in addition, in the case of Shop Drawings by a specific notation made on each Shop Drawing submitted to Engineer for review and approval of each such variation.

- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals. Each submittal will be identified as Engineer may require.

1. *Shop Drawings:*

- a. Contractor shall submit the number of copies required in the Specifications.
- b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to

provide and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.D.

2. *Samples:*
 - a. Contractor shall submit the number of Samples required in the Specifications.
 - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 7.16.D.
3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. *Other Submittals:* Contractor shall submit other submittals to Engineer in accordance with the accepted Schedule of Submittals, and pursuant to the applicable terms of the Specifications.
- D. *Engineer's Review:*
 1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
 2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions or programs incident thereto.
 3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
 4. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order.
 5. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 7.16.A and B.
 6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, shall not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
 7. Neither Engineer's receipt, review, acceptance or approval of a Shop Drawing, Sample, or other submittal shall result in such item becoming a Contract Document.

8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.D.4.

E. *Resubmittal Procedures:*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.
2. Contractor shall furnish required submittals with sufficient information and accuracy to obtain required approval of an item with no more than three submittals. Engineer will record Engineer's time for reviewing a fourth or subsequent submittal of a Shop Drawings, sample, or other item requiring approval, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved submittal item, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

7.17 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 1. observations by Engineer;
 2. recommendation by Engineer or payment by Owner of any progress or final payment;
 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 4. use or occupancy of the Work or any part thereof by Owner;
 5. any review and approval of a Shop Drawing or Sample submittal;
 6. the issuance of a notice of acceptability by Engineer;
 7. any inspection, test, or approval by others; or
 8. any correction of defective Work by Owner.

- D. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract shall govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 7.18.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
 - 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 - 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

7.19 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable Laws and Regulations.
- B. If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, and other submittals prepared by such professional. Shop

Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this paragraph, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 7.16.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria specified by Owner or Engineer.

ARTICLE 8 – OTHER WORK AT THE SITE

8.01 *Other Work*

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

8.02 *Coordination*

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

8.03 *Legal Relationships*

- A. If, in the course of performing other work at or adjacent to the Site for Owner, the Owner's employees, any other contractor working for Owner, or any utility owner for whom the Owner is responsible causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment shall take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract. When applicable, any such equitable adjustment in Contract Price shall be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due to Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this paragraph.
- C. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due to Contractor.

- D. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9 – OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

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

9.02 *Replacement of Engineer*

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

9.03 *Furnish Data*

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

9.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.
- B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
- C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
- B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

ARTICLE 10 – ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

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

10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.08. Particularly, but without limitation, during

or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Project Representative*

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

10.04 *Rejecting Defective Work*

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

10.05 *Shop Drawings, Change Orders and Payments*

- A. Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, are set forth in Paragraph 7.16.
- B. Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, are set forth in Paragraph 7.19.
- C. Engineer's authority as to Change Orders is set forth in Article 11.
- D. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.06 *Determinations for Unit Price Work*

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

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

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

10.08 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 15.06.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 10.08 shall also apply to the Resident Project Representative, if any.

10.09 *Compliance with Safety Program*

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

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

11.01 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
 - 1. *Change Orders:*
 - a. If an amendment or supplement to the Contract Documents includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order. A Change Order also may be used to establish amendments and supplements of the Contract Documents that do not affect the Contract Price or Contract Times.
 - b. Owner and Contractor may amend those terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, without the recommendation of the Engineer. Such an amendment shall be set forth in a Change Order.
 - 2. *Work Change Directives:* A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.04 regarding change of Contract Price. Contractor must submit any Change Proposal seeking an

adjustment of the Contract Price or the Contract Times, or both, no later than 30 days after the completion of the Work set out in the Work Change Directive. Owner must submit any Claim seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 60 days after issuance of the Work Change Directive.

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

11.02 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Such changes shall be supported by Engineer's recommendation, to the extent the change involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters. Such changes may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work shall be performed under the applicable conditions of the Contract Documents. Nothing in this paragraph shall obligate Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.03 *Unauthorized Changes in the Work*

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

11.04 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment of Contract Price shall comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:
 1. where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03); or
 2. where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.04.C.2); or
 3. where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on

the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.04.C).

- C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit shall be determined as follows:
1. a mutually acceptable fixed fee; or
 2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 13.01.B.3, the Contractor's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.04.C.2.a and 11.04.C.2.b is that the Contractor's fee shall be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.A.1 and 13.01.A.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of five percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted work the maximum total fee to be paid by Owner shall be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the work;
 - d. no fee shall be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
 - e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
 - f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 11.04.C.2.a through 11.04.C.2.e, inclusive.

11.05 *Change of Contract Times*

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

11.06 *Change Proposals*

- A. Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; appeal an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; contest a set-off against payment due; or seek other relief under

the Contract. The Change Proposal shall specify any proposed change in Contract Times or Contract Price, or both, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents.

1. *Procedures:* Contractor shall submit each Change Proposal to Engineer promptly (but in no event later than 30 days) after the start of the event giving rise thereto, or after such initial decision. The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal. The supporting data shall be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event. Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal.
 2. *Engineer's Action:* Engineer will review each Change Proposal and, within 30 days after receipt of the Contractor's supporting data, either deny the Change Proposal in whole, approve it in whole, or deny it in part and approve it in part. Such actions shall be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.
 3. *Binding Decision:* Engineer's decision will be final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- B. *Resolution of Certain Change Proposals:* If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice shall be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

11.07 Execution of Change Orders

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

- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of this Paragraph 11.07, it shall be deemed to be of full force and effect, as if fully executed.

11.08 *Notification to Surety*

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

ARTICLE 12 – CLAIMS

12.01 *Claims*

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

submittal and decision process shall resume as of the date of the conclusion of the mediation, as determined by the mediator.

3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action shall be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim shall be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim shall be incorporated in a Change Order to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

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

13.01 *Cost of the Work*

- A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
 1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or
 2. To determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.
- B. *Costs Included*: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 13.01.C, and shall include only the following items:
 1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, and vacation and holiday pay applicable

thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

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

other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
- 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
- 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee:* When the Work as a whole is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 11.04.C.

E. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

- B. *Cash Allowances*: Contractor agrees that:
 - 1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 - 2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.
- C. *Contingency Allowance*: Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

13.03 *Unit Price Work*

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

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

14.01 *Access to Work*

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

14.02 *Tests, Inspections, and Approvals*

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

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

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering shall be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to

cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

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

14.04 *Acceptance of Defective Work*

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

14.05 *Uncovering Work*

- A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.

- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
 - 1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
 - 2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

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

14.07 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, then Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will

include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

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

15.01 Progress Payments

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

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

- e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due:*

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

E. *Reductions in Payment by Owner:*

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

remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed shall be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

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

15.02 *Contractor's Warranty of Title*

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

15.03 *Substantial Completion*

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

- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

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

15.05 *Final Inspection*

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

15.06 *Final Payment*

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

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

2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;
 - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.
 - d. a list of all disputes that Contractor believes are unsettled; and
 - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

B. *Engineer's Review of Application and Acceptance:*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the Application for Payment to Owner for payment. Such recommendation shall account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to the provisions of Paragraph 15.07. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment.

D. *Payment Becomes Due:* Thirty days after the presentation to Owner of the final Application for Payment and accompanying documentation, the amount recommended by Engineer (less any further sum Owner is entitled to set off against Engineer's recommendation,

including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions above with respect to progress payments) will become due and shall be paid by Owner to Contractor.

15.07 *Waiver of Claims*

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

15.08 *Correction Period*

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

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

ARTICLE 16 – SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

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

16.02 *Owner May Terminate for Cause*

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

and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

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

16.03 *Owner May Terminate For Convenience*

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

16.04 *Contractor May Stop Work or Terminate*

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

expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17 – FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

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

ARTICLE 18 – MISCELLANEOUS

18.01 *Giving Notice*

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

18.02 *Computation of Times*

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

18.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

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

18.05 *No Waiver*

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

18.06 *Survival of Obligations*

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

18.07 *Controlling Law*

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

18.08 *Headings*

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

SECTION 00800
Supplementary Conditions
(EJCDC Form C-800, Modified)

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

The terms used in these Supplementary Conditions have the meanings stated in the General Conditions. Additional terms used in these Supplementary Conditions have the meanings stated below, which are applicable to both the singular and plural thereof.

The address system used in these Supplementary Conditions is the same as the address system used in the General Conditions, with the prefix "SC" added thereto.

SC-1.01 *Defined Terms*

Add to the list of definitions in Paragraph 1.01.A by inserting the following as numbered items in their proper alphabetical positions:

Geotechnical Baseline Report (GBR) — The interpretive report prepared by PARE for the Engineer and the Owner regarding subsurface conditions at the Site, and containing specific baseline geotechnical conditions that may be anticipated or relied upon for bidding and contract administration purposes, subject to the controlling provisions of the Contract, including the GBR's own terms. The GBR's content may include logs of borings and other site investigations, recorded measurements of subsurface water levels, and results of field and laboratory testing, and descriptions of the investigative and testing programs. The GBR is a Contract Document.

SC-4.01A *Commencement of Contract Times; Notice to Proceed*

Delete paragraph 4.01A in its entirety and replace with the following:

- A. The contract times will commence to run on the day indicated in the Notice to Proceed. In no event will the Contract Times commence to run later than the 30th day after the Effective Date of the Contract.

SC-5.03 *Subsurface and Physical Conditions*

Delete Paragraphs 5.03 of the General Conditions in their entireties and replace with the following provisions:

- A. Reports and Drawings: The Supplementary Conditions hereby identify:

1. those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site

B. 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. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

C. Geotechnical Baseline Report:

1. This Contract contains a Geotechnical Baseline Report ("GBR"), identified as follows: Report dated December 2014, prepared by PARE Corporation, entitled "Geotechnical Design Basis Report, Proposed Removal of Great Dam, Exeter River, Exeter, New Hampshire", consisting of 59 pages.
2. The GBR is incorporated as a Contract Document. The GBR is to be used in conjunction with other Contract Documents, including the Drawings and Specifications.
3. The GBR describes certain select subsurface conditions that are anticipated to be encountered by Contractor during construction in specified locations (referred to here in the Supplementary Conditions as "Baseline Conditions"). These may include ground, geological, groundwater, and other subsurface geotechnical conditions, and baselines of anticipated Underground Facilities or subsurface structures.
4. The Baseline Conditions shall be used to assist in the administration of the Contract's differing site conditions clause at locations where subsurface conditions have been baselined. If a condition is baselined in the GBR, then only the pertinent Baseline Conditions shall be used to determine whether there is a differing site condition; and no other indication of that condition in the Contract Documents or Technical Data, or of a condition

that describes, quantifies, or measures a similar characteristic of the subsurface, shall be used for the differing site condition determination.

5. The Baseline Conditions shall not be used to make differing site conditions determinations at locations that have not been baselined in the GBR, or at any location with respect to subsurface conditions that the Baseline Conditions do not address. If Underground Facilities or Hazardous Environmental Conditions are expressly addressed in the Baseline Conditions, then comparison to such Baseline Conditions shall be the primary means of determining (a) whether an Underground Facility was shown or indicated with reasonable accuracy, as provided in Paragraph 5.05 of the General Conditions, or (b) whether a Hazardous Environmental Condition was shown or indicated in the Contract Documents as indicated in Paragraph 5.06.H of the General Conditions. As indicated in Paragraph SC-5.04 below, the GDR shall be the primary resource for differing site conditions determinations in cases in which the GBR is inapplicable.
6. The descriptions of subsurface conditions provided in the GBR are based on geotechnical investigations, laboratory tests, interpretation, interpolation, extrapolation, and analyses. Neither Owner, Engineer, nor any geotechnical or other consultant warrants or guarantees that actual subsurface conditions will be as described in the GBR, nor is the GBR intended to warrant or guarantee the use of specific means or methods of construction.
7. The behavior of the ground during construction depends substantially upon the Contractor's selected means, methods, techniques, sequences, and procedures of construction. If ground behavior conditions are baselined in the GBR, they are based on stated assumptions regarding construction means and methods.
8. The GBR shall not reduce or relieve Contractor of its responsibility for the planning, selection, and implementation of safety precautions and programs incident to Contractor's means, methods, techniques, sequences, and procedures of construction, or to the Work.

SC-5.04 *Differing Subsurface or Physical Conditions*

Delete Paragraphs 5.04 of the General Conditions in their entireties and replace with the following provisions:

- A. Notice: If Contractor believes that any subsurface condition that is uncovered or revealed at the Site:
1. differs materially from conditions shown or indicated in the GBR; or
 2. differs materially from conditions shown or indicated in the GDR, to the extent the GBR is inapplicable; or
 3. differs materially from conditions shown or indicated in Contract Documents other than the GBR or GDR, to the extent the GBR and GDR are inapplicable; or
 4. to the extent the GBR and GDR are inapplicable, is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate; or
 5. to the extent the GBR and GDR are inapplicable, is of such a nature as to require a change in the Drawings or Specifications; or
 6. to the extent the GBR and GDR are inapplicable, 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 conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. Engineer's Review: After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine the necessity of Owner's obtaining additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph SC/GBR 5.04.A above; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption or continuation of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. Owner's Statement to Contractor Regarding Site Condition:

After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption or continuation of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.

D. Possible Price and Times Adjustments:

1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must fall within any one or more of the categories described in Paragraph SC/GBR 5.04.A;
 - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03 of the General Conditions; and,
 - c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
 - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise; or
 - b. the existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice as required by Paragraph SC/GBR 5.04.A.

3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, or both, then any such adjustment shall be set forth in a Change Order.
4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

SC-5.06 *Hazardous Environmental Conditions*

Delete Paragraphs 5.06.A and 5.06.B in their entirety and insert the following:

- A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.
- B. Not Used.

SC-6.03 *Contractor's Insurance*

Add the following new paragraph immediately after Paragraph 6.03J:

- K. The limits of liability for the insurance required by Paragraph 6.03 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:
 1. Workers' Compensation, and related coverages under Paragraphs 6.03.A.1 and A.2 of the General Conditions:

State:	<u>Statutory</u>
Federal, if applicable (e.g., Longshoreman's):	<u>Statutory</u>

Employer's Liability:	
Bodily injury, each accident	\$ <u>100,000</u>
Bodily injury by disease, each employee	\$ <u>100,000</u>
Bodily injury/disease aggregate	\$ <u>500,000</u>

2. Contractor's Commercial General Liability under Paragraphs 6.03.B and 6.03.C of the General Conditions:

General Aggregate	\$ <u>2,000,000</u>
Products - Completed Operations Aggregate	\$ <u>2,000,000</u>
Personal and Advertising Injury	\$ <u>1,000,000</u>
Each Occurrence (Bodily Injury and Property Damage)	\$ <u>1,000,000</u>

3. Automobile Liability under Paragraph 6.03.D. of the General Conditions:

Bodily Injury:

Combined Single Limit of \$ 1,000,000

Property Damage:

Each accident \$ 1,000,000

4. Excess or Umbrella Liability:

Per Occurrence \$ 1,000,000

General Aggregate \$ 1,000,000

[See Paragraph 6.03.F of the General Conditions.]

5. Additional Insureds: In addition to Owner and Engineer, include as additional insureds the following:

- a. 37 Water Street
- b. 33 Water Street
- c. 31 Water Street
- d. 27 Water Street
- e. 11 Water Street

f. 1-9 Water Street

6. Contractor's Professional Liability:

Each Claim	\$ <u>2,000,000</u>
Annual Aggregate	\$ <u>2,000,000</u>

SC-7.08 Add the following new paragraphs immediately after paragraph 7.08.A

- B. The OWNER has applied for or has obtained the following permits for this project, which are listed below.
 - 1. NH Department of Environmental Services Wetlands and Non- Site Specific Permit.
 - 2. ACOE Permit NAE-2014-02631
- C. Copies of permits are included in the Appendices. The CONTRACTOR is responsible for complying with the project specific conditions outlined in the permit(s). If the CONTRACTOR intends to proceed with construction means and methods that are outside the General Conditions and Specific Conditions of the permit(s), it is the CONTRACTOR's responsibility to obtain new permit(s) for these means and methods and to bear all costs associated with applying for and obtaining new permit(s).

SC-7.16.E. Delete Paragraph 7.16.E.2 and replace with the following:

- 2. Contractor shall furnish required submittals with sufficient information and accuracy to obtain required approval of an item with no more than two submittals. Engineer will record Engineer's time for reviewing a third or subsequent submittal of a Shop Drawings, sample, or other item requiring approval, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due to Contractor to secure reimbursement for such charges.

SC-10.03 *Project Representative*

Add the following new paragraphs immediately after Paragraph 10.03.A.:

- B. The Resident Project Representative (RPR) will be Engineer's representative at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions.

1. General: RPR's dealings in matters pertaining to the Work in general shall be with Engineer and Contractor. RPR's dealings with Subcontractors shall only be through or with the full knowledge and approval of Contractor. RPR shall generally communicate with Owner only with the knowledge of and under the direction of Engineer.
2. Schedules: Review the progress schedule, schedule of Shop Drawing and Sample submittals, and Schedule of Values prepared by Contractor and consult with Engineer concerning acceptability.
3. Conferences and Meetings: Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings, and prepare and circulate copies of minutes thereof.
4. Liaison:
 - a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.
 - b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.
 - c. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.
5. Interpretation of Contract Documents: Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.
6. Shop Drawings and Samples:
 - a. Record date of receipt of Samples and Contractor-approved Shop Drawings.
 - b. Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.
 - c. Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which RPR believes that the submittal has not been approved by Engineer.

7. Modifications: Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, if any, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.
8. Review of Work and Rejection of Defective Work:
 - a. Conduct on-Site observations of Contractor's work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.
 - b. Report to Engineer whenever RPR believes that any part of Contractor's work in progress is defective, will not produce a completed Project that conforms generally to the Contract Documents, or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.
9. Inspections, Tests, and System Start-ups:
 - a. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.
 - b. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.
10. Records:
 - a. Prepare a daily report or keep a diary or log book, recording Contractor's hours on the Site, Subcontractors present at the Site, weather conditions, data relative to questions of Change Orders, Field Orders, Work Change Directives, or changed conditions, Site visitors, deliveries of equipment or materials, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to Engineer.

- b. Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.
- c. Maintain records for use in preparing Project documentation.

11. Reports:

- a. Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the Progress Schedule and schedule of Shop Drawing and Sample submittals.
- b. Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.
- c. Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, force majeure or delay events, damage to property by fire or other causes, or the discovery of any Constituent of Concern or Hazardous Environmental Condition.

12. Payment Requests: Review applications for payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the Schedule of Values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.

13. Certificates, Operation and Maintenance Manuals: During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Contract Documents to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.

14. Completion:

- a. Participate in Engineer's visits to the Site to determine Substantial Completion, assist in the determination of Substantial Completion and the preparation of a punch list of items to be completed or corrected.

- b. Participate in Engineer's final visit to the Site to determine completion of the Work, in the company of Owner and Contractor, and prepare a final punch list of items to be completed and deficiencies to be remedied.
 - c. Observe whether all items on the final list have been completed or corrected and make recommendations to Engineer concerning acceptance and issuance of the notice of acceptability of the work.
- C. The RPR shall not:
 - 1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).
 - 2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.
 - 3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.
 - 4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of Contractor's work.
 - 5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
 - 6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
 - 7. Accept Shop Drawing or Sample submittals from anyone other than Contractor.
 - 8. Authorize Owner to occupy the Project in whole or in part.

SC-13.03 *Unit Price Work*

Delete Paragraph 13.03.E in its entirety and insert the following in its place:

- E. The unit price of an item of Unit Price Work shall be subject to reevaluation and adjustment under the following conditions:
 - 1. if the extended price of a particular item of Unit Price Work amounts to 25 percent or more of the Contract Price (based on estimated quantities at the time of Contract formation) and the variation in the quantity of that

particular item of Unit Price Work actually furnished or performed by Contractor differs by more than 25 percent from the estimated quantity of such item indicated in the Agreement; and

2. if there is no corresponding adjustment with respect to any other item of Work; and
3. if Contractor believes that Contractor has incurred additional expense as a result thereof, Contractor may submit a Change Proposal, or if Owner believes that the quantity variation entitles Owner to an adjustment in the unit price, Owner may make a Claim, seeking an adjustment in the Contract Price.

SC-15.03 *Substantial Completion*

SC 15.03.B Add the following new subparagraph to Paragraph 15.03.B:

1. If some or all of the Work has been determined not to be at a point of Substantial Completion and will require re-inspection or re-testing by Engineer, the cost of such re-inspection or re-testing, including the cost of time, travel and living expenses, shall be paid by Contractor to Owner. If Contractor does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under Article 15.

SC-15.06 Replace the following in 15.06.D

- D. Payment Becomes Due: Thirty days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 15.01.E) become due, and when due will be paid by Owner to Contractor.

SC-17.02 *Arbitration*

SC-17.02 Arbitration

- A. All matters subject to final resolution under this Article will be decided by arbitration in accordance with the rules of the Town's Arbitration Agency, subject to the conditions and limitations of this paragraph. This agreement to arbitrate and any other agreement or consent to arbitrate entered into will be specifically enforceable under the prevailing law of any court having jurisdiction.
- B. The demand for arbitration will be filed in writing with the other party to the Contract and with the selected arbitrator or arbitration provider, and a copy will

be sent to Engineer for information. The demand for arbitration will be made within the specific time required in this Article, or if no specified time is applicable within a reasonable time after the matter in question has arisen, and in no event shall any such demand be made after the date when institution of legal or equitable proceedings based on such matter in question would be barred by the applicable statute of limitations. The demand for arbitration should include specific reference to Paragraph SC-17.02.D below.

- C. No arbitration arising out of or relating to the Contract shall include by consolidation, joinder, or in any other manner any other individual or entity (including Engineer, and Engineer's consultants and the officers, directors, partners, agents, employees or consultants of any of them) who is not a party to this Contract unless:
 - 1. the inclusion of such other individual or entity is necessary if complete relief is to be afforded among those who are already parties to the arbitration; and
 - 2. such other individual or entity is substantially involved in a question of law or fact which is common to those who are already parties to the arbitration and which will arise in such proceedings.
- D. The award rendered by the arbitrator(s) shall be consistent with the agreement of the parties, in writing, and include a concise breakdown of the award, and a written explanation of the award specifically citing the Contract provisions deemed applicable and relied on in making the award.
- E. The award will be final. Judgment may be entered upon it in any court having jurisdiction thereof, and it will not be subject to modification or appeal, subject to provisions of the Laws and Regulations relating to vacating or modifying an arbitral award.
- F. The fees and expenses of the arbitrators and any arbitration service shall be shared equally by Owner and Contractor.

END OF SECTION

**SECTION 00850
SPECIAL CONDITIONS**

The following Special Conditions apply and are hereby made part of the Agreement and Contract Documents:

1.01 Permits

- A. Permits applied for or obtained by the Owner are indicated in paragraph SC-7.08 of the Supplementary Conditions.

1.02 Construction Schedule

- A. The Owner anticipates issuing a Notice to Proceed on this Project by June 30, 2016 subject to successful bidder satisfying the requirements indicated in the Notice of Award.

1.03 Resident Project Representative

- A. The Owner will provide a Resident Project Representative at no cost to the Contractor. The Resident Project Representative is being provide for the benefit of the Owner, not the Contractor. Duties and responsibilities of the Resident Project Representative are indicated in paragraph SC-10.03 of the Supplementary Conditions.
- B. The Contractor shall notify the Engineer a minimum of five (5) business days in advance of key construction activities in order to have the Resident Project Representative present and observe the work. The Contractor shall provide this advance notice for the following construction activities:
 - 1. Construction of river access.
 - 2. Initial Placement of cofferdam.
 - 3. Start of river diversion activities.
- C. The Contractor shall notify the Engineer a minimum of 24 hours in advance of key construction activities in order to have the Resident Project Representative present and observe the work. The Contractor shall provide this advance notice for the following construction activities:
 - 1. Contractor mobilization to the site.
 - 2. Any clearing and grubbing activities.
 - 3. Examination of bedrock elevations for potential removal.
 - 4. Removal or reconfiguration of cofferdam.
 - 5. Start of construction of riffle crest near station 3+50 and placement of random boulders.
 - 6. Demolition adjacent to property located at 33 Water Street.
- D. Failure of the Contractor to provide the proper advanced notice of construction activities as indicated in paragraph 1.03-B may be cause for rejection of the work. Any work rejected shall be removed and replaced by the Contractor at no additional cost to the owner.

1.04 Coordination with String Bridge Project.

- A. The Contractor is advised that construction on the String Bridge, which is located approximately 350 ft downstream from the Dam, is expected to be ongoing during this Contract. The Contractor shall coordinate with the String Bridge repairs, especially river diversion.

SECTION 00910
Notice of Award
(EJCDC Form C-510, Modified)

Date: _____

Project: Great Dam Removal and Exeter River Restoration Project

Owner: Town of Exeter

Owner's Contract No.: NA

Contract: Great Dam Removal and Exeter River Restoration Project

Engineer's Project No.: 52151.04

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.]

___ 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 [15] 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 and General Conditions, Articles 2 and 6.
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

Title

Copy: Engineer

SECTION 00950
Notice to Proceed
(EJCDC Form C-550, Modified)

Date: _____

Project: Great Dam Removal and Exeter River Restoration

Owner: Town of Exeter

Owner's Contract No.: NA

Contract: Great Dam Removal and Exeter River Restoration

Engineer's Project No.: 52151.04

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 the Agreement, the date of Substantial Completion is ___, and the date of readiness for final payment is _____ [(or) the number of days to achieve Substantial Completion is ___, and the number of days to achieve readiness for final payment is _].

Before you may start any Work at the Site, Paragraph 2.01.B of the General Conditions provides that you and Owner must each deliver to the other (with copies to Engineer and other identified additional insureds and loss payees) certificates of insurance which each is required to purchase and maintain in accordance with the Contract Documents.

Also, before you may start any Work at the Site, you must: *[add other requirements]*.

Owner

Given by:

Authorized Signature

Title

Date

Contractor's Application for Payment No.

	Application Period:	Application Date:
To (Owner): Town of Exeter	From (Contractor):	Via (Engineer):
Project: Great Dam Removal and Exeter River Restoration	Contract: Great Dam Removal and Exeter River Restoration	
Owner's Contract No.: NA	Contractor's Project No.:	Engineer's Project No.: 52151.04

**Application For Payment
Change Order Summary**

Approved Change Orders			1. ORIGINAL CONTRACT PRICE.....	\$ _____
Number	Additions	Deductions	2. Net change by Change Orders.....	\$ _____
			3. Current Contract Price (Line 1 ± 2).....	\$ _____
			4. TOTAL COMPLETED AND STORED TO DATE (Column F on Progress Estimate).....	\$ _____
			5. RETAINAGE:	
			a. X _____ Work Completed.....	\$ _____
			b. X _____ Stored Material.....	\$ _____
			c. Total Retainage (Line 5a + Line 5b).....	\$ _____
			6. AMOUNT ELIGIBLE TO DATE (Line 4 - Line 5c).....	\$ _____
			7. LESS PREVIOUS PAYMENTS (Line 6 from prior Application).....	\$ _____
			8. AMOUNT DUE THIS APPLICATION.....	\$ _____
			9. BALANCE TO FINISH, PLUS RETAINAGE (Column G on Progress Estimate + Line 5 above).....	\$ _____
TOTALS				
NET CHANGE BY CHANGE ORDERS				

Contractor's Certification

The undersigned Contractor certifies that to the best of its knowledge: (1) all previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with Work covered by prior Applications for Payment; (2) title of all Work, materials and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to Owner at time of payment free and clear of all Liens, security interests and encumbrances (except such as are covered by a Bond acceptable to Owner indemnifying Owner against any such Liens, security interest or encumbrances); and (3) all Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

By: _____ Date: _____

Payment of: \$ _____
(Line 8 or other - attach explanation of the other amount)

is recommended by: _____ (Engineer) _____ (Date)

Payment of: \$ _____
(Line 8 or other - attach explanation of the other amount)

is approved by: _____ (Owner) _____ (Date)

Approved by: _____ (Funding Agency (if applicable)) _____ (Date)

Progress Estimate

Contractor's Application

For (contract):				Application Number:				
Application Period:				Application Date:				
A		B	Work Completed		E	F		G
Item		Scheduled Value	C	D	Materials Presently Stored (not in C or D)	Total Completed and Stored to Date (C + D + E)	% (E) B	Balance to Finish (B - F)
Specification Section No.	Description		From Previous Application (C+D)	This Period				
Totals								

SECTION 00965
FIELD ORDER
(EJCDC Form C-942, Modified)

Field Order
No. _____

Date of Issuance: _____ Effective Date: _____

Project: Great Dam Removal and Exeter River Restoration	Owner: Town of Exeter	Owner's Contract No.:
Contract: Great Dam Removal and Exeter River Restoration		Date of Contract:
Contractor:		Engineer's Project No.: 52151.04

Attention:

You are hereby directed to promptly execute this Field Order issued in accordance with General Conditions Paragraph 11.01, for minor changes in the Work without changes in Contract Price or Contract Times. If you consider that a change in Contract Price or Contract Times is required, please notify the Engineer immediately and before proceeding with this Work.

Reference: _____
(Specification Section(s)) (Drawing(s) / Detail(s))

Description:

Attachments:

Engineer: _____

Receipt Acknowledged by Contractor:	Date:
--	-------

**SECTION 00980
CHANGE ORDER**

(EJCDC Form C-941, Modified)

No. _____

Date of Issuance: _____ Effective Date: _____

Project: Great Dam Removal and Exeter River Restoration	Owner: Town of Exeter	Owner's Contract No.: 52151.04
Contract: Great Dam Removal and Exeter River Restoration		Date of Contract:
Contractor:		Engineer's Project No.:

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

Description:

Attachments (list documents supporting change):

CHANGE IN CONTRACT PRICE:

CHANGE IN CONTRACT TIMES:

Original Contract Price:
\$ _____

Original Contract Times: Working days Calendar days
Substantial completion (days or date): _____
Ready for final payment (days or date): _____

[Increase] [Decrease] from previously approved
Change Orders No. _____ to No. _____:
\$ _____

[Increase] [Decrease] from previously approved Change Orders
No. _____ to No. _____:
Substantial completion (days): _____
Ready for final payment (days): _____

Contract Price prior to this Change Order:
\$ _____

Contract Times prior to this Change Order:
Substantial completion (days or date): _____
Ready for final payment (days or date): _____

[Increase] [Decrease] of this Change Order:
\$ _____

[Increase] [Decrease] of this Change Order:
Substantial completion (days or date): _____
Ready for final payment (days or date): _____

Contract Price incorporating this Change Order:
\$ _____

Contract Times with all approved Change Orders:
Substantial completion (days or date): _____
Ready for final payment (days or date): _____

RECOMMENDED:
By: _____
Engineer (Authorized Signature)
Date: _____

ACCEPTED:
By: _____
Owner (Authorized Signature)
Date: _____

ACCEPTED:
By: _____
Contractor (Authorized)
Date: _____

SECTION 00990
Certificate of Substantial Completion
(EJCDC Form C-625, Modified)

Project: Great Dam Removal and Exeter River Restoration

Owner: Town of Exeter

Owner's Contract No.:

Contract: Great Dam Removal and Exeter River Restoration

Engineer's Project No.: 52151.04

Contractor:

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

- All Work under the Contract Documents: The following specified portions:

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] [revised 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:

SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Contract Description.
- B. Work by OWNER.
- C. OWNER supplied Products.
- D. CONTRACTOR use of site.
- E. Future work.
- F. Work Sequence.
- G. OWNER occupancy.

1.2 RELATED SECTIONS

Not Used.

1.3 CONTRACT DESCRIPTION

- A. Contract Type: Stipulated Price as described in Document Agreement.

1.4 WORK BY OWNER

Not Used.

1.5 OWNER SUPPLIED PRODUCTS

Not Used.

1.6 CONTRACTOR USE OF SITE

- A. Limit use of site to allow:
 - 1. OWNER access.
 - 2. Allow access to local property owners.
- B. Construction Operations: Limited to right-of-way and easement areas as shown on the drawings.
- C. Time Restrictions for Performing Work: The CONTRACTOR will be limited to accessing the site and performing the required work between the hours of 7:00am to 7:00pm, Monday through Friday or as further limited by Town Ordinance.

1.7 FUTURE WORK

Not Used.

1.8 WORK SEQUENCE

- A. Construct Work as shown on the drawings, coordinate construction schedule and operations with ENGINEER.

1.9 OWNER OCCUPANCY

Not Used.

1.10 CONSTRUCTION PERMITS AND EASEMENTS

- A. The OWNER shall be responsible for identifying and obtaining federal, state, and local permits as may be required due to the nature and location of construction except those required to be obtained by the CONTRACTOR such as trench permits, building permits, waste disposal permits, etc. To the extent possible, OWNER procured permits shall be obtained prior to the Advertisement for Bids for construction, and copies of all permits so obtained shall be included in the Appendix. The status of the application on each permits, including the conditions thereof, not obtained prior to the Advertisement for Bids shall also be indicated in the Supplementary Conditions.
- B. When construction permits are accompanied by regulations or requirements issued by a particular authority or agency, it shall be the CONTRACTOR's responsibility to familiarize himself and comply with such regulations or requirements as they apply to his operations on this project.
- C. The OWNER has received permission from Mr. Peter Olney (See Appendix C) to conduct work on the west side of the river via the property located at 23 Water Street. Any additional easement will be the responsibility of the CONTRACTOR
- D. The OWNER has applied for or obtained the following permits:
 - 1. A NH Wetlands Bureau permit from the NH Department of Environmental Services is required for this project. This permit has been applied for by the OWNER. The OWNER has also received ACOE authorization and Section 106 MOA. These permits are appended to this document as Appendix A. The CONTRACTOR is responsible for meeting all of the conditions and requirements of the permit.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01019
CONTRACT CONSIDERATIONS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Cash allowances.
- B. Contingency allowance.
- C. Inspecting and testing allowances.
- D. Schedule of values.
- E. Application for payment.
- F. Change procedures.
- G. Measurement and payment - unit prices
- H. Alternatives.

1.2 RELATED SECTIONS

Not Used.

1.3 CASH ALLOWANCES

Not Used.

1.4 CONTINGENCY ALLOWANCE

Not Used.

1.5 INSPECTING AND TESTING ALLOWANCES

Not Used.

1.6 SCHEDULE OF VALUES

Not Used.

1.7 APPLICATIONS FOR PAYMENT

- A. Submit three (3) copies of each application on Contractor's electronic media driven form or EJCDC C-620 (Section 00960).
- B. Content and Format: Utilize Schedule of Values for listing items in Application for Payment.

- C. Payment Period: 30 days.
- D. Include any forms required by Owner.
- E. Include an updated construction progress schedule.

1.8 CHANGE PROCEDURES

- A. The Engineer will advise of minor changes in the Work not involving an adjustment to Contract Sum/Price or Contract Time as authorized by the General Conditions.
- B. The Engineer may issue a Change Order which includes a detailed description of a proposed change with supplementary or revised Drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor will prepare and submit an estimate within seven (7) days.
- C. The Contractor may propose changes by submitting a request for change to the Engineer, describing the proposed change and its full effect on the Work. Include a statement describing the reason for the change, and the effect on the Contract Sum/Price and Contract Time with full documentation and a statement describing the effect on Work by separate or other Contractors. Document any requested substitutions in accordance with Section 01600.
- D. Unit Price Change Order: For contract unit prices and quantities, the Change Order will be executed on a fixed unit price basis. For unit costs or quantities of units of work which are not pre-determined, execute Work under a Work Change Directive. Changes in Contract Sum/Price or Contract Time will be computed as specified for Time and Material Change Order.
- E. Work Change Directive: Engineer may issue a directive, on EJCDC Form C-940 Work Change Directive signed by the Owner, instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order. Document will describe changes in the Work, and designate method of determining any change in Contract Sum/Price or Contract Time. Promptly execute the change.
- F. Time and Material Change Order: Submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract. Engineer will determine the change allowable in Contract Sum/Price and Contract Time as provided in the Contract Documents.
- G. Maintain detailed records of work done on Time and Material basis. Provide full information required for evaluation of proposed changes, and to substantiate costs for changes in the Work.
- H. Change Order Forms: EJCDC C-941 Change Order (Section 00990). Work Change Directive Forms: EJCDC C-940 (Section 00970).
- I. Execution of Change Orders: Engineer will issue Change Orders for signatures of

parties as provided in the Conditions of the Contract.

1.9 DEFECT ASSESSMENT

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

1.10 MEASUREMENT AND PAYMENT - UNIT PRICES

- A. Authority: Measurement methods are delineated in the individual specification sections.
- B. Take measurements and compute quantities. The Engineer will verify measurements and quantities proposed by the Contractor, or the Engineer will take measurements and compute quantities accordingly. Provide and assist in the taking of measurements.
- C. Unit Quantities: Quantities and measurements indicated in the Bid Form are for bidding purposes only. Actual quantities provided shall determine payment.
- D. Payment Includes: Full compensation for required labor (including sales tax), products, tools, equipment, plant and facilities, transportation, services and incidentals; erection, application or installation of an item of the Work; overhead and profit.

1.11 ALTERNATIVES

Not Used.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01039
COORDINATION AND MEETINGS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Coordination and project conditions.
- B. Field engineering.
- C. Preconstruction meeting.
- D. Site mobilization meeting.
- E. Progress meetings.
- F. Pre-installation meetings.
- G. Equipment electrical characteristics and components.
- H. Examination.
- I. Preparation.
- J. Cutting and Patching.
- K. Alteration project procedures.

1.2 RELATED SECTIONS

Not Used.

1.3 COORDINATION AND PROJECT CONDITIONS

- A. Coordinate scheduling, submittals, and Work of the various sections of the Specifications to ensure efficient and orderly sequence of construction elements.
- B. Verify all existing utility locations.

1.4 FIELD ENGINEERING

- A. See Supplemental Specification for Item 587.1

1.5 PRECONSTRUCTION MEETING

- A. Engineer will schedule a meeting after Notice of Award.
- B. Attendance Required: Owner, Engineer and Contractor.

- C. Agenda:
1. Execution of Owner-Contractor Agreement.
 2. Submission of executed bonds and insurance certificates.
 3. Distribution of Contract Documents.
 4. Permit compliance and overview.
 5. Submission of list of Subcontractors, schedule of values, and progress schedule.
 6. Submission of list of surveyor or person responsible for layout, testing agency and other parties providing services on the project.
 7. Designation of personnel representing the parties in Contract, and the Engineer.
 8. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
 9. Procedures for layout of the project, establishing controls, limits of right-of-way and easements.
 10. Scheduling.
- D. Engineer will record minutes and distribute copies to participants and those affected by decisions made.

1.6 SITE MOBILIZATION MEETING

- A. Engineer may schedule a meeting at the Project site prior to Construction start-up.
- B. Attendance Required: Engineer, Contractor's Superintendent, and major Subcontractors.
- C. Agenda:
1. Use of site by Owner and Contractor.
 2. Owner's requirements.
 3. Construction facilities provided by Contractor.
 4. Temporary utilities provided by Contractor.
 5. Survey layout.
 6. Security and housekeeping procedures.
 7. Schedules.
 8. Application for payment procedures.
 9. Procedures for testing.
 10. Procedures for maintaining record documents.
- D. Engineer will record minutes and distribute copies to participants and those affected by decisions made.

1.7 PROGRESS MEETINGS

- A. Schedule and administer meetings throughout progress of the Work at weekly intervals or intervals agreed to by Owner/Engineer/Contractor.
- B. Engineer will make arrangements for meetings, prepare agenda with copies for participants, preside at meetings, and prepare meeting minutes.

C. Attendance Required: Job superintendent, major Subcontractors and suppliers, Engineer, as appropriate to agenda topics for each meeting.

D. Agenda:

1. Review minutes of previous meetings.
2. Review of Work progress.
3. Field observations, problems, and decisions.
4. Identification of problems which impede planned progress.
5. Review of submittals schedule and status of submittals.
6. Review of off-site fabrication and delivery schedules.
7. Maintenance of progress schedule.
8. Corrective measures to regain projected schedules.
9. Planned progress during succeeding work period.
10. Coordination of projected progress.
11. Maintenance of quality and work standards.
12. Effect of proposed changes on progress schedule and coordination.
13. Other business relating to Work.

E. Engineer will record minutes and distribute copies to participants and those affected by decisions made including the Owner, NHDES, NOAA and USFWS.

1.8 PREINSTALLATION MEETING

Not Used.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not used

END OF SECTION

SECTION 01300
SUBMITALS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Submittal procedures.
- B. Construction progress schedules.
- C. Proposed Products list.
- D. Product Data.
- E. Shop Drawings.
- F. Samples.
- G. Design data.
- H. Test reports.
- I. Certificates.
- J. Manufacturer's instructions.
- K. Manufacturer's field reports.
- L. Erection drawings.
- M. Construction photographs.

1.2 RELATED SECTIONS

- A. Section 01400 - Quality Control: Manufacturers' field services and reports.
- B. Section 01700 - Contract Closeout: Contract warranties, bonds, manufacturers' certificates, and closeout submittals.

1.3 REFERENCES

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

1.4 SUBMITTAL PROCEDURES

- A. Transmit each submittal with Engineer accepted form.

- B. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.
- C. Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate.
- D. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.
- E. Schedule submittals to expedite the Project, and deliver to Engineer at Vanasse Hagen Brustlin, Inc., 101 Walnut Street, Watertown, MA 02471. Coordinate submission of related items.
- F. For each submittal for review, allow 15 days excluding delivery time to and from the contractor.
- G. Identify variations from Contract Documents which may be detrimental to successful performance of the completed Work.
- H. Provide space for Contractor and Engineer review stamps.
- I. When revised for resubmission, identify all changes made since previous submission.
- J. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.
- K. Submittals not requested will not be recognized or processed.
- L. The cost of furnishing drawings and details, calculations, product data, samples, test reports and certificates shall be included in the Contract unit price for the item involved.

1.5 CONSTRUCTION PROGRESS SCHEDULES

- A. Submit initial schedule in duplicate within ten (10) days after date of Owner-Contractor Agreement established in Notice to Proceed.
- B. Revise and resubmit as required.
- C. Submit revised schedules with each Application for Payment, identifying changes since previous version.
- D. Submit a computer generated horizontal bar chart with separate line for each major portion of Work or operation, identifying first workday of each week.

- E. Show complete sequence of construction by activity, identifying Work of separate stages and other logically grouped activities. Indicate the early and late start, early and late finish, float dates, and duration.
- F. Indicate estimated percentage of completion for each item of Work at each submission.
- G. Indicate submittal dates required for shop drawings, product data, samples, and product delivery dates, including those furnished by Owner and required by Allowances.

1.6 PROPOSED PRODUCTS LIST

- A. Within fifteen (15) days after date of Owner-Contractor Agreement, submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
- B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

1.7 PRODUCT DATA

- A. Product Data For Review:
 - 1. Submitted to Engineer for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
 - 2. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article above and for record documents purposes described in Section 01700 - CONTRACT CLOSEOUT.
- B. Submit the number of copies as indicated in the General Conditions.
- C. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- D. After review distribute in accordance with the Submittal Procedures article above and provide copies for record documents described in Section 01700 - CONTRACT CLOSEOUT.

1.8 SHOP DRAWINGS

- A. Shop Drawings For Review and Approval:
 - 1. Submitted to Engineer for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
 - 2. The Contractor or fabricator shall not begin work on the activity or fabrication involved without approval of the details and procedures. Engineer's approval

of drawings and procedures does not relieve the Contractor or fabricator of compliance with all specifications and code requirements. The Engineer will respond within five (5) business days to any submittal. The Engineer assumes no responsibility for error(s) and/or omission(s) of details.

3. Drawings and procedures identified as "approved as noted" indicate that specific clarification or conditional changes have been identified and take precedence over submitted information. Withholding of approval by the Engineer for selected details, calculations or procedures shall not constitute a basis for delay.
4. After approval of the drawings, details and procedures, no changes shall be made without written approval of the Engineer. The Contractor or fabricator shall assume risk for materials ordered or work performed prior to the approval of the Engineer.
5. After review, produce copies and distribute in accordance with SUBMITTAL PROCEDURES article above and for record documents purposes described in Section 01700 - CONTRACT CLOSEOUT.

B. Shop drawings to be submitted fall into two (2) categories:

1. Fabrication Drawings: Drawings required for work performed by or in conjunction with materials furnished by a fabricator or supplier. Drawings provided to the Engineer for review and approval shall consist of complete details developed from information in the Plans and these Specifications to define dimensions, sizes, procedures, and materials necessary to complete fabrication and installation or erection of the work specified.
2. Working Drawings: Drawings submitted for review and approval shall include, but not be limited to; the following: cofferdam plans, water diversion structure plans, or any other working drawings for review and approval required by the Contract.

Shop drawings that must be submitted for review and approval are listed in Section 01300, Paragraph 3.1.C.

C. Submit the number of opaque reproductions as indicated in the General Conditions.

1.9 SAMPLES

A. Samples For Review:

1. Submitted to Engineer for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
2. After review, produce duplicates and distribute in accordance with SUBMITTAL PROCEDURES article above and for record documents purposes described in Section 01700 - CONTRACT CLOSEOUT.

- B. Submit samples to illustrate functional and aesthetic characteristics of the Product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
- C. Include identification on each sample, with full Project information.
- D. Submit the number of samples as indicated in the General Conditions.
- E. Reviewed samples which may be used in the Work are indicated in individual specification sections.
- F. Samples will not be used for testing purposes unless specifically stated in the specification section.

1.10 DESIGN DATA

- A. Submit for the Engineer's review and approval as contract administrator.
- B. Submit information for the purpose of assessing conformance with information given and the design concept expressed in the contract documents.
- C. For an item or element of work which includes optional design data and calculations that affect structural capacity, safety, and/or the results of work, the Contractor shall prepare for the Engineer's review and approval detailed design data and calculations of how the work is proposed to be performed and adequately controlled.

1.11 TEST REPORTS

- A. Submit test reports for information for the purpose of assessing conformance with information given and the design concept expressed in the contract documents.

1.12 CERTIFICATES

- A. When specified in individual specification sections, submit certification by the manufacturer, installation/application subcontractor, or the Contractor using the Certificate of Compliance form at the end of this section or an approved equal, to Engineer, in quantities specified for Product Data.
- B. Indicate material or Product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or Product, but must be acceptable to Engineer.

1.13 MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, adjusting, and finishing, to Engineer for delivery to the site in quantities specified for Product Data.

- B. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
- C. Refer to Section 01400 - Quality Control, Manufacturers' Field Services article.

1.14 MANUFACTURER'S FIELD REPORTS

Not Used.

1.15 ERECTION DRAWINGS

Not Used.

1.16 CONSTRUCTION PHOTOGRAPHS

- A. See Construction Plan Sheet C-2

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 SUBMITTALS

- A. The Contractor shall provide to the Engineer product data, shop drawings, samples, Certificates of Compliance and other submittals to the Engineer as indicated in the submittal summary provided in this section. The summary provided is not all inclusive and does not relieve the contractor from providing all submittals identified or call for in the Contract Documents (plans and individual section specifications).
- B. Product Data

Submit the following product data:

Specification Section	Item
202.8	Sprinkler System, Trees, Chain Fence, Wood Fence
611	Dry Hydrant Components
612	Pump House Components
699	Temporary Erosion Controls

- C. Shop Drawings/Plans

Submit fabrication drawings for review and approval for the following:

Specification Section	Item
202.8	Timber Access Bridge and Access Ramp
202, 203, 207	Demolition Procedures
503	Coffer Dam and Water Diversion Plan

Submit working drawings for review and approval for the following:

1. Submit Detailed Work Plan including: Construction Schedule, Construction Sequence and Methods, and Temporary Erosion Control Plan per Construction Plan Sheet C-4. Include Proposed River Diversion, River Restoration, Cofferdam Construction, and Construction Phasing.
2. Timber Access Bridge drawings and calculations.
3. Access Ramp drawings and calculations.

D. Samples

Not Used.

E. Design Data

503 Cofferdam and Water Diversion

F. Test Reports

Not Used

G. Certificates

Permits for disposal of debris (if necessary)

H. Manufacturers Instructions

Not Used.

3.2 ENGINEER'S REVIEW

- A. The Engineer will review initial and second submittals made by the Contractor for each item at no cost to the Contractor. Engineer's fees and charges for review of resubmittal (beyond the second resubmittal) shall be paid for by the Contractor.
1. Payment for review of resubmittals will be charged to the contractor by deducting charges from the total contract sum/price.

END OF SECTION

SECTION 01400
QUALITY CONTROL

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Quality assurance - control of installation.
- B. Tolerances
- C. References and standards.
- D. Mock-up.
- E. Inspecting and testing laboratory services.
- F. Manufacturers' field services.

1.2 RELATED SECTIONS

- A. Section 01300 - Submittals: Submission of manufacturers' instructions and certificates.
- B. Section 01600 - Material and Equipment: Requirements for material and product quality.

1.3 QUALITY ASSURANCE - CONTROL OF INSTALLATION

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

1.4 TOLERANCES

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

1.5 REFERENCES AND STANDARDS

- A. For Products or workmanship specified by association, trade, or other consensus standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard by date of issue current on date of Contract Documents, except where a specific date is established by code.
- C. Obtain copies of standards where required by product specification sections.
- D. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of the Engineer shall be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.6 MOCK-UP

Not Used.

1.7 MATERIAL TESTING AND LABORATORY SERVICES

- A. Owner or Engineer may appoint, employ, and pay for specified services of an independent firm to perform construction testing services.
- B. The independent firm will perform testing and other services specified in individual sections and as required by the Owner or Engineer.
- C. Testing reports will be submitted by the independent firm to the Owner or engineer indicating services and indicating compliance or non-compliance with the contract documents.
- D. Cooperate with independent firm; furnish safe access and assistance by incidental labor as requested.
 - 1. Notify Engineer and/or independent firm 48 hours prior to expected time for operations requiring services.

- E. All additional testing or re-testing necessitated by the failure of initial tests as determined by the Engineer shall be conducted and paid for by the Contractor as directed by the Engineer.
 - 1 The Contractor shall take immediate corrective measures as suggested by the testing laboratory and/or directed by the Engineer to make the materials meet or exceed the specifications.
 - 2 Payment for additional testing or re-testing will be charged to the Contractor by deducting charges from the total contract sum/price.

1.8 OBSERVATION SERVICES

- A. Owner may appoint, employ, and pay for specified services of an independent firm to perform observation.
- B. The independent firm will perform observations and other services specified in individual specification sections and as required by the Owner.
- C. Reports will be submitted by the independent firm to the Owner, in duplicate, indicating observations and indicating compliance or non-compliance with Contract Documents.
- D. Contractor shall cooperate with independent firm; furnish safe access and assistance by incidental labor as requested.
 - 1. Notify Engineer and/or independent firm 48 hours prior to expected time for operations requiring services.
- E. Observations do not relieve Contractor to perform Work to contract requirements.

1.9 MANUFACTURERS' FIELD SERVICES

- A. When specified in individual specification sections, require material or Product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, as applicable, and to initiate instructions when necessary.
- B. Submit qualifications of observer to Engineer 30 days in advance of required observations. Observer subject to approval of Engineer.
- C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.
- D. Refer to Section 01300 - SUBMITTALS, MANUFACTURERS' FIELD REPORTS article.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new Work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Verify that utility services are available, of the correct characteristics, and in the correct locations.

3.2 PREPARATION

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

END OF SECTION

SECTION 01500
CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Temporary Utilities: telephone/fax service, water, and sanitary facilities.
- B. Temporary Controls: Barriers, enclosures and fencing, protection of the Work, water control and erosion controls.
- C. Construction Facilities: Access roads, parking, progress cleaning and project signage.

1.2 RELATED SECTIONS

- A. Section 01700 - Contract Closeout: Final cleaning.

1.3 TEMPORARY ELECTRICITY

Not Used.

1.4 TEMPORARY LIGHTING FOR CONSTRUCTION PURPOSES

Not Used.

1.5 TEMPORARY HEATING

Not Used.

1.6 TEMPORARY COOLING

Not Used.

1.7 TEMPORARY VENTILATION

Not Used.

1.8 TELEPHONE SERVICE

Not Used.

1.9 FACSIMILE SERVICE

Not Used.

1.10 TEMPORARY WATER SERVICE

Not Used.

1.11 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
- B. At end of construction, return facilities to same or better condition as originally found.

1.12 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building, if applicable.
- C. Provide protection for plants designated to remain. Replace damaged plants.
- D. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.13 FENCING

Not Used.

1.14 WATER CONTROL

- A. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.
- B. Protect site from puddling or running water. Provide erosion control barriers as required to protect site from soil erosion.

1.15 EXTERIOR ENCLOSURES

Not Used.

1.16 INTERIOR ENCLOSURES

Not Used.

1.17 PROTECTION OF INSTALLED WORK

- A. Protect installed Work and provide special protection where specified in individual specification sections.
- B. Provide temporary and removable protection for installed Products. Control activity in immediate work area to prevent damage.
- C. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity

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

- D. Prohibit traffic from landscaped areas.

1.18 SECURITY

- A. Provide security and facilities to protect Work, and existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.
- B. Coordinate with Owner's security program.

1.19 ACCESS ROADS

- A. Construct and maintain temporary roads accessing public thoroughfares to serve construction area.
- B. Extend and relocate as Work progress requires. Provide detours necessary for unimpeded traffic flow.
- C. Provide and maintain access to fire hydrants, free of obstructions.
- D. Provide means of removing mud from vehicle wheels before entering streets.
- E. Designated existing on-site roads may be used for construction traffic at the discretion of the Engineer.

1.20 PARKING

- A. Provide temporary gravel surface parking areas to accommodate construction personnel.
- B. Construction personnel shall park within the project limits so as not to obstruct local traffic and construction activities.

1.21 PROGRESS CLEANING AND WASTE REMOVAL

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Collect and remove waste materials, debris, and rubbish from site daily and dispose off-site.

1.22 PROJECT IDENTIFICATION

Not Used.

1.23 FIELD OFFICES AND SHEDS

Not Used

1.24 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities and materials, prior to Final Application for Payment.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing and permanent land and facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

1.25 DUST CONTROL

A. GENERAL

- 1 The Contractor shall furnish all labor, materials, tools and equipment necessary to apply water on roads or traveled surfaces within the construction site when directed by the Engineer and/or as necessary to control dust. Calcium chloride will not be allowed to be used on this project due to the potential for contaminating nearby surface water or groundwater.
- 2 When dust control is not included as a separate item in the Contract, the work shall be considered incidental to the appropriate items of the Contract.

B. PRODUCTS

- 1. Water for sprinkling shall be clean, free of salt, oil and other injurious materials.

C. EXECUTION

- 1. Water shall be applied by equipment approved by the Engineer. As a minimum it shall consist of a tank, a spray bar and a gauge equipped pump. Water shall be dispersed through nozzles at a minimum pressure of 20 psi.

1.26 ADVERSE CONDITIONS

A. NIGHT WORK

- 1 Work after dark will not be permitted except under extreme emergency, or only under special directions, and only if permitted by the Engineer.
- 2 Whenever the Contractor finds it necessary or expedient to do work at night, such night work shall be performed by the Contractor without additional or extra cost to the Owner, and only with the Owner's approval. The Contractor shall provide all lights required for the proper and expeditious carrying on of any work.
- 3 The placing of concrete shall be started early enough in the daylight hours to insure completion of the section under construction before dark.

B. WEATHER CONDITIONS

- 1 No work shall be done when the weather is unsuitable. The Contractor shall take necessary precautions (in the event of impending storms) to protect all work, materials or equipment from damage or deterioration due to floods, driving rain, or wind and snowstorms. The Owner reserves the right, through the opinion of the Engineer, to order that additional protective measures over and beyond those proposed by the Contractor, be taken to safeguard all components of the project. The Contractor shall not claim any compensation for such precautionary measures so ordered, nor claim any compensation from the Owner for damage to the work from weather elements.
- 2 The mixing and placing of concrete or pavement courses, the laying of masonry, and installation of sewers and water mains shall be stopped during rain storms; all freshly placed work shall be protected by canvas or other suitable covering in such manner as to prevent running water from coming in contact with it. Sufficient coverings shall be provided and kept ready at hand for this purpose. The limitations and requirements for mixing and placing concrete, or laying of masonry, in cold weather shall be as described elsewhere in these specifications.

1.27 POLICING

A. GENERAL

- 1 When, in the opinion of the Owner, or the Engineer, public safety or convenience requires the services of police, the Engineer may direct the Contractor to request the local police department to assign uniformed officers to direct traffic within the location of work under the Contract.
- 2 When so directed, the Contractor shall make all arrangements in obtaining police assistance and shall pay all police officers. The police shall, at all times, be subject to the direction and control of the Contractor.
- 3 The intent is to ensure public safety by police direction of traffic. Police are not to serve as watchmen to protect the Contractor's equipment and materials, or to warn pedestrians of such hazards as open trenches.
- 4 Nothing contained herein shall be construed as relieving the Contractor of any of his responsibilities for protection of persons and property under the terms of the Contract, or for providing necessary traffic control including signs, barricades, or flagmen as required in Section 01500 of these specifications.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01600
MATERIAL AND EQUIPMENT

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Products.
- B. Transportation and handling.
- C. Storage and protection.
- D. Product options.
- E. Substitutions.

1.2 RELATED SECTIONS

- A. Document 00100 - Instructions to Bidders: Substitute and "or equal" items procedures.
- B. Section 01400 - Quality Control: Quality Assurance - Control of Installation.

1.3 PRODUCTS

- A. Do not use materials and equipment removed from existing premises, except as specifically permitted by the Contract Documents.
- B. Provide interchangeable components of the same manufacture for components being replaced.

1.4 TRANSPORTATION AND HANDLING

- A. Transport and handle Products in accordance with manufacturer's instructions.
- B. Promptly inspect shipments to ensure that Products comply with requirements, quantities are correct, and Products are undamaged.
- C. Provide equipment and personnel to handle Products by methods to prevent soiling, disfigurement, or damage.

1.5 STORAGE AND PROTECTION

- A. Store and protect Products in accordance with manufacturers' instructions.
- B. Store with seals and labels intact and legible.
- C. Store sensitive Products in weather tight, climate controlled, enclosures in an environment favorable to Product.

- D. For exterior storage of fabricated Products, place on sloped supports above ground.
- E. Provide bonded off-site storage and protection when site does not permit on-site storage or protection.
- F. Cover Products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of Products.
- G. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- H. Provide equipment and personnel to store Products by methods to prevent soiling, disfigurement, or damage.
- I. Arrange storage of Products to permit access for inspection. Periodically inspect to verify Products are undamaged and are maintained in acceptable condition.

1.6 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Any Product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Products of manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named in accordance with the following article.

1.7 SUBSTITUTIONS

- A. Engineer will consider requests for Substitutions only within thirty (30) days after date of Owner-Contractor Agreement.
- B. Substitutions may be considered when a Product becomes unavailable through no fault of the Contractor.
- C. Document each request with complete data substantiating compliance of proposed Substitution with Contract Documents.
- D. A request constitutes a representation that the Contractor:
 - 1. Has investigated proposed Product and determined that it meets or exceeds the quality level of the specified Product.
 - 2. Will provide the same warranty for the Substitution as for the specified Product.
 - 3. Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to Owner.
 - 4. Waives claims for additional costs or time extension which may subsequently

become apparent.

5. Will reimburse Owner and Engineer for review or redesign services associated with re-approval by authorities.
- E. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.
- F. Substitution Submittal Procedure:
1. Submit three (3) copies of request for Substitution for consideration. Limit each request to one proposed Substitution.
 2. Submit shop drawings, product data, and certified test results attesting to the proposed Product equivalence. Burden of proof is on proposer.
 3. The Engineer will notify Contractor in writing of decision to accept or reject request.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01700
CONTRACT CLOSEOUT

PART 1 GENERAL

1.1 SECTION INCLUDES

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

1.2 RELATED SECTIONS

- A. Section 01500 - Construction Facilities and Temporary Controls: Progress cleaning.

1.3 CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Engineer's review.
- B. Provide submittals to Engineer that are required by governing or other authorities.
- C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.

1.4 FINAL CLEANING

- A. Execute final clean up and restoration of all disturbed areas prior to final project assessment.
- B. Clean site; sweep paved areas, rake clean landscaped surfaces.
- C. Remove waste and surplus materials, rubbish, and construction facilities from the site.

1.5 ADJUSTING

Not Used.

1.6 PROJECT RECORD DOCUMENTS

A. Maintain on site one set of the following record documents; record actual revisions to the Work:

1. Drawings.
2. Specifications.
3. Addenda.
4. Change Orders and other modifications to the Contract.
5. Reviewed Shop Drawings, Product Data, and Samples.
6. Manufacturer's instruction for assembly, installation, and adjusting.

B. Ensure entries are complete and accurate, enabling future reference by Owner.

C. Store record documents separate from documents used for construction.

D. Record information concurrent with construction progress.

E. Specifications: Legibly mark and record at each Product section description of actual Products installed, including the following:

1. Manufacturer's name and product model and number.
2. Product substitutions or alternates utilized.
3. Changes made by Addenda and modifications.

F. Record Drawings (As-Built) and Shop Drawings: Contractor shall legibly mark each item to record actual construction including:

1. Measured depths of footer rocks and subgrade in relation to finish ground or river elevation.
2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements as well as top elevations of cross vanes and vane notches. .
3. Field changes of dimension and detail.
4. Details not on original Contract Drawings.

G. Submit documents to Engineer with claim for final Application for Payment.

1.7 OPERATION AND MAINTENANCE DATA

Not Used.

1.8 SPARE PARTS AND MAINTENANCE PRODUCTS

Not Used.

1.9 WARRANTIES AND BONDS

A. Provide duplicate notarized copies.

- B. Execute and assemble transferable warranty documents from Subcontractors, suppliers, and manufacturers.
- C. Provide Table of Contents and assemble in three D side ring binder with durable plastic cover.
- D. Submit prior to final Application for Payment.
- E. For items of Work delayed beyond date of Substantial Completion, provide updated submittal within ten (10) days after acceptance, listing date of acceptance as start of warranty period.

1.10 MAINTENANCE SERVICE

- A. Furnish service and maintenance of all work items indicated in the Contract Documents for one year from date of Substantial Completion.

PART 2 PRODUCTS

Not Used.

PART3 EXECUTION

Not Used.

END OF SECTION

TECHNICAL SPECIFICATIONS

All work shall be in accordance with State of New Hampshire, Department of Transportation NHDOT Standard Specifications for Road and Bridge Construction, approved and adopted in March 2016 (Standard Specifications).

The NHDOT specifications are hereby amended as follows:

1. Delete Division 100-General Provisions in its entirety, with the exception of the following sections which are retained:
 - Section 101 - Definitions and Terms
 - Section 105 - Control of the Work (subsections 105.03 through 105.07 and 105.10 through 105.15 only)
 - Section 106 - Control of Material (subsections 106.01, 106.04 through 106.07, 106.09 through 106.10).
 - Section 107 - Legal Relations and Responsibility to Public (subsections 107.01 through 107.10 and 107.15 through 107.17).
 - Section 109 - Measurement and Payment (subsections 109.01 and 109.11 only)

2. Substitute "Vanasse Hangen Brustlin, Inc." for "Engineer", "Department", "State", "Bureau of Bridge Design", "Bureau of Materials and Research" or "NHDOT Compliance Review Officer" throughout the specifications.

At a minimum, the following sections from the NHDOT Standard Specifications (English Units) apply to this Project:

Section Number	Title
206	Structure Excavation for Pipes and Other Minor Structures
520	Portland Cement Concrete
530	Waterproofing Concrete Surfaces
585	Stone Fill
603	Culverts and Storm Drains
641	Loam
645	Erosion Control
646	Turf Establishment
650	Planting - General
698	Field Facilities

NHDOT Standard Specifications for Road and Bridge Construction and NHDOT Standard Plans for Road and Bridge Construction may be purchased from NHDOT, Records Section, 1 Hazen Drive, P.O. Box 483, Concord, NH 03302-0483, Phone No. 603-271-3514. These specifications may also be downloaded, free of charge, from the NHDOT website at:

https://www.nh.gov/dot/org/projectdevelopment/highwaydesign/specifications/documents/2016NHDO_TSpecBook.pdf

END OF SECTION

SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS

The following Supplemental Specifications and Special Provisions modify and supplement the Standard and Supplemental Specifications for this project. These Supplemental Specifications and Special Provisions are to be used in conjunction with the NHDOT Standard Specifications and are herein made a part of the Contract Documents and apply to this project:

Supplemental Specifications and Special Provisions

Section	Description
105.20	Control of Work
202.11	Removal of Structures and Obstructions
202.8	Site Staging
203	Excavation and Embankment
207	Channel Excavation
211.11	Vibration Monitoring
503	Cofferdam and Water Diversion
572.4	Stone Wall
585.25	Boulder Cobble Mix
587.1	Keyed Stone Fill
587.4	Granite Revetment
611.0	Dry Hydrant
612.0	Pump Intake Modifications
646.51	Seeding and Sodding
692.1	Mobilization and Demobilization
699	Miscellaneous and Temporary Erosion and Sediment Controls

GREAT DAM REMOVAL

March 14, 2016

SPECIAL PROVISION**AMENDMENT TO SECTION 105 – CONTROL OF WORK****Item 105.20 - Surveys for Construction Layout and Quality Control**

This special provision applies to surveys for construction layout and quality control only and does not modify or amend other provisions of Section 105.

DESCRIPTION

- 1.1 This item shall consist of performing engineering surveys for construction layout, quality control during construction, and development of As-Built drawings. It includes furnishing all necessary equipment, personnel and material to perform the surveys as specified.

MATERIALS

- 2.1 Equipment for performing all surveys shall be of a quality and condition to provide the required accuracy. All equipment shall be maintained in good working order and proper adjustment at all times. Records of calibration tests, accuracy checks and adjustments shall be maintained and be available for inspection by the Engineer.
- 2.2 Materials shall include all the necessary field notebooks, stakes, flagging, templates, spikes, steel pins tools and all other items necessary to perform the survey work specified.

CONSTRUCTION REQUIREMENTS**3.1 QUALITY OF WORK****3.1.1 Survey Personnel**

The Contractor shall provide an experienced, competent engineering/surveying staff working under the direction of a Professional Engineer or Professional Land Surveyor licensed in the state of New Hampshire to set the lines and grades necessary for constructing the proposed project.

3.1.2 Accuracy and Documentation

All survey work shall conform to recognized professional practice and standards of the industry. Notes, sketches, and other data shall be complete, recorded neatly, legible, and organized in a manner that will allow reproduction of copies for job documentation. All survey computations shall be checked for accuracy and mathematical correctness and shall include information to identify the survey work performed, date, and who performed, checked and approved the

computations. All computations, survey notes and other records necessary to accomplish the work shall be made available to the Engineer upon request.

The Engineer may check all or any portion of the survey work or notes made by the Contractor and any necessary correction to the work shall be made immediately. Such quality assurance checking shall not relieve the Contractor of responsibility for the accuracy and completeness of the work. The Contractor shall assume full responsibility for any errors and/or omissions in the work of the engineering/surveying staff in the performance of this item.

The elevations of permanent and temporary benchmarks shall be determined and recorded to the nearest 0.01 foot. Differential leveling and horizontal traverses shall be of such precision that the error of vertical closure in feet shall not exceed plus or minus 0.1 times the square root of the traverse distance in miles. Linear measurements shall be accurate to within 1.0 in 5000 feet. The angular error of closure for traverses shall not exceed 1.0 minute times the square root of the number of angles turned.

Slope (cut/fill) stakes shall be placed perpendicular to the centerline/baseline established on Sheet C-6 of the Drawings. Slope stakes shall be set at 25 foot intervals along the baseline in order to accurately evaluate the impact of the proposed stream grading. Appropriate adjustment of slope stakes will be determined in the field by the Engineer. Distances shall be measured horizontally and recorded to the nearest 0.1 foot. Measurements for stationing and establishing the location of structures shall be made to the nearest 0.1 of a foot.

3.2 PROSECUTION OF WORK

3.2.1 Primary Control

The baselines and benchmarks for primary control, necessary to establish lines and grades needed for construction are shown on the drawings and have been located on the project site. These baselines and benchmarks shall be used as the origin of all surveys, layouts and measurements to establish construction lines and grades. The Contractor shall take all necessary precautions to prevent the loss or damage of primary control points.

3.2.2 Construction Layout

The Contractor shall perform all construction layout from information provided on the drawings. The Contractor shall be responsible for providing and protecting offset controls for stations established along the baseline. Construction Layout shall include establishing all control points, reference points, elevations, grade stakes, etc. as required for completion of the project. The Construction layout survey shall include the Limits of Work (LOW), cut and fill limits, and Cross Vane and Boulder Cluster locations.

The Existing elevations and contours shown on the plans are based upon field surveys of the project area conducted in 2011 and 2014 as described on the Project Plans. Existing elevations and grades may be slightly different than those shown due to changes in river morphology caused by erosion and sedimentation since the field surveys were performed and the topographic map was developed. The Contractor is responsible for confirming existing grades and adjusting earthwork and channel work as necessary at no additional cost to the Town.

3.2.3 Daily Construction Surveys and As-Built Survey Requirements

On a daily basis, the Contractor shall keep a record of all survey measurements necessary to construct the proposed restoration river channel. This record shall include but not be limited to station location, cross section break points, bankfull elevations, left and right bank slopes, structure top rock elevations across the channel, length of structure arms as measured from the baseline, and cross vane arm tie-in locations. This record shall be submitted to the Engineer at the end of each day in order to confirm that construction has occurred in accordance with the Construction Drawings and Specifications or any changes and deviations from these documents previously approved by the Engineer. A construction quality control checklist and standard data collection and documentation forms shall be provided to the Contractor and used on a daily basis as an aid to ensure proper construction in accordance with the Construction Drawings and Specifications.

The Contractor shall also keep a careful record at the job site of all changes and deviations from the layouts shown on the Construction Drawings. The Contractor shall immediately record any changes and deviations from the proposed design on the Construction Drawings. These Drawings shall be made available to the Engineer for inspection or checking anytime during the construction period. At the time of conditional acceptance of the work, the Contractor shall submit to the Town one (1) set of clean, white prints of the Contract drawings with all the aforementioned As-Built information neatly recorded thereon in ink. The Contractor shall also provide an As-Built Survey of the constructed conditions that accurately and thoroughly depicts the As-Built condition including stream channel profiles and cross sections as well as contour lines. The As-Built Survey shall include the following items: Horizontal and vertical controlled profile of the stream thalweg at every major breakpoint along the thalweg; and three (3) permanent post-construction stream channel cross-sections with established vertical and horizontal control; and location and elevation of all Rock Boulder Structures in their entirety. The location of each permanent cross-section shall be determined in the field by the Engineer. The Contractor shall establish a permanent benchmark at each cross-section location.

METHOD OF MEASUREMENT

- 4.1 The surveys for construction layout and quality control shall be measured as a Unit for the completed work.

BASIS OF PAYMENT

- 5.1 Compensation for Surveys for Construction Layout and Quality Control will be paid at the Contract lump sum bid price for this item. Such payment will constitute full compensation for furnishing all labor, equipment, instruments, stakes and other material and incidentals necessary to complete the work. Monthly progress payments will be made for this item based upon the percentage of the actual amount of work completed as determined by the Engineer.

Add to Pay Items and Units:

105.20	Surveys for Construction Layout and Quality Control	UNIT
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GREAT DAM REMOVAL

March 14, 2016

SUPPLEMENTAL SPECIFICATION**AMENDMENT TO SECTION 202 – REMOVAL OF STRUCTURES AND OBSTRUCTIONS**

This Section supplements Section 202 of the NHDOT Standards and Specifications for Roads and Bridges for this Contract. Where these supplemental specifications conflict or modify the NHDOT Construction Standards and Specifications Section 202, these provisions shall govern.

DESCRIPTION**Add:**

- 1.5** This work shall also consist of the complete removal of the Great Dam, the associated Fish Weir, Fish Ladder, and abutment and sluiceway including all wood, metal, concrete, stone and miscellaneous components.
- 1.6** This work shall also include consist of furnishing all materials and reconstructing a masonry wall of existing and approved stones, laid with cement mortar, as shown on the plans or order in accordance with Section 570 of the NHDOT Standard Specifications. This shall include restoring exposed portions of removed concrete in accordance with Section 520 of the NHDOT Standard Specifications.

CONSTRUCTION REQUIREMENTS**Add:**

- 3.8 Removal of Dam Structure.**
- 3.8.1** The contractor shall perform all work as shown on the plans and specified in the contract.
- 3.8.2** All of the concrete, abutments, footings and pinning shall be removed from the river and hauled for disposal at an approved upland location.
- 3.8.3** All waste materials that result from dam removal shall be disposed of by an approved method. The Contractor's attention is directed to RSA 149-M in that demolition material is classified as solid waste and as such shall be disposed of only in permitted sites. New Hampshire Department of Environmental Services, Division of Waste Management is the permitting agency.
- 3.8.4** As depicted on project plans, the concrete dam abutments and related structure on each side of the river shall be removed only as far as can be accomplished without damaging adjacent properties or structures. The dam, fish weir, ladder and abutments shall be saw cut 3 feet from the adjacent structures and remaining material to be removed flush with adjacent walls shall be removed using a low impact chisel.

- 3.8.6** Footings shall be removed to a minimum depth 2 feet below the surrounding channel bottom and filled with the boulder-cobble mix as specified in the Project Plans.
- 3.8.7** Exposed portions of removed concrete shall be restored to a smooth uniform surface with concrete in accordance with Section 520 and any related Sections. Masonry repair shall be in accordance with Section 570 and any related Sections.
- 3.8.8** All walls and adjacent structures identified to remain on the Project Plans shall be protected.
- 3.8.9** The Contractor shall install crack gauges to monitor movement of existing cracks and any new cracks that develop in concrete, foundations, walls, and structure foundations of adjacent structures to remain as specified in the Project Plans. Crack gauges shall be monitored on a daily basis.
- 3.8.10** Vibration monitoring shall be performed by the Contractor in accordance with Section 211 and Supplemental Section 211 included as part of these special provisions.
- 3.8.11** The Contractor shall monitor groundwater elevations as indicated on the Construction Plans.
- 3.8.12** The Contractor shall, by photographs and measurements acceptable to the Engineer, record the configuration of the existing wall prior to removal. These photographs and measurements shall be used to guide the reconstruction of the wall. These records shall be made at intervals of not more than 10 ft and at locations where characteristics of the wall change. The photographs shall become the property of the Town at the end of the project.
- 3.8.13** The Contractor shall retain all stone from existing wall for reuse. Additional stones that may be necessary shall be placed in bottom courses only. No new stone shall be placed atop relaid existing stones.
- 3.8.14** The Contractor shall carefully duplicate special features of the existing wall, such as the stair posts, etc..

MEASUREMENT AND PAYMENT

Add:

- 4.7** Measurement of this item shall include restoring masonry walls and restoring portions of exposed concrete as necessary.
- 4.8** This work shall include measurements, photographs, documentation, additional stones, labor, and materials needed to reconstruct masonry walls or exposed concrete.
- 4.9** Removal of Structures and Obstructions of the designated and approved areas will be measured and paid for at the Contract lump sum bid price. Partial payments will be made based upon the estimated percentage of work completed during the preceding calendar month as reviewed and accepted by the Engineer. Such payment will constitute full compensation for all labor, materials, equipment, tools and all other items necessary and incidental to completion of the work.

Add to pay items & units:

202.11 Dam Removal

Unit

GREAT DAM REMOVAL

March 14, 2016

SPECIAL PROVISION

AMENDMENT TO SECTION 202 – REMOVAL OF STRUCTURES AND OBSTRUCTIONS

Item 202.8 – Site Staging

This Section supplements Section 202 of the NHDOT Standards and Specifications for Roads and Bridges for this Contract. Where these special provisions conflict or modify the NHDOT Construction Standards and Specifications Section 202, these provisions shall govern.

DESCRIPTION

- 1.1 This Section specifies requirements for site staging including removal, storage and replacement of structures within the limit of work that may interfere with the Contractor's activities and installation and removal of temporary site access structures as needed.
- 1.2 The work includes, but is not necessarily limited to, furnishing all labor, materials and equipment for:
 - 1.2.1 Removal and replacement, if deemed necessary by the Engineer, of the impacted existing sprinkler system located within Founder's Park.
 - 1.2.2 Stripping of loam within areas disturbed by grading and/or equipment access and stockpiling for later restoration.
 - 1.2.3 Removal and replacement of existing trees, as needed, within the work area as shown on the plans. It is anticipated that one (1) 22-inch diameter Poplar tree and two (2) 12-inch diameter Elm trees may be required to be removed and replaced.
 - 1.2.4 Removal, storage, and replacement of existing benches, as needed, within the work area as shown on the plans.
 - 1.2.5 Removal and replacement of existing chain link fence, as determined by the Engineer, within the work area as shown on the plans.
 - 1.2.6 Removal and disposal of the existing wood fence at the Penstock Intake. The wood fence shall be replaced with an approved new fence similar in style to the existing fence.
 - 1.2.7 Clearing and grubbing of the site as necessary, and as approved by the Engineer.
 - 1.2.8 Design, furnishing or obtaining, construction, maintenance and removal of a temporary timber access bridge, or approved equal, as needed and as shown in an approximate

manner on the plans. The work shall also include furnishing all equipment to install and dismantle the temporary bridge.

- 1.2.9 Design, furnishing or obtaining, construction, maintenance and removal of a temporary ramp to provide Contractor access to the work area downstream of the dam as needed and as shown on the plans. The work shall also include furnishing all equipment to install and dismantle the temporary ramp.

MATERIALS

- 2.1 If determined necessary to replace any portion of the existing sprinkler system, the replacement system shall be of the similar size and materials as the existing system. The Contractor shall submit Product Data Sheets and installation layout plans of the new system.
- 2.2 Replacement of existing trees, including, but not necessarily limited to one (1) 22-inch Poplar tree and two (2) 12-inch Elm trees, shall be in accordance with Section 650.2 of the NHDOT Standard Specifications. The aforementioned trees shall be replaced with White Poplar (*Populus grandidentata*) and American Elm (*Ulmus americana*). The new trees shall be 4" minimum caliper. The Contractor shall submit Product Data sheets to the Engineer for approval prior to ordering the trees.
 - 2.2.1 If the Contractor is able to remove and store existing trees in good condition, the Contractor may be allowed to use these trees for replacement. The Contractor shall receive approval from the Engineer of the trees and their condition prior to planting at the site.
- 2.3 Benches to be replaced shall be the existing benches located at the site. The existing benches shall be removed and stored, and reset, without damage. Damaged benches shall be replaced in kind at the Contractor's expense.
- 2.4 Replacement of the chain link fence shall be in-kind, in an equal or better condition than the existing fence. The Contractor shall submit Product Data Sheets for the replacement fence to be approved by the Engineer prior to installation.
- 2.5 Replacement of the wooden fence that covers the penstock intake shall be with a new fence that is similar in style to the existing wood fence. The Contractor shall submit Product Data Sheets of the proposed replacement fence to be approved by the Engineer.
- 2.6 The timber access bridge, if needed, shall be designed by the Contractor. The Contractor shall submit shop drawings and design calculations for the timber bridge for approval by the Engineer.
 - 2.6.1 Steel sheet piling shall conform to Section 506.
 - 2.6.2 Steel bearing piles shall conform to Section 510.
 - 2.6.3 Concrete shall conform to Section 520.
 - 2.6.4 Reinforcing steel shall conform to Section 544.

- 2.6.5 Structural steel shall conform to Section 550.
- 2.6.6 Structural timber shall conform to Section 568.
- 2.6.7 Bridge rail shall be galvanized steel conforming to Section 563.2.
- 2.7 The access ramp, if needed, shall be designed by the Contractor. The Contractor shall submit shop drawings and design calculations for the access ramp for approval by the Engineer.
 - 2.7.1 Steel sheet piling shall conform to Section 506.
 - 2.7.2 Steel bearing piles shall conform to Section 510.
 - 2.7.3 Concrete shall conform to Section 520.
 - 2.7.4 Reinforcing steel shall conform to Section 544.
 - 2.7.5 Structural steel shall conform to Section 550.
 - 2.7.6 Structural timber shall conform to Section 568.
 - 2.7.7 Bridge rail shall be galvanized steel conforming to Section 563.2.

CONSTRUCTION REQUIREMENTS

- 3.1 The contractor shall perform all work as shown on the plans and specified in the contract.
- 3.2 When items require submittal of shop drawings to the Engineer for approval, the Contractor shall not install the item without receiving approval.
- 3.3 All items to be removed and replaced shall be replaced in a condition that is equal to or better than that existing item prior to construction activities. Acceptance of each item shall be subject to the approval of the Engineer.
- 3.4 Stripping of loam shall consist of removal of grass to a depth of at least 3 inches and removal of all topsoil and organic soils to a minimum depth of 6 inches. The Contractor shall remove grass before stripping topsoil.
- 3.5 Installation of trees shall be in accordance with Section 650.3 of the NHDOT Standard Specifications.
- 3.6 Benches shall be stored within the limit of work, or on the Contractor's property, and shall be protected to their original condition prior to construction activities.
- 3.7 Clearing and grubbing shall be in accordance with Section 201.3 of the NHDOT Standard Specifications.

- 3.8 The timber access bridge and access ramp shall be designed by the Contractor and the design and layout plans shall be submitted to the Engineer for review. Installation of the access bridge and access ramp shall be in accordance with the plans approved by the Engineer.
- 3.8.1 Construction requirements for the proposed timber access bridge shall be in accordance with Sub-Sections 3.1, 3.6, 3.7, 3.9 of Section 501 of the NHDOT Standard Specifications.
- 3.9 The timber access bridge and access ramp, and all associated materials, shall be removed by the Contractor at no cost to the Owner.
- 3.9.1 Construction requirements for the proposed access ramp shall be in accordance with Sub-Sections 3.1, 3.6, 3.7, 3.9 of Section 501 of the NHDOT Standard Specifications.

METHOD OF MEASUREMENT

- 4.1 The construction requirements associated with Site Staging will be measured as a unit. The unit shall include the following items:
- 4.1.1 Removal and replacement of the existing sprinkler system in Founder's Park, if determined necessary by the Engineer.
- 4.1.2 Stripping of loam within areas disturbed by grading and/or equipment access and stockpiling for later restoration. Restoration of disturbed areas shall be covered under item 644.
- 4.1.3 Removal and replacement of existing trees, as needed, within the work area as shown on the plans. It is anticipated that one (1) 22-inch diameter Poplar tree and two (2) 12-inch diameter Elm trees will be required to be removed and replaced with White Poplar (*Populus grandidentata*) and American Elm (*Ulmus americana*).
- 4.1.4 Removal, storage, and resetting of existing benches, as needed, within the work area as shown on the plans.
- 4.1.5 Removal and replacement of existing chain link fence, as needed, within the work area as shown on the plans.
- 4.1.6 Removal and disposal of the existing wood fence at the Penstock Intake. Installation of a new wood fence similar in style to the existing fence.
- 4.1.7 Clearing and grubbing of the site, as necessary, and approved by the Engineer.
- 4.1.8 Fabrication, installation, maintenance and removal of a timber access bridge, or approved equal, as needed and as shown on the plans. Design of the timber access bridge shall be inclusive of this item.
- 4.1.9 Fabrication, installation, maintenance and removal of an access ramp as needed and as shown on the plans. Design of the timber access bridge shall be inclusive of this item.

MEASUREMENT AND PAYMENT

Add to pay items & units:

202.8 Site Staging

UNIT

GREAT DAM REMOVAL

March 14, 2016

SPECIAL PROVISION**AMENDMENT TO SECTION 203 – EXCAVATION AND EMBANKMENT**

The purpose of this Special Provisions is to prevent the use of blasting for rock excavation during this project

Replace 2.2 with the following:

2.2 Rock excavation shall consist of all solid rock that can be removed by ramming or ripping. It shall also consist of boulders and bedrock when found to measure 2 cy or more. It shall exclude parts of concrete and masonry structures.

Replace 3.2 thru 3.3 with the following:

3.2 Rock Excavation

3.2.1 No blasting of rock shall be allowed during this project. It is expected that rock will be removed using a hoe ram or similar methods. Contractor shall submit a rock excavation plan for review and acceptance by the Engineer prior to beginning channel excavation. Vibration monitoring shall be required during construction as outlined in Section 211 – Vibration Monitoring and as modified by Supplemental Specification 211 included with these special provisions.

3.2.2 All loose and unstable material, all breakage, and all potentially unstable rock slides, even if located beyond the payment lines, shall be removed or stabilized to the Engineer's satisfaction during or upon completion of the excavation in each lift. Drilling of the next lift will not be allowed until this work has been completed. It shall be the responsibility of the Contractor to perform all phases of this work to produce the required slopes.

3.2.3 All surplus material shall be incorporated in the work or disposed of as directed.

3.2.4 No excavation shall be performed prior to establishment of construction layout and cross-sectioning as approved by the Engineer.

3.2.5 The Contractor shall be required to comply with the vibration limits established on the Project Plans and detailed in Section 211 – Vibration Monitoring and Supplemental Section 211 – Vibration Monitoring included in this specifications package. The vibration limits shall be incorporated in the Contractor's Rock Excavation Plan, as required. The Contractor shall provide for monitoring of the vibrations produced as a result of the construction activities and shall provide a Pre-Construction Condition survey of structures. The Contractor shall cooperate in adjusting the rock excavation plan and procedures to maintain the vibration limits specified herein and to minimize vibration-related claims and complaints.

3.3 Presplitting with the use of explosives and blasting accessories shall not be allowed for this project.

Add 4.13 and 4.14 as follows:

4.13 Preparation of an approved rock excavation plan and adoption of revised rock excavation methods necessary to meet vibration requirements will not be measured.

4.14 Vibration control and monitoring, pre-construction surveys, post-construction surveys, rock excavation precautions and other protective measures will not be measured under this item.

Replace 5.1, 5.10 and 5.11 with the following:

5.1 Excavation and embankment shall be considered inclusive of other Bid Items including Common Channel Excavation, Rock Channel Excavation, Dry Hydrant Installation, and Pump House Modifications.

5.10 All costs incurred by the Contractor in preparing an approved rock excavation plan and in adopting revised rock excavation methods necessary to meet vibration requirements shall be considered incidental to the Contract unit prices for rock excavation.

5.11 All costs incurred by the Contractor for vibration control and monitoring, pre-construction surveys, post-construction surveys, rock excavation precautions and other protective measures shall be included under Item 211.11.

GREAT DAM REMOVAL

March 14, 2016

SPECIAL PROVISION**AMENDMENT TO SECTION 207 – CHANNEL EXCAVATION**

The purpose of this Special Provisions is to prevent the use of blasting for rock channel excavation during this project

Replace 2.2 with the following:

2.2 Rock channel excavation shall consist of all solid rock that can be removed only by ramming or ripping. It shall also consist of boulders and bedrock when found to measure 1 cy or more. It shall exclude parts of masonry structures.

Replace 3.1 with the following:

3.1 Channel excavation shall be removed to the grades shown or ordered by the Engineer.

3.1.1 No blasting of rock shall be allowed during this project. It is expected that rock will be removed using a hoe ram or similar methods. Contractor shall submit a rock excavation plan for review and acceptance by the Engineer prior to beginning channel excavation. Vibration monitoring shall be required during construction as outlined in Section 211 – Vibration Monitoring and as modified by Supplemental Specification 211 included with these modified specifications.

3.2 All surplus material shall be incorporated in the work or disposed of as directed.

3.3 No excavation shall be performed prior to establishment of construction layout and cross-sectioning as approved by the Engineer.

Replace 4.2 with the following:

4.2 Vibration control and monitoring, pre-construction surveys, post-construction surveys, rock excavation precautions and other protective measures will not be measured.

GREAT DAM REMOVAL

March 14, 2016

SUPPLEMENTAL SPECIFICATION

AMENDMENT TO SECTION 211 – VIBRATION MONITORING

The purpose of this Special Provision is to revise requirements for Pre-Construction and Post-Construction surveys.

Amend 3.2 to read:

3.2 Vibration Monitoring Plan. Prior to initiating a particular activity which requires vibration monitoring, the Contractor shall submit a Vibration Monitoring Plan prepared by the Contractor's Vibration Consultant. The plan shall be submitted a minimum of 10 working days prior to beginning the particular construction activity. The construction activity shall not begin until the plan has been approved, except as allowed under 3.2.1.

3.2.1 Prior to the production phase of the particular construction activity, the Contractor will be permitted to conduct a test program to establish the allowable vibration limits, subject to approval. The production phase shall not begin until the results of the test program have been approved.

3.2.2 The plan shall include the following:

- a) The qualification of the Vibration Consultant in accordance with Supplemental Section 3.1
- b) A description of the monitoring equipment in accordance with Supplemental Specification 3.3
- c) Vibration limits and construction sequencing descriptions for the particular construction activity under consideration as specified in the Project Plans.
- d) Recommendations for structures, utilities and all other facilities which in the judgment of the Vibration Consultant require a pre and post construction condition survey in accordance with 3.4 of this Supplemental Specification. This recommendation shall pay particular attention to historic structures, structures in poor condition, structures supported by vibration sensitive materials which could cause settlement or loss of support, and structures which contain sensitive equipment or processes. The Monitoring Plan shall also include methods for measuring deformation or settlement of selected structures, if deemed necessary by the Vibration Consultant or Engineer.
- e) Recommendations if it is determined that the proposed construction activity could not be reasonably implemented without exceeding vibration limits that are necessary to protect adjacent facilities.

3.2.3 As part of the review of the Monitoring Plan, the Engineer may require modifications to the submittal to include, but not limited to, surveying and monitoring of additional structures, the number of monitoring sites and the distances for monitoring. There may be a need for simultaneous setups with multiple monitoring devices.

Amend 3.4 to read:

3.4 Pre-construction and post-construction condition surveys. The Contractor shall conduct a pre-construction condition survey on all structures, including buildings, foundations, and retaining walls, within 150 feet of the anticipated sources of construction related vibrations as detailed in the Project Plans. A pre-construction survey shall also be conducted on structures that may be affected by construction related vibrations beyond the 150 foot distance as directed by the Engineer or as contained in the approved Vibration Monitoring Plan. The pre-construction surveys shall not be initiated until the Vibration Monitoring Plan has been approved. Upon completion of all construction operations that are a source of construction related vibrations, the Contractor shall conduct a post-construction condition survey of any structure for which a complaint of damage has been received or a damage claim has been filed. Notification of the post-construction survey shall be given to all interested parties, so they may be present during the survey. A copy of the pre-construction condition surveys shall be provided to the Engineer prior to the start of work. A copy of any post-construction condition survey conducted shall be provided to the Engineer upon its completion.

The pre-construction condition survey shall consist of a good quality videotape with appropriate audio description of locations, conditions, and defects. In addition to the videotape, a written description with high resolution photos shall supplement the videotape recording. Pictures and sketches shall be provided with a scale where practical. Descriptions shall locate any existing cracks, damage, or other defects and shall include such information so as to make it possible to determine the effect, if any, of the construction operations on the defect. Particular note shall be made of evident structural faults and deficiencies, or recent repairs. Prior to the start of work, a copy of the pre-construction condition survey shall be submitted to the Engineer for review.

The vibration consultant shall give written notice to the owner of the property concerned, tenants of the property, and any representative of local authorities required to be present at the pre-construction survey. The notice shall state the dates on which surveys are to be made. Copies of all notices shall be provided to the Engineer.

Upon completion of all construction activities that may induce vibration, the Contractor shall conduct a post-construction condition survey for all locations identified during the pre-construction survey as well as any properties, structures, and conditions for which complaints of damage have been received or damage claims have been filed. The survey shall consist of a good quality videotape with appropriate audio descriptions and meet all the requirements set forth for the pre-construction survey. Notice shall be given to all interested parties so that they may be present during the final examination. Records of the final examination shall be distributed the same as the original pre-construction condition survey.

Amend 4.1 to read:

4.1 Vibration monitoring services including pre- and post- construction surveys will be measured as a complete unit fully completed. The lump sum is all inclusive of the equipment and personnel necessary to perform the vibration monitoring service. The lump sum is also all inclusive of equipment and personnel necessary to measure or monitor for potential deformation in structures.

4.2 All costs incurred by the Contractor in preparing an approved rock excavation plan and in adopting revised rock excavation methods necessary to meet vibration requirements shall be considered

incidental to the Contract unit prices for rock excavation. All crack monitoring devices and associated monitoring time will be considered incidental to Vibration Monitoring Services.

Amend 5.1 to read:

5.1 The accepted quantity of vibration monitoring services will be paid for at the Contract unit price as a lump sum item, complete.

5.1.1 The Vibration Monitoring Plan will be subsidiary

5.1.2 Travel time and other time not spent at the construction site or off-site areas and support services (i.e., travel, mileage, clerical staff, miscellaneous expenses, overhead, etc.) will be subsidiary.

5.1.3 No payment will be made for time spent in preparing the reports for the condition surveys.

Pay Item and Unit:

211.11	Vibration Monitoring Services	UNIT
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GREAT DAM REMOVAL

March 14, 2016

SPECIAL PROVISION

AMENDMENT TO SECTION 503 -- COFFERDAMS AND WATER DIVERSION STRUCTURES

This special provision provides for cofferdams and water diversion structures and neither amends nor modifies other provisions of this section except as provided below.

Add to Description:

1.2 Water Diversion Structures and Cofferdams have been included in this contract to address proposed temporary construction efforts within Exeter River. These items shall be used to supplement other temporary erosion control and storm water management measures included in the project to ensure compliance with water quality regulations, and erosion and sediment control and stormwater commitments during the work in the proposed area. All Cofferdam and Water Diversion work to be installed to allow other construction activities (drainage installation, excavation, embankments, BMP's, etc.) in and around the areas listed below (sections 3.2.4 and 3.3.8) are all inclusive to the area's correlating item number.

1.3 This work shall include bypass pumping or other means required to control water.

1.4 This work shall include dewatering of all areas within the limit of work including open excavations and areas within the coffer dam.

1.5 This work shall include the design of a river diversion and water management plan by the Contractor to be submitted to the Engineer for review and approval. The plan shall include river diversion materials and layout, coffer dam design and installation procedures, construction phasing and other temporary controls needed to manage both surface and groundwater within the limit of work.

Add to 3.1:

3.1.3 The Contractor shall submit the water diversion and water management plan to the Engineer for review and approval prior to construction activities. The Contractor shall submit the water management plan to the Engineer **15** days prior to planned construction requiring water management.

Add to 3.2.2:

3.2.2.1 The Contractor shall construct a water diversion structure to convey on and off site flows around the proposed work areas as shown on the plans or as directed by the Engineer. The structure shall be constructed in a workmanlike manner and in a way that prevents erosion and isolates the work area.

3.2.2.2 Water Diversion Structures shall remain in place until all work is complete within the area specified for Water Diversion and the area is stabilized to the point it will not contribute to the degradation of water quality when water flow is restored.

Add to 3.2:

3.2.4 The intended locations of the coffer dams shall be similar to those proposed in the Project Plans. If the Contractor proposes changes in the alignment and layout of the proposed coffer dam, the Contractor shall submit a plan depicting changes for approval by the Engineer.

Add to 3.3:

3.3.7 The Contractor shall use sand bags (for cofferdams) unless otherwise authorized by the Engineer.

3.3.8 The intended locations of the coffer dams shall be similar to those proposed in the Project Plans. If the Contractor proposes changes in the alignment and layout of the proposed coffer dam, the Contractor shall submit a plan depicting changes for approval by the Engineer.

3.3.9 Cofferdams shall remain in place until all work is complete within the area specified and the area is stabilized to the point it will not contribute to the degradation of water quality.

Add to Method of Measurement:

4.2 Bypass pumping or other measures utilized to control water in conjunction with water diversion near this location will not be measured.

4.3 Reinstallation of Cofferdams/Water Diversion Structures due to Contractor's scheduling will not be measured.

4.4 All equipment, pumps, structures, design of dewatering systems shall be included under the lump sum cofferdam item.

4.5 Time, labor and materials required for the development of the water management plan shall be included under the lump sum cofferdam item.

Add to Basis of Payment:

5.4 Bypass pumping or other means utilized to control water in conjunction with water diversion near this location shall be subsidiary to the cofferdam and water diversion structure item.

5.5 Reinstallation of Cofferdams/Water Diversion Structures due to Contractor's scheduling will be subsidiary to the cofferdam and water diversion structure item.

5.6 Water diversion and dewatering of the designated work areas will be paid for as a unit. Partial payments will be made based upon the estimated percentage of work completed during the preceding calendar month as reviewed and accepted by the Engineer. Such payment will constitute full compensation for all labor, materials, equipment, tools and all other items necessary and incidental to completion of the work.

MEASUREMENT AND PAYMENT

Add to pay items & units:

503.101	Cofferdam and Water Diversion	UNIT
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GREAT DAM REMOVAL

March 14, 2016

SPECIAL PROVISION**AMENDMENT TO SECTION 572 – STONE WALL****Item 572.4 – Reinforced Concrete Masonry Unit Wall**

This special provision applies to reinforced concrete masonry unit (CMU) walls only and replaces all other provisions of Section 572.

DESCRIPTION

- 1.1 This item shall consist reinforced concrete masonry units to be installed to seal the penstock adjacent to the existing dam as shown on the Project Plans.

MATERIALS

- 2.1 Materials shall include concrete masonry units, mortar and grout materials, reinforcement, mortar and grout mixes, and all other materials necessary for the installation of the CMU's as shown on the Project Plans

2.1.1 Concrete Masonry Units

CMUs shall meet ASTM C 90. The units shall provide a minimum average net-area compressive strength of 2800 psi. The units shall have a normal weight density classification.

2.1.2 Mortar and Grout Materials

Mortar shall meet the specifications outlined in Section 520 – Portland Cement Concrete and Section 707 – Cement Mortar

2.1.3 Reinforcement

Reinforcement shall be Grade 60, uncoated steel reinforcing bars and meet the specifications outlined in Section 544 – Reinforcement for Concrete

2.1.4 Mortar and Grout Mixes

Mortar shall meet the specifications outlined in Section 520 – Portland Cement Concrete and Section 707 – Cement Mortar

Contractor shall not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures unless

otherwise indicated. Contractor shall not use calcium chloride in mortar or grout. Use portland cement-lime masonry cement or mortar cement mortar unless otherwise indicated. For exterior masonry, use portland cement-lime masonry cement or mortar cement mortar. For reinforced masonry, use portland cement-lime masonry cement or mortar cement] mortar. Add cold-weather admixture (if used) at same rate for all mortar that will be exposed to view, regardless of weather conditions, to ensure that mortar color is consistent. For reinforced masonry, use Type S. Grout for Unit Masonry shall comply with ASTM C 476. Use grout of type indicated or, if not otherwise indicated, of type (fine or coarse) that will comply with Table 1.15.1 in ACI 530.1/ASCE 6/TMS 602 for dimensions of grout spaces and pour height. Proportion grout in accordance with ASTM C 476, for specified 28-day compressive strength indicated, but not less than 3000 psi. Provide grout with a slump of 8 to 11 inches as measured according to ASTM C 143/C 143M.

CONSTRUCTION REQUIREMENTS

3.1 Laying Masonry Wall

Lay out wall in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed. Pattern is usually running bond. If other bond patterns are required, specify in first paragraph below or indicate on Drawings. Unless otherwise indicated, lay exposed masonry in running bond; do not use units with less than nominal 4-inch horizontal face dimensions at corners or jambs.

3.2 Mortar Bedding and Jointing

Lay hollow CMUs as follows:

1. With face shells fully bedded in mortar and with head joints of depth equal to bed joints.
2. With webs fully bedded in mortar in grouted masonry, including starting course on footings.

Toll exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.

3.3 Reinforced Unit Masonry Installation

Placing of reinforcement shall comply with requirements in ACI 530.1/ASCE 6/TMS 602. Do not place grout until entire height of masonry to be grouted has attained enough strength to resist grout pressure. Comply with requirements in ACI 530.1 / ASCE 6 / TMS 602 for cleanouts and for grout placement, including minimum grout space and maximum pour height. Specification limits grout lifts to 60 inches (1520 mm) unless masonry has cured for at least 4 hours, grout slump is between 10 and 11 inches (254 and 279 mm), and there are no intermediate bond beams between top and bottom of pour height. Limit height of vertical grout pours to not more than 60 inches.

3.4 Parging

Parge exterior faces of below-grade masonry walls, where indicated, in 2 uniform coats to a total thickness of 3/4 inch. Use a steel-trowel finish to produce a smooth, flat, dense surface. Form a wash at top of parging and a cove at bottom. Damp-cure parging for at least 24 hours and protect parging until cured.

METHOD OF MEASUREMENT

- 4.1 The reinforced concrete masonry unit wall will be measured as a unit for the entire wall installed in place and accepted by the Engineer.

BASIS OF PAYMENT

- 5.1 Reinforced concrete masonry unit wall will be measured and paid at the Contract bid price per unit. Such payment will constitute full compensation for the transporting, furnishing, stockpiling, installation, including removal of unsuitable and surplus material, preparing any necessary surfaces, and for all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Add to Pay Items and Units:

572.4	Reinforced Concrete Masonry Unit Wall	UNIT
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GREAT DAM REMOVAL

March 14, 2016

SPECIAL PROVISION**ADDITION OF SECTION 585 – STONE FILL****Item 585.2 – Stone Fill, Class B**

Add to Description:

1.2 This work shall consist of installing Stone Fill, Class B at outfall locations along Pleasant Street as shown on the plans.

Add to Construction Requirements:

3.5 Stone fill at outfall locations shall be placed in accordance with the Construction Plans and detailed on Sheet C-11.

Add to Method of Measurement:

4.2 The accepted quantity of Stone Fill, Class B at outfall locations shall include placement of 6-inch crushed stone bedding and other material as indicated on the Construction Plans.

Add to Basis of Payment:

5.1.1 The accepted quantity of Stone Fill, Class B as specified will be paid for at the Contract unit price per cubic yard complete in place and shall include the crushed stone bedding and other material required as indicated on the Construction Plans.

Item 585.25 – Cobble-Boulder Mix

This special provision applies to cobble-boulder mix only and modifies the provisions of 585. as follows:

DESCRIPTION

- 1.1 The work shall consist of the furnishing, stockpiling, placing, and maintaining an approved stone fill to be utilized in constructing the streambed of the mitigation channels and as designated on the plans or as directed by the Engineer.

MATERIALS

- 2.1 General

- 2.1.1 The Cobble-boulder bed material shall consist of natural field stone or natural river rock. Crushed stone from a quarry or other sources will not be permitted. Stone gradation will approximate the following size distribution; amounts finer than each laboratory sieve (square openings) (percent by weight):

Stone Class	Stone Size (in)
D95	24 – 40
D84	18 – 24
D50	10 – 15
D30	5 – 8
D16	2 – 4

The bed material mix shall include 10% sand supplemented in addition to the gradation outlined above.

The size of an individual stone particle will be determined by measuring its diameter across the intermediate axis. Stone particles shall be sound, tough, dense, resistant to the action of air and water, and suitable in all respects for the purpose intended. All gravel fill will be approved by the Engineer prior to furnishing and stockpiling of materials on site.

CONSTRUCTION REQUIREMENTS

- 3.1 General

- 3.1.1 The Contractor shall install gravel fill as shown on the plans, or as directed by the Engineer. Gravel Fill shall be used to construct the streambed.
- 3.1.2 The cobble-boulder mix shall be placed to a minimum 30-inch depth. If presence of bedrock limits the depth of placed material, the Contractor shall notify the Engineer. In most instances, bedrock shall not be removed to allow for 30-inch depth of material. The Contractor shall

require Engineer approval prior to removing bedrock to allow for 30-inch depth of placed material.

METHOD OF MEASUREMENT

- 4.1 Cobble-Boulder Mix will be measured by the cubic yard.

BASIS OF PAYMENT

- 5.1 Cobble-Boulder Mix will be measured and paid for per cubic yard of fill installed complete and in place. This price will be full compensation for the transporting, furnishing, stockpiling, installation, including removal of unsuitable and surplus fill material, any required grading in and out of the streambed, backfilling, compaction, and for all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Add to Pay Items and Units:

585.2	Stone Fill, Class B	Cubic Yard
585.25	Cobble-Boulder Mix	Cubic Yard

GREAT DAM REMOVAL

March 14, 2016

SUPPLEMENTAL SPECIFICATION

Amend Section 587 to read:

SECTION 587.1 — Keyed Stone Fill

This Section supplements Section 587 of the NHDOT Standards and Specifications for Roads and Bridges for this Contract. Where these special provisions conflict or modify the NHDOT Construction Standards and Specifications Section 587, these provisions shall govern.

DESCRIPTION

- 1.1 The work shall consist of furnishing and placing natural Rock Boulders for installation of Riffle Crest, Transition Structure, and Randomly Placed Boulders as defined in this specification, shown on the construction plans, and as directed in the field by the Engineer.
- 1.2 The work shall also consist of furnishing and placing granite blocks to form a revetment along the existing stone masonry retaining wall located at 33 and 37 Water Street. The granite revetment shall be installed as shown on the plans and described in this Section.

1.2 SUBMITTALS

The Contractor shall locate potential sources of natural Rock Boulders and Granite Blocks that conform to all contract requirements. The source or sources of proposed Rock Boulder and Granite Block material shall be indicated to the Engineer a minimum of ten (10) working days prior to delivery to the construction site. The Contractor and Engineer will jointly visit the identified sources to determine whether the Rock meets the size, shape and color requirements specified. The Contractor will not be granted an extension of time due to delay caused by sampling, testing, approval or disapproval of Rock Boulder and Granite Block material in complying with contract requirements. The Contractor shall submit a signed certification from the supplier stating that each load of rock delivered to the site meets the requirements of this specification.

MATERIALS

2.1 ROCK QUALITY

Individual Rock Boulders shall be block-like in shape and meet the minimum/maximum size requirements specified on Sheet C-14 of the Construction Drawings. Rock Boulder color shall blend with the existing streambed material. Green/Gray, brown/gray, dark gray, and/or dark brown shall be acceptable. White Rock is not acceptable. All Rock shall be free from laminations, weak cleavages and will not disintegrate from the action of air, water and in handling and placing. Granular sedimentary stone will generally be unacceptable.

Rock Boulders shall have a minimum Bulk Specific Gravity of 2.65 and an Absorption of not more than two (2) percent in accordance with ASTM Method C 127. The test for soundness shall be performed in accordance with ASTM Method C 88 for coarse aggregate and shall yield the following results: weight loss in five (5) cycles not more than 10 percent when sodium sulfate is used or 15 percent when magnesium sulfate is used.

2.2 GRANITE ROCK

Granite blocks shall be block-like in shape and meet minimum block dimensions as specified on Sheet C-8 of the Construction Drawings. Granite blocks shall have minimum dimensions of 60 inches by 30 inches by 30 inches. Granite color shall blend with the existing streambed material. Green/Gray, brown/gray, dark gray, and/or dark brown shall be acceptable. White Rock is not acceptable. All Rock shall be free from laminations, weak cleavages and will not disintegrate from the action of air, water and in handling and placing. Granular sedimentary stone will generally be unacceptable.

2.3 STONE FILL, CLASS B

Stone Fill, Class B shall be placed behind the granite blocks as shown on Sheet C-8. Stone Fill shall conform to Section 585 of the NHDOT Standard Specifications.

CONSTRUCTION REQUIREMENTS

3.1 PLACEMENT OF BOULDERS

The Contractor shall install Rock Boulders in accordance with the Construction Plans and Specifications and as directed by the Engineer for Riffle Crests, Transition Structure, and Randomly Placed Boulder Features. Final placement of Rock Boulder Clusters shall be approved by the Engineer in the field.

Riffle Crest Structures contain footer rocks that shall be firmly embedded into the stream bottom substrate as shown on the Construction Drawings. First Tier Footer Rocks and Top Rocks shall be placed on Footer Rocks in a shingled or offset manner as indicated on Sheet C-5 of the Construction Drawings. Each Tier of Rock placed shall be backfilled with Stone Fill (Cobble-Gravel-Sand) material taking care to fill or "choke" all voids between the individual Boulder fragments. Stone Fill material shall extend a minimum of three (3) feet upstream of the Tier being backfilled. Gravel material for choking structures shall be obtained from the existing riverbed and/or an approved offsite source as specified under SECTION 585, Stone Fill.

For the Riffle Crest, Rock Boulders shall be placed to fit together in a puzzle like fashion such that individual Boulder fragments lock together to form a stable cohesive structure or unit. The Contractor shall manage and control the flow of water during installation such that the foundation, footer rocks and top rocks are clearly visible during placement of individual rock boulders.

3.2 PLACEMENT OF GRANITE

The Contractor shall install a granite revetment along the Green Bean Retaining Wall at 33 and 37 Water Street in accordance with the Construction Plans as shown on Sheet C-6 and Sheet C-8 and as directed by the Engineer. Granite shall be placed to elevation 16.0 at the upstream end and slope down to elevation 14.0 as shown on the Construction Drawings. Granite shall be placed to fit together with at least 75% contact between granite blocks. The granite shall be sloped from the bedrock up to the retaining wall at a slope of 2 horizontal to 1 vertical. Stone Fill, Class C, as described in Section 585 of the NHDOT Standard Specifications shall be placed behind the granite revetment as detailed on Sheet C-8.

MEASUREMENT AND PAYMENT

- 4.1 Keyed Stone Fill shall consist of furnishing, stockpiling, and installing boulder clusters and boulders in constructed riffle crest as shown on Sheet C-6 and Sheet C-8 of the Construction Plans. Keyed Stone Fill shall consist of all labor, materials and time necessary for installation of the boulders. The quantity of Rock Boulders Placed within the specified limits and as directed by the Engineer will be measured to the nearest ton by actual weight. For each ton of Rock placed in constructing the aforementioned Structures and Boulder Features, the Contractor shall furnish to the Engineer a statement of delivery ticket showing the weight to the nearest 0.1 ton of rock in the load. Rock will be measured and paid for on a per ton basis installed complete and in place. Such payment will constitute full compensation for transporting, furnishing, stockpiling, and installation of Rock Structures, including removal and disposal off-site of unsuitable and surplus fill material, any required grading in and out of the streambed, and for all materials, labor, equipment, tools and all other items necessary and incidental to completing the work.
- 4.2 Granite Revetment shall consist of furnishing, stockpiling, and installing granite blocks in granite revetment as shown on Sheet C-6 and Sheet C-8 of the Construction Plans. Granite Revetment shall consist of all labor, materials and time necessary for installation of the granite revetment. The quantity of Granite placed within the specified limits and as directed by the Engineer will be measured to the nearest ton by actual weight. For each ton of granite placed in constructing the aforementioned revetment, the Contractor shall furnish to the Engineer a statement of delivery ticket showing the weight to the nearest 0.1 ton of granite in the load. Granite will be measured and paid for on a per ton basis installed complete and in place. Such payment will constitute full compensation for transporting, furnishing, stockpiling, and installation of granite revetment, including removal and disposal off-site of unsuitable and surplus fill material, any required grading in and out of the streambed, and for all materials, labor, equipment, tools and all other items necessary and incidental to completing the work. Payment for granite installed, will be inclusive of the Stone Fill, Class C placed behind the granite revetment as shown on Sheet C-8.

Add to pay items & units:

587.1	Keyed Stone Fill	Ton
587.4	Granite Revetment	Ton

GREAT DAM REMOVAL

March 14, 2016

SPECIAL PROVISION**ADDITION OF SECTION 611 – DRY HYDRANT****Item 611.0 – Dry Hydrant**

This special provision includes the addition of Section 611 – Dry Hydrant and does not modify or amend other provisions of the Standard Specifications.

DESCRIPTION

- 1.1 This work shall consist of the furnishing and constructing of the Dry Hydrant to be installed in the Exeter River at the end of Franklin Street as shown on the Construction Plans or as ordered by the Engineer. Construction of the Dry Hydrant shall include all components shown on the Construction Plans.
- 1.2 Channel excavation to the depth specified on the Construction Plans, bedding if required, and backfill shall be included in this work. Installation of the row of boulders shall be included in this work. Boulders shall conform the specifications outlined in Section 587 – Keyed Stone Fill. Stone Fill, Class B shall conform to Section 585 of the NHDOT Standard Specifications.
- 1.3 Furnishing all materials and reconstruction, if necessary, of the stone wall and the granite wall shall be included in this work. This work shall be in accordance with Section 570 of the NHDOT Standard Specifications.
- 1.4 Water Diversion and Water Management required during the installation of the dry hydrant shall be considered inclusive of this item.
- 1.5 The dry hydrant and components shall be constructed in accordance with local fire department standards and painted accordingly.

MATERIALS

- 2.1 Materials shall be new, with manufacturers' warranties, as applicable.
- 2.2 The Contractor shall submit Product Data Sheets for all components to be installed as shown on the Construction Plans and outlined in this Section. The Contractor shall submit to the Engineer for review and approval prior to installation.
- 2.3 The materials to be included for the manufacturing and installing of the dry hydrant shall consist of those shown on the Project Plans. At a minimum, the materials shall include the dry hydrant pump connection, pump connection cap, all required 6-inch ductile iron (DI) pipe, risers, and

elbows with associated thrust blocks, 6-inch straight coupling, strainer assembly, strainer end cap, 3/4-inch galvanized pipe (to support the intake), SST clamp band (to connect the support pipe to the intake), paint, and any additional materials required for the installation of the dry hydrant.

- 2.4 All other materials depicted in the plan, profile and details on sheets C-9 and C-13 of the Construction Plans associated with the installation of the dry hydrant shall also be included for this item. Those additional items shall include at a minimum, two (2) steel bollards, filter fabric, Stone Fill, Class B, 6-inch crushed stone, marker buoy and connection chain.

2.4.1 Pipe

The pipe material installed for the hydrant system shall conform to the following specifications:

Iron	ANSI/AWWA C151/A21.51
	ANSI/AWWA C151/A21.15

The pipe and fittings, where applicable, shall be marked by the manufacturer as described in the applicable ASTM or ANSI/AWWA specification. Fittings shall be rated, in strength and quality, equal to the pipe being specified. Joints shall be air and water tight and shall meet the requirements of the applicable ASTM or ANSI/AWWA standards.

2.4.2 Dry Hydrant Head

The hydrant sleeve shall be made of ductile iron, or other durable, non-corrosive metal. The hydrant head shall be able to accept a 6-inch NHT (American National Fire Hose Thread) connection to provide maximum supply, and shall conform to ASTM 2466. The thread type and height and shall be per municipal standard. All hydrants shall contain a removable head strainer and stainless steel snap ring that can be removed without special tools. The strainer shall be conical in shape to maximize straining area. Unless otherwise approved prior to installation, all hydrants shall use a rubber "O" ring between the threaded sleeve and PVC head.

2.4.3 Dry Hydrant Cap

The cap shall be of snap-on/snap-off design and removable without special tools. It shall be joined with a steel cable or chain and be permanently attached to the dry hydrant head. The cap shall be hard plastic or of same metal as NHT connection for maximum corrosion resistance. The hydrant cap shall be per the municipal standard.

2.4.4 Strainer

Fabricate a strainer of material compatible with the pipe or use corrosion resistant manufactured well screens. Individual inlet holes shall not exceed 3/8- inch diameter. All components, including pins, shall be non-corrosive. Screens and strainers shall have a minimum surface area of 4 times the pipe cross sectional area. A strainer may be formed by drilling 1/4-inch to 3/8-inch diameter holes with a minimum of one-hole diameter between

the holes in PVC pipe. Drilled holes shall be deburred and the pipe cleaned before putting the strainer into service. The screens or strainers shall be capped with a removable end cap.

2.4.5 End Cap

The end cap must be easily removed without special tools. Perforations are required in the end cap to improve flow conditions into the strainer and for jetting action for silt cleanout. Other required materials shall be as shown in the drawings. **However, the contractor shall verify that all equipment furnished as part of the dry hydrant system is compatible with the local fire department(s) equipment.**

CONSTRUCTION REQUIREMENTS

- 3.1 All incidental work required to install the dry hydrant and components shall be considered inclusive for this item. Work items to be included, shall include at a minimum, excavation and trenching of pipe including temporary shoring, reconstruction of the stone and concrete walls, if necessary, saw cutting and restoration of pavement, channel excavation below the normal water level, compaction of suitable subgrade, installation of bedding materials, and installation of any additional items required by the Engineer.
- 3.2 The Contractor shall submit Product Data Sheets for all items to the Engineer for review and approval prior to installation.
- 3.3 The Contractor shall submit Product Data Sheets a minimum of ten (10) days prior to planned installation.
- 3.4 All components of the system shall be installed to the lines and grades as shown on the drawings. All equipment shall be installed to the manufacturers' recommendations.

3.4.1 Pipe

The pipe shall be fitted with intake screen or strainer and standard fire truck hose adapters for quick connect/release operations acceptable to the local fire department. Ductile Iron pipe shall be protected from ultraviolet rays by painting with an exterior latex or similar paint. The depth at which the pipe is installed shall be below the frost-free depth for the area. All pipes shall be installed to provide water tight and airtight joints. Pipe shall be placed on undisturbed soil or non-yielding compacted material. Over excavation must be corrected as noted on the drawings or as directed by the responsible engineer or his designated representative. Backfill shall be placed so as not to damage the pipe nor disturb alignment in any way. All pipes shall be properly bedded as designated on the drawings.

3.4.2 Pipe Intake

The pipe intake shall be installed at the depth shown in the drawings. A dry hydrant installation shall provide for a positive slope toward the water source. In pits or impoundments, the intake screen or strainer shall be supported and secured at least 2 feet above the pool bottom. The intake shall be at least 4 feet beyond the earth slope. The maximum head differential from the pipe intake to the pipe connection shall be 20 feet.

3.4.3 Testing

- Allow pipe joint sealants to cure before testing the piping system. The contractor is responsible for performing an initial pump test at the design capacity after installation to confirm satisfactory operation. Give careful attention to silt, debris, or other interference that may limit the full operation of the hydrant.
- 3.5 The dry hydrant system shall be certified by the contractor responsible for the final installation to the fact that it conforms to all the applicable construction specifications and requirements of the material and/or equipment manufacturers.
- 3.6 Installation of the dry hydrant shall conform to the Project Plans and this Specifications Section 611 as well as, but not limited to, Standard Specification Sections 570 – Stone Masonry for the reconstruction of the stone wall, 203 – Excavation and Embankment, 206 – Structure Excavation for Pipes and Other Minor Structures, 207 – Channel Excavation, 587 – Keyed Stone Fill (for the Cross Vane Boulder Placement), and 593 – Geotextile.
- 3.7 Water Diversion and Water Management shall follow similar procedures as detailed in the Water Diversion and Water Management Plan to be developed and submitted as part of Section 503 of the Special Provisions.
- 3.8 The Contractor shall, by photographs and measurements acceptable to the Engineer, record the configuration of the existing walls prior to removal. These photographs and measurements shall be used to guide the reconstruction of the wall. These records shall be made at intervals of not more than 10 ft and at locations where characteristics of the wall change. The photographs shall become the property of the Town at the end of the project.
- 3.9 The Contractor shall retain all stone from existing wall for reuse. Additional stones that may be necessary shall be placed in bottom courses only. No new stone shall be placed atop relaid existing stones.
- 3.10 The Contractor shall carefully duplicate special features of the existing wall, such as the stair posts, etc.

METHOD OF MEASUREMENT

- 4.1 The dry hydrant will be measured as a unit installed, inclusive of all accessories and appurtenances.
- 4.2 All additional items associated with the installation of the dry hydrant, including but not limited to the following shall be considered part of the unit installed for this item:
- 4.2.1 Water Diversion and Water Management required for the installation of the dry hydrant

- 4.2.2 Excavation, shoring, backfilling, trenching associated with installation of the pipe, and reconstructing, if necessary, of the granite and concrete walls as shown on Sheet C-13.
- 4.2.3 All material required to stabilize the area including but not limited to Rock Boulders, Stone Fill, Class B, 6-Inch Crushed Stone.
- 4.2.4 All other items shown on the Construction Plans on Sheet C-9 or Sheet C-13.

BASIS OF PAYMENT

- 5.1 The dry hydrant will be paid at the Contract unit price installed complete in place. Such payment will constitute full compensation for the transporting, furnishing, installation, including removal of unsuitable and surplus material, and for all materials, labor, equipment, tools, and incidentals necessary to complete the work.
- 5.2 This work shall include measurements, photographs, documentation, additional stones, labor, and materials needed to reconstruct the masonry wall.

Add to Pay Items and Units:

611.0	Dry Hydrant	UNIT
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GREAT DAM REMOVAL

March 14, 2016

SPECIAL PROVISION**ADDITION OF SECTION 612 – PUMP HOUSE MODIFICATIONS****Item 612.0 – Pump House Modifications**

This special provision includes the addition of Section 612 – Pump House Modifications and does not modify or amend other provisions of the Standard Specifications.

DESCRIPTION

- 1.1 This work shall consist of the furnishing and constructing of the new 24-inch pipe intake and associated Tee-Screen at the Town of Exeter Pump Station as shown on Sheet C-9. Modifications to the Pump House shall include all components shown on the Construction Plans.
- 1.2 The work shall also include the removal and disposal of the existing 24-inch cast iron pipe and the two (2) 12-inch cast iron pipes as shown on the Construction Plans.
- 1.3 Channel excavation to the depth specified on the Construction Plans, bedding if required, and backfill shall be included in this work. Stone Fill, Class B shall conform to Section 585 of the NHDOT Standard Specifications.
- 1.4 Reconstruction to the wall of the pump house required to fill the opening from the existing pipe and create a new opening for the proposed pipe shall be included in this work.
- 1.5 This work shall include the furnishing and installing of the Tee-Screen on the 24-inch ductile iron intake pipe leading to the Pump House as shown on the Construction Plans. Work shall include all labor materials, equipment, and incidentals required to install, test, and place in satisfactory working order the Tee-Screen including all associated hardware as approved by the Engineer.
- 1.6 Water Diversion and Water Management required during the modification of the Pump House shall be considered inclusive of this item.

MATERIALS

- 2.1 Materials shall be new, with manufacturers' warranties, as applicable.
- 2.2 The Contractor shall submit Product Data Sheets for all components to be installed as shown on the Construction Plans and outlined in this Section. The Contractor shall submit to the Engineer for review and approval prior to installation.

- 2.3 The materials to be included for the modification of the pump house and installation of a new pipe intake shall consist of those shown on the Construction Plans. At a minimum, the materials shall include the 24-inch ductile iron pipe, 24-inch pipe intake tee screen, concrete and grout associated with modifications involving the filling and opening of pipe openings in the pump house wall, and a marker buoy.
- 2.4 All other materials depicted in the plan, profile and details on Sheet C-9 of the Construction Plans associated with modifications to the Pump House shall also be included for this item. Materials required to modify the Pump House associated with creating a new pipe opening and filling / grouting existing openings, stone fill, class B, and support for trenching and excavation. Stone Fill, Class B shall conform to specifications outlined in Section 585.

2.4.1 Pump Intake Tee-Screen

- 2.4.1.1 The Contractor shall submit all shop drawings, manufacturers' data and literature to the Engineer for approval prior to manufacturing the screens. The Contractor shall submit drawings showing screen diameter length, outlet size and slot opening, materials of construction and assembly weight.
- 2.4.1.2 The T-screen shall have capacity meeting or exceeding 1050 GPM and a maximum through velocity due to water removal not to exceed 0.5 feet per second. The total pressure drop through the Tee assembly shall not exceed 1.0 foot of water. Hydraulic calculation and documentation verifying compliance to these criteria shall be provided to the Engineer for approval.
- 2.4.1.3 The slot opening size shall be determined protect against impingement and mortality of aquatic life and also prevent against intake of debris into the pump system.
- 2.4.1.4 Structural performance shall be based on ASME pressure calculations and FEA. Screen shall be capable of withstanding a differential hydrostatic pressure in excess of 7.4 pounds per square inch or a maximum working depth of 17 feet of water. The design stress when determining strength shall be two thirds of the yield stress. Strength calculation and documentation verifying compliance to these criteria shall be provided upon request.
- 2.4.1.5 The wire and supports shall be 304 stainless steel. The remainder of the assembly shall be manufactured of corrosion resistant metal, AISI type 304 or 316 stainless steel. The main outlet shall be a 30-inch plate flange with a bolt pattern equal to AWWA C-207, Table 1, Class B. The airburst cleaning connection shall be through a 3 inch ANSI Class 150 raised face slip on flange.

2.4.2 Pipe

The pipe material installed for the hydrant system shall conform to the following specifications:

Iron	ANSI/AWWA C151/A21.51
	ANSI/AWWA C151/A21.15

The pipe and fittings, where applicable, shall be marked by the manufacturer as described in the applicable ASTM or ANSI/AWWA specification. Fittings shall be rated, in strength and quality, equal to the pipe being specified. Joints shall be air and water tight and shall meet the requirements of the applicable ASTM or ANSI/AWWA standards.

CONSTRUCTION REQUIREMENTS

- 3.1 All incidental work required to install the dry hydrant and components shall be considered inclusive for this item. Work items to be included, shall include at a minimum, excavation and trenching of pipe including temporary shoring, reconstruction of the stone and granite walls, if necessary, saw cutting and restoration of pavement, channel excavation below the normal water level, compaction of suitable subgrade, installation of bedding materials, and installation of any additional items required by the Engineer.
- 3.2 The Contractor shall submit Product Data Sheets for all items to the Engineer for review and approval prior to installation.
- 3.3 The Contractor shall submit Product Data Sheets a minimum of ten (10) days prior to planned installation.
- 3.4 All components of the system shall be installed to the lines and grades as shown on the drawings. All equipment shall be installed to the manufacturers' recommendations.

3.4.1 Pipe

The pipe shall be fitted with a Tee-Screen as described in Section 3.4.2. All pipes shall be installed to provide water tight and airtight joints. Pipe shall be placed on undisturbed soil or non-yielding compacted material. Over excavation must be corrected as noted on the drawings or as directed by the responsible engineer or his designated representative. Backfill shall be placed so as not to damage the pipe nor disturb alignment in any way. All pipes shall be properly bedded as designated on the drawings.

3.4.2 Pump Intake Tee-Screen

- 3.2.2.1 All incidental work required to install the Tee-screen shall be considered inclusive for this item. Work related to the installation of the 24-inch ductile iron pipe intake shall be covered under Section 603.
- 3.2.2.2 All components of the system shall be installed to the lines and grades as shown on the drawings. All equipment shall be installed to the manufacturers' recommendations.
- 3.2.2.3 Equipment shall be installed in accordance with the approved shop drawings and the manufacturer's installation instructions.
- 3.2.2.4 The end cap/plate shall be installed normal to streamflow on the downstream end.

3.2.2.5 The debris deflector shall be installed normal to streamflow on the upstream end to deflect debris from damaging screen.

3.2.2.6 The Contractor shall furnish and install all stainless steel hardware and incidentals to mount the screens as shown on the drawings.

3.4.3 Testing

Allow pipe joint sealants to cure before testing the piping system. The contractor is responsible for performing an initial pump test at the design capacity after installation to confirm satisfactory operation. Give careful attention to silt, debris, or other interference that may limit the full operation of the hydrant.

3.5 The Pump House modifications shall be certified by the contractor responsible for the final installation to the fact that it conforms to all the applicable construction specifications and requirements of the material and/or equipment manufacturers.

3.6 Modifications to the Pump House shall conform to the Construction Plans and this Specifications Section 612 as well as, but not limited to, Standard Specification Sections 520 – Preparation for Concrete Repairs, 203 – Excavation and Embankment, 206 – Structure Excavation for Pipes and Other Minor Structures, and 207 – Channel Excavation, 585 –Stone Fill.

METHOD OF MEASUREMENT

4.1 Modifications to the Pump House will be measured as a unit installed, inclusive of all accessories and appurtenances.

4.2 All additional items associated with the Pump House modifications, including but not limited to the following shall be considered part of the unit installed for this item:

4.2.1 Water Diversion and Water Management required for the installation of the 24-inch ductile iron pipe.

4.2.2 Excavation, shoring, trenching associated with installation of the pipe, and reconstructing, if necessary, of the pump house walls.

4.2.3 The 24-inch ductile iron pipe, associated Tee-Screen, and marker buoy.

4.2.4 All material required to stabilize the area including but not limited to Stone Fill, Class B.

4.2.5 All materials necessary for the removal and disposal of the existing 24-inch cast iron pipe, two (2) 12-inch cast iron pipes, concrete and / or grout associated with the sealing and opening of pipe holes in the pump house walls.

4.2.6 All other items shown on the Construction Plans on Sheet C-9 or Sheet C-13.

BASIS OF PAYMENT

5.1 Modifications to the Pump House will be paid at the Contract unit price installed complete in place. Such payment will constitute full compensation for the transporting, furnishing, installation, including removal of unsuitable and surplus material, and for all materials, labor, equipment, tools, and incidentals necessary to complete the work.

Add to Pay Items and Units:

612.0	Pump House Modifications	UNIT
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GREAT DAM REMOVAL

March 16, 2016

SPECIAL PROVISION

AMENDMENT TO SECTION 646 – TURF ESTABLISHMENT

ITEM 646.51 – Turf Establishment with Mulch, Tackifiers and Loam

Add to Description:

1.1.1 This work shall consist of preparing the soil and furnishing and applying seed to upland areas and riparian areas as shown on Sheet C-10 of the Construction Drawings. This shall also include preparing the soil and furnishing and applying seed to areas outside the limit of work and disturbed by the Contractor.

1.3 This work shall also consist of installing Coir Fiber Matting in Riparian areas as shown on the Construction Plans. Coir fiber matting shall be installed in the specified areas immediately following the seeding operation.

Replace the Materials Section 2.3 with the following:

2.3 Seed shall conform to 644.2 using the Upland Seed Mix provided herein. Upland seed mix shall conform to that provided in Table 1 and riparian seed mix shall conform to that provided in Table 2. Seed mixes indicated in the plans shall use native plant species only as follows:

Table 1 – Upland Seed Mix – Apply at 120 lbs per acre

Botanical Name	Common Name	Minimum Purity (%)	Minimum Germination (%)
<i>Agrostis stolonifera</i>	Red Top	95	80
<i>Festuca rubra</i>	Creeping Red Fescue	96	85
<i>Lolium perenne</i>	Perennial Ryegrass	98	90
<i>Poa pratensis</i>	Kentucky Bluegrass	97	85

Total lb/ac

Table 2 – Riparian Seed Mix – Apply at 25 lbs per acre (pure live seed)

Botanical Name	Common Name	Minimum Purity (%)	Minimum Germination (%)
<i>Acer rubrum</i>	Red maple	95	80
<i>Aster novae-angliae</i>	New England Aster	90	80
<i>Betula populifolia</i>	Gray birch	95	80
<i>Bidens frondosa</i>	Beggar-ticks	90	80
<i>Carex vulpinodes</i>	Fox sedge	90	80
<i>Carex crinita</i>	Fringed sedge	90	80
<i>Cornus ammomum</i>	Silky dogwood	90	80
<i>Ilex verticilata</i>	Winterberry	90	80
<i>Juncus effusus</i>	Soft rush	90	80
<i>Panicum virgatum</i>	Switch grass	90	80
<i>Scirpus cyperinus</i>	Wool grass	90	80
<i>Scirpus validus</i>	Soft Stem Bulrush	90	80

2.4 All areas disturbed within the limit of work, or disturbed by the Contractor outside the limit of work shall be loamed and seeded.

2.5 Coir Fiber Matting shall be installed in areas within the riparian shown as shown on the Construction Plans.

2.5.1 Matting for erosion control shall consist of 100% coconut fiber matric, CM-700 or equivalent as approved by the Engineer, and meet the following physical and performance parameters:

Index Parameters		Performance Parameters	
Thickness:	0.3 inches	Flow Velocity:	Observed 11 ft/sec
Tensile Strength:	1348 x 626 lbs/ft	"C" Factor:	0.002
Elongation:	34% x 38%		
Flexibility (mg-cm):	65030 x 29590		
Weight:	20 oz/SY		
Size:	6.6 x 164 ft (120 SY)		
Open Area:	50%		

2.5.2 Source of Coir Fiber Matting shall be submitted to the Engineer for review and acceptance prior to beginning construction.

Add to Construction Requirements:

3.4 Upland areas to be seeded with upland seed mix shall include a 4 inch depth of loam in accordance with the Construction Plans.

- 3.5 Riparian areas to be seeded with riparian seed mix shall include a 12 inch depth of humus in accordance with the Construction Plans.
- 3.6 Coir Fiber Matting shall be installed in areas within the riparian shown as shown on the Construction Plans. Sheet C-10 of the Construction Plans details the specified area of coir fiber matting to be placed, and Sheet C-8 provides a detail showing methods for installing and tying in the coir fiber matting.
- 3.6.1 Installation shall be in accordance with the manufacturer recommendations or as directed by the Engineer.

Replace in Method of Measurement:

4.1 Turf establishment for both upland areas and riparian areas shall be measured as a unit fully installed. Installation of loam and humus will be considered inclusive of the seeding unit.

Add to Method of Measurement:

4.3 Coir Fiber Matting shall be measured as a unit fully installed in riparian areas as shown on the Construction Plans or as directed by the Engineer. Installation of coir fiber matting will be considered inclusive of the seeding unit.

Replace in Basis of Payment:

5.1 Turf establishment for both upland areas and riparian areas shall be paid for at the Contract lump sum price.

5.2 Coir fiber matting for riparian areas shall be paid for the Contact Lump sum price.

Pay items and units:

646.51	Turf Establishment with Mulch, Tackifiers and Loam	UNIT
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GREAT DAM REMOVAL

March 14, 2016

SPECIAL PROVISION**AMENDMENT TO SECTION 692 – MOBILIZATION**

The purpose of this Special Provisions is to amend the Mobilization Section to include Demobilization and Site Cleanup as well as a Potential Second Mobilization during Year 2

Add 1.2 and 1.3 as follows:

- 1.2** Work required to complete mobilization and site preparation includes, but is not limited to:
- 1.2.1** Preparation, submittal, and revision of all required submittals as described in Specification Section 01300 – Submittals including the Detailed Project Work Plan and Project Schedule.
 - 1.2.2** Participation in a pre-construction meeting with the Engineer and Owner.
 - 1.2.3** Participation in weekly construction meetings with the Engineer and Owner.
 - 1.2.4** Coordination with the String Bridge Project.
 - 1.2.5** Installation of a Project Sign detailing the Project Owner, Designer, and Funding Partners at a prominent location within the limit of work.
 - 1.2.6** Construction and maintenance of temporary construction facilities and controls. This shall include a temporary field office if determined necessary by the Contractor.
 - 1.2.7** The lump sum price shall also include obtaining and paying fees associated with any required permits determined necessary by the Contractor or the Owner.
 - 1.2.8** All other one-time and recurring activities required by the Contractor to complete the Project unless included in another pay item or specifically identified as being the responsibility of Others.
- 1.3** This item shall consist of work and operations required to complete Demobilization and Site Cleanup. This shall include, but not be limited to, those necessary to the movement of personnel, equipment, supplies, and incidentals from the site of work, and associated cleanup and restoration of the site to its pre-construction condition. Work required to complete Demobilization and Site Cleanup includes, but is not limited to:
- 1.3.1** Removal of all personnel, equipment, and materials from the Site at the completion of the Work;

- 1.3.2 Removal of temporary facilities, utilities, erosion and sediment controls;
- 1.3.3 Removal and disposal of construction debris;
- 1.3.4 Removal of stockpile areas;
- 1.3.5 Restoration of site to a clean, neat, and orderly condition including repair of any additional damaged asphalt, brick sidewalk and lawn area, as required by the Engineer; and
- 1.3.6 Completion of punch list items to substantially complete all work as determined by the Engineer.

1.4 This item shall also describe a Second Mobilization and associated grading adjustments required during the second year following the first spring migration season post construction. This will be bid as an alternate second bid item. This item shall consist of preparatory work and operations, including, but not limited to, those necessary to the movement of personnel, equipment, supplies, and incidentals to the site of the work; and for all other work and operations which must be performed or for costs which must be incurred prior to beginning work on the various items. This shall include, but not be limited the following:

- 1.4.1 Mobilization to the site in year two following the first spring migration season post construction. This mobilization shall cover all items covered in this Section 692.
- 1.4.2 Two (2) days of construction activity, including but not limited to, personnel, equipment, supplies, and incidentals required to perform grading adjustments and boulder placement at the direction of the Engineer. This work shall not require water diversion. This work shall occur during a low flow period, and the construction shall occur "in-the-wet". The Contractor shall ensure all temporary erosion controls are installed in place to manage turbidity at the site.
- 1.4.3 The exact nature of the grading shall be determined in the field with the Owner, Engineer, and other Project Partners. The work shall be coordinated at the direction of the Engineer.

Add Section 2.1 Materials and include the following:

Materials

2.1 The Project Sign shall have minimum dimensions of 4 feet by 6 feet. Design of the sign shall be submitted to the Owner for review and approval prior to manufacturing and installation.

- 2.1.1 The sign shall contain the following information:

Project Name: Great Dam Removal and Exeter River Restoration
Owner: Town of Exeter
Design Engineer: VHB

2.1.2 The sign shall contain as a minimum the following language:

"This project has been completed with the assistance from the following funding partners:

- NHDES, Coastal Program
- NHDES, Aquatic Resource Mitigation Fund
- NH State Conservation Committee, Conservation Grant Program
- NOAA, National Marine Fisheries

2.1.3 The sign shall include the logo of the Owner, the Design Engineer and all the Funding Partners as shown on the Title Page of the Construction Plans.

Add Section 3.1 Construction Requirements and include the following:

Construction Requirements

3.1 Contractor shall submit the proposed Project Sign location for approval to the Engineer prior to installation.

Replace 4.1 with the following:

4.1 Mobilization and Demobilization and Site Cleanup, as described in Sections 1.2 and 1.3 will be measured as a unit.

4.2 Second Mobilization and associated grading and boulder adjustments to occur following the spring migration season post construction, as described in Section 1.4 will be measured as a unit.

Replace Pay item and unit with the following:

Pay Item and unit:

692.1	Mobilization and Demobilization and Site Cleanup	UNIT
692.2	Second Mobilization and Grading Adjustments in Year 2	UNIT

GREAT DAM REMOVAL

March 14, 2016

SUPPLEMENTAL**AMENDMENT TO SECTION 699 – MISCELLANEOUS TEMPORARY EROSION AND SEDIMENT CONTROL**

The purpose of this Supplemental Provision is to amend the Miscellaneous Temporary Erosion and Sediment Control and does not modify or amend other provisions of Section 699

Add 1.5 and 1.6 as follows:

- 1.5** This item shall consist of the fabrication and installation of temporary erosion and sediment controls methods prior to construction as shown on the Construction Plans.
- 1.6** The work covered under this item shall include all requirements outlined in Section 645 and Section 699 of the NHDOT Standard Specifications. The work covered under this item shall also include, at a minimum but not limited to, the following:
 - 1.6.1** Temporary Construction Fence
 - 1.6.2** Silt Fence
 - 1.6.3** Turbidity Curtain
 - 1.6.4** Tree Protection
 - 1.6.5** Silt Sack Sediment Trap
 - 1.6.6** Dewatering Basin

Add 2.4 through 2.6 as follows:

- 2.4** Materials shall be new, with manufacturers' warranties, as applicable.
- 2.5** The Contractor shall submit Product Data Sheets for all components to be installed as shown on the Construction Plans and outlined in this Section. The Contractor shall submit to the Engineer for review and approval prior to installation.
- 2.6** Materials shall include the following temporary erosion and sediment controls:
 - 2.6.1** Temporary Construction Entrance

Crushed stone shall be in accordance with Specification Section 645.3 of the NHDOT Standard Specifications.

2.6.2 Silt Fence

Silt Fence shall be in accordance with Section 3.7 of Specification 645 of the NHDOT Standard Specifications.

2.6.3 Turbidity Curtain

The turbidity curtain shall be in accordance with the detail shown on Sheet C-13 of the Construction Plans or an equal submitted by the Contractor to the Engineer for approval. The Contractor shall submit the Product Data sheet for the turbidity curtain ten (10) days prior to instream work for approval by the Engineer.

2.6.4 Tree Protection

Tree protection fencing shall be an orange plastic web fence, 4 feet high minimum. Wood stakes shall be six (6) foot long by 1 inch by 1 inch square driven a minimum of two (2) feet into the ground. Posts shall be spaced eight (8) feet on center, maximum.

2.6.5 Silt Sack Sediment Trap

Filter shall be a nonwoven geotextile in accordance with the following:

2.6.5.1 Non-woven filter fabric material shall be used for all separation layer applications (i.e. construction stabilized entrance and under rip rap) and for the catch basin inlet filters. Nonwoven filter fabric material shall be used to prevent soil intrusion into drains and/or assist in stabilizing soil subgrades to be laid on approved soil subgrades prior to placement of fill materials.

2.6.5.2 The non-woven filter fabric shall be Mirafi 140N or equivalent filter fabric. The Non-woven filter fabric shall meet the requirements of Standard Specification for Geotextile Specification for Highway Applications (ASHTO Designation: M 288) for a Class 3 fabric. The material shall conform to the following minimum average roll values (weakest principal direction) requirements:

Factory QA Certification Requirements
Material – Non-woven Polypropylene

ITEM	TEST METHOD	REQUIRMENT
Grab Tensile Strength	ASTM D 4632	120 (lbs)
Grab Tensile Elongation	ASTM D 4632	50 (%)
Trapezoidal Tear Strength	ASTM D 4533	50 (lbs)
CBR Puncture Strength	ASTM D 6241	310 (lbs)
Apparent Opening Size	ASTM D 4751	70 (U.S. Sieve)
Permittivity	ASTM D 4491	1.7 (sec-1)
Flow Rate	ASTM D 4491	135 (gal/min/sf)
UV Resistance (at 500 hours)	ASTM D 4355	70 (% strength retained)

2.6.6 Dewatering Basin

The Contractor shall submit for approval the proposed dewatering basin and / or dewatering system for approval by the Engineer. The Contractor shall submit Product Data Sheets for proposed dewatering devices to the Engineer ten (10) days before dewatering activities are to occur.

Add 3.3 through 3.8 as follows:

- 3.3** Construction requirements shall be as specified in 645.3 or as directed by the Engineer.
- 3.4** All incidental work required to install temporary erosion controls shall be considered inclusive for this item.
- 3.5** The Contractor shall submit Product Data Sheets for all items to the Engineer for review and approval prior to installation.
- 3.6** The Contractor shall submit Product Data Sheets a minimum of ten (10) days prior to planed installation.
- 3.7** All components of the system shall be installed to the lines and grades as shown on the drawings or as directed by the Engineer. All equipment shall be installed to the manufacturers' recommendations.

Replace 4.1 as follows:

- 4.1 Work authorized under this section will be paid as a unit once fully removed from the site following completion of all construction activities. The unit shall include all items described in this specification or as directed by the Engineer.

Replace 5.1 as follows:

- 5.1 Payment for work authorized under this item will be paid for at the Contract price per unit.

Add to Pay Items and Units:

699	Miscellaneous Temporary Erosion and Sediment Controls	UNIT
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Appendix A

NHDES Wetlands and Non-Specific Permit, ACOE Authorization, & Section 106 MOA

Appendix B

PARE Geotechnical Report and Boring Logs

Appendix C

Property Access Agreement
