

PROJECT MANUAL FOR

Larkin Dam Removal Parker River Restoration Project

CONTRACT NO. 25-07

*Town of Newbury
Essex County, Massachusetts*

6/4/2025

ISSUED FOR BID

Prepared for:



Town of Newbury
12 Kent Way, Byfield, MA 01922
(978) 465-0862

Prepared by:



Gomez and Sullivan Engineers, DPC
PO Box 2179, Henniker, NH 03242
(603) 428-4960

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DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

DOCUMENT 001116 - INVITATION TO BID

1.1 PROJECT INFORMATION

- A. **Notice to Bidders:** Qualified bidders are invited to submit bids for Project as described in this Document according to the Instructions to Bidders
- B. **Project Identification:** Larkin Dam Removal / Parker River Restoration (Contract No. 25-07)
- C. **Project Location:**
1. **Larkin Dam:** access from Larkin Road approximately 400 feet southwest of the bridge over the Parker River (lat/long: 42.749945, -70.942368)
 2. **USGS Gage / I-95 Bridge:** access from the south end of the commercial plaza at 12 Kent Way (lat/long: 42.752709, -70.945558)
- D. **Project Contacts:**
- Owner:
Mason Ferrick
Conservation Agent
Town of Newbury
12 Kent Way, Suite 101
Byfield, MA 01922
(978) 465-0862
conscom@newburyma.gov
- Engineer:
Jill Griffiths, PE
Gomez and Sullivan Engineers, DPC
PO Box 2179
Henniker, NH 03242
(716) 402-6777
jgriffiths@gomezandsullivan.com
- E. **Project Description:** The Town of Newbury (Town or Owner) is soliciting a contractor to remove the Larkin Road Dam (Larkin Dam) on the Parker River. The three major elements of the project include 1) removal of the Larkin Dam, 2) installation of a scour countermeasure through the Interstate 95 (I-95) bridge located approximately 1,000 feet upstream of the dam to mitigate an existing scour condition, and 3) removal of an existing US Geological Survey (USGS) gage weir and channel stabilization approximately 180 feet upstream of the bridge to eliminate a potential post-dam removal fish passage barrier.

Larkin Dam Removal: Work at this site will involve demolition and removal of the dam and appurtenant structures, including the full horizontal and vertical extent of the approximately 38-foot-long, 5-foot-high concrete and stone spillway; a 65-foot-long concrete-faced stone left abutment wall; a 127-foot-long concrete right abutment wall; the concrete former mill intake; a 140-foot-long concrete fishway; and a 35-foot-long, 2- to 3-foot-high stone “fish weir” that spans the channel 30 feet downstream of the spillway.

Sediment will be graded in the immediate area of the dam breach to construct a channel section, and a low-flow channel will be dredged between the dam and the downstream fish weir to accommodate fish passage. The fishway and former mill intake excavations will be filled to provide temporary construction access and then loamed and seeded to create a footpath.

I-95 Bridge Scour Countermeasure: The proposed scour countermeasure for the I-95 bridge will involve placement of an approximately 3-foot-thick layer of rounded riprap (infilled with fines) within the channel through the approximately 35-foot-wide, 227-foot-long bridge. Existing steel struts connecting the bridge abutments under the channel will need to be protected from damage during riprap placement.

1. **USGS Gage Weir Removal & Channel Stabilization:** Work at this site will involve removal of the approximately 18-foot-wide, 2-foot-high, concrete low-head weir and upstream concrete pad, removal of the right stone abutment and grading of the bank, and construction of a riffle with rounded riprap (infilled with fines) to stabilize the channel. A low-flow channel will be dredged between the upstream bridge face and the bottom of the proposed riffle to accommodate fish passage.

1.2 BID SUBMITTAL AND OPENING

- A. Sealed bids marked “Larkin Dam Removal (Contract No. 25-07)” will be received until the bid time and date at the location indicated below. Bids will thereafter be publicly opened and read aloud.

1. **Bid Opening Date:** Tuesday, July 8, 2025
2. **Bid Time:** 10:00 am
3. **Location:** Submit bids via email (preferred), mail, or hand-delivery to:
Mason Ferrick
Conservation Agent
Town of Newbury
12 Kent Way, Suite 101
Byfield, MA 01922
conscom@newburyma.gov

1.3 PRE-BID CONFERENCE

- A. A pre-bid conference for all Bidders will be held at the site on Wednesday, June 11, 2025 at 1:00 pm. Prospective Bidders are strongly encouraged to attend. Prospective Bidders should park in the commercial plaza at 12 Kent Way in Byfield, MA and meet at the south end of the lot near the storage containers. The USGS Gage/I-95 Bridge site will be toured first, and a carpool will be arranged to the Larkin Dam site following.

1.4 BIDDING DOCUMENTS

- A. Electronic copies of Bidding Documents (i.e., this Project Manual) may be contacting the Owner or Engineer and a link will be provided.
- B. Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

- C. 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 authorize or confer a license for any other use.

1.5 TIME OF COMPLETION

- A. Bidders may begin the Work upon receipt of the Notice to Proceed and shall complete the Work within the Contract Time. The Notice to Proceed is anticipated by July 24, 2025 (pending an outstanding permit from the Massachusetts Department of Transportation (MassDOT) for the I-95 bridge work). Substantial Completion will be defined by the completion of instream work and is encouraged to be completed in 2025 but must be completed by March 31, 2026, prior to the start of the Time-of-Year (TOY) restriction for in-water or silt-producing work to protect anadromous fish (April 1 through June 15). Final Completion is required by July 31, 2026.

1.6 BID/CONTRACT SCHEDULE

- A. The following dates shall apply to this bid solicitation and contract:
- | | |
|--|-------------------------------|
| 1. Publication of Bid Notice | Wed, Jun 04, 2025 |
| 2. Pre-Bid Meeting | Wed, Jun 11, 2025 at 1:00 pm |
| 3. Deadline to Submit Questions | Wed, Jun 18, 2025 |
| 4. Issuance of Final Addenda | Wed, Jun 25, 2025 |
| 5. Bid Opening | Tue, Jul 08, 2025 at 10:00 am |
| 6. Notice of Award Anticipated by | Thu, Jul 10, 2025 |
| 7. Notice to Proceed Anticipated by | Thu, Jul 24, 2025 |
| Time-of-Year Restriction for Instream Work | Tue, Mar 31, 2026 |
| 8. Substantial Completion (instream work) | April 1 – June 15 |
| 9. Final Completion | Fri, Jul 31, 2026 |

END OF DOCUMENT 001116

DOCUMENT 002113 - INSTRUCTIONS TO BIDDERS

1.1 QUALIFICATIONS OF BIDDERS

- A. Bidders must be properly licensed under the laws governing their respective trades and be able to obtain insurance and bonds required for the Work.
- B. To demonstrate Bidder's qualifications to perform the Work, each Bid must be accompanied by an experience statement describing at least three projects completed within the past five years that demonstrates satisfactory execution by Bidder of the primary tasks listed in the project. Project reference(s) shall include project name, location, delivery date, description, and owner contact information (phone and email). A reference form is provided in the Bid Form for the Bidder's use.
- C. Bids shall be accompanied by a condensed preliminary version of the proposed Water Control Plan required per Section 312319, Paragraph 1.2(A). The preliminary Water Control Plan shall include, but not be limited to, a description of the proposed cofferdam/temporary bypass plan for each site, methods for installing the water control measures, and the anticipated length of time that the USGS gage site will be dewatered.
- D. Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.
- E. Project experience in all areas requested in the Bid Form is not a requirement for selection; however, the information provided in the experience statement will be used to assist in evaluating Bidder's skill, ability, and integrity necessary for the performance of the Work.
- F. Owner reserves the right to reject any Bid if the evidence submitted fails to satisfy Owner that such Bidder is properly qualified to carry out the obligations of the Agreement and to complete the Work contemplated herein.

1.2 EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA, AND SITE

- A. The Larkin Dam site is publicly accessible, and as such, Bidder may access the site to conduct such examinations, investigations, and tests as Bidder deems necessary for submission of a Bid. The USGS gage weir/I-95 bridge site must be accessed through private property at 12 Kent Way, which is permissible with prior notification to Owner.
- B. It is the responsibility of each Bidder before submitting a Bid to:
 - 1. examine and carefully study the Bidding Documents and the other related data identified in the Bidding Documents;
 - 2. become familiar with and satisfy Bidder as to the general, local, and site conditions that may affect cost, progress, and performance of the Work;
 - 3. 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;
 - 4. 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;
 - 5. 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

6. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.
- C. The submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article.

1.3 INTERPRETATIONS AND ADDENDA

- A. 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 emailed to all parties recorded by Engineer as having received the Bidding Documents. Addenda may also be issued to clarify, correct, or change the Bidding Documents as deemed advisable by Owner or Engineer.
- B. To ensure receipt of any Addenda, contact the Engineer to be added to the list of Bidders. Provide company name and address, contact name, email address, and phone number.
- C. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
- D. Final questions must be submitted by Wednesday, June 18, 2025 to Engineer. Final addenda will be issued to the Bidder list by Wednesday, June 25, 2025.

1.4 BID SECURITY

- A. A Bid must be accompanied by bid security made payable to Owner in an amount of 5 percent of Bidder's maximum Bid price and in the form of a Bid bond (such as the form attached in Document 004113 of this Project Manual). No bids may be withdrawn for a period of 60 calendar days after opening of bids. Owner reserves the right to reject any and all bids and to waive informalities and irregularities.
- B. 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 days¹ after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults. The Bid security of other Bidders whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Agreement or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be returned.
- C. 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.

1.5 CONTRACT TIMES

- A. The times by which milestones are to be achieved and for readiness for final payment are to be set forth by Bidder in the Bid and will be entered into the Agreement (or incorporated therein by reference to the specific language of the Bid). The times will be taken into consideration by the

¹ For the purposes of this document, the word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

Owner during the evaluation of Bids, and it will be necessary for the apparent Successful Bidder to satisfy the Owner that it will be able to achieve completion of the work and be ready for final payment within the times designated in the Bid.

- B. Substantial Completion will be defined by the completion of instream work and is encouraged to be completed in 2025 but must be completed by March 31, 2026, prior to the start of the Time-of-Year (TOY) restriction for in-water or silt-producing work to protect anadromous fish (April 1 through June 15). Final Completion is required by July 31, 2026.

1.6 SUBSTITUTE AND “OR-EQUAL” ITEMS

- A. 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.

1.7 SUBCONTRACTORS AND SUPPLIERS

- A. Names of any proposed Subcontractors and Suppliers shall be indicated at the time of Bid on the Bid Form in the spaces provided; all other Subcontractors and Suppliers must be submitted in the Schedule of Values. Contractor shall submit Subcontractor/Supplier experience statements for Owner's review at the time of Bid. No Subcontractor or Supplier, other than those named in the Bid, shall be utilized without the prior approval of Owner.

1.8 PREPARATION OF BID

- A. The Bid Form is included with the Bidding Documents. All blanks on the Bid Form shall be completed in ink or typewritten and the Bid Form shall be signed in ink or with an approved electronic signature. All names shall be printed below signatures. A Bid price shall be indicated for each Bid item listed therein.
- B. 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. The corporate address and state of incorporation shall be shown. 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. 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. A Bid by an individual shall show the Bidder's name and official address. 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.
- C. The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.
- D. The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder's state contractor license number, if any, shall also be shown on the Bid Form.

1.9 BASIS OF BID

- A. Bidders shall submit a Bid on a lump sum basis by bid item for the Base Bid and Add-Alternate items described in the Bidding Documents as provided for in the Bid Form. The comparison of Bids will be based on the Total Base Bid for all Base Bid items included in the Bid Form.

1.10 SUBMITTAL OF BID

- A. With each copy of the Bidding Documents, a Bidder is furnished one separate copy of the Bid Form and the Bid Bond Form.
- B. The Bid Form is to be completed and submitted with the Bid security, the experience statement, and the condensed preliminary Water Control Plan.
- C. A Bid shall be submitted no later than the date and time prescribed and at the place indicated in the Invitation to Bid.
- D. Electronic submittals via email are preferred, but mailed or hand-delivered bids will also be accepted.

1.11 MODIFICATION AND WITHDRAWAL OF BID

- A. A Bid may be modified or withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids.

1.12 EVALUATION OF BIDS AND AWARD OF CONTRACT

- A. 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 reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate terms with Successful Bidder.
- B. 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.
- C. 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.
- D. Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work in accordance with the Contract Documents.
- E. If the Contract is to be awarded, Owner will award the Contract to the Bidder whose Bid is in the best interests of the Project.
- F. Owner reserves the right to delay or cancel award of the Contract in the event that project regulatory approvals or grant funds are delayed or canceled.

1.13 CONTRACT SECURITY AND INSURANCE

- A. Article 5 of the General Conditions, as modified by the Supplementary Conditions in Section 006000, sets forth Owner's requirements as to performance and payment bonds and insurance. When Successful Bidder delivers the executed Agreement to Owner, it shall be accompanied by such bonds. Insurance requirements are provided in Article 5 of the Supplementary Conditions.

1.14 SIGNING OF AGREEMENT

- A. When Owner issues a Notice of Award to the Successful Bidder, it shall be accompanied by the required number of unsigned counterparts of the Agreement along with the other Contract Documents which are identified in the Agreement as attached thereto. Within 5 days thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to Owner.

1.15 ADDITIONAL REQUIREMENTS

- A. Applicable provisions of State General Laws and Regulations and/or the United States Code and Code of Federal Regulations govern this Contract and any provision in violation of the foregoing shall be deemed null, void and of no effect. Where conflict between Code of Federal Regulations and State Laws and Regulations exist, the more stringent requirement shall apply.
- B. All materials, workmanship, methods, practices, etc., shall conform to the requirements of the latest versions of the following references, as applicable:
 - 1. MassDOT Highway Division Standard Specifications for Highways and Bridges, Supplemental Provisions, and Construction Standard Details
 - 2. Manual on Uniform Traffic Control Devices (MUTCD)
 - 3. American Society for Testing and Materials (ASTM)
- C. Construction shall be in accordance with the project drawings, "Parker River Restoration Project Final Drawings – Issued for Bid" dated June 4, 2025 (attached in **Appendix A**).
- D. The Work shall be completed in accordance with all project permits, which are attached in **Appendix B**.
- E. Minimum wage rates as determined by the Commissioner of Dept. of Workforce Development under the provision of the Massachusetts General Laws, Chapter 149, Sections 26 to 27G, as amended, apply to this project. Prevailing wage rates for this project are provided in **Appendix C**. It is the responsibility of the contractor, prior to bid opening, to request, if necessary, any additional information on the Minimum wage rates for those trade people who may be employed for the proposed work under this contract.

END OF DOCUMENT 002113

DOCUMENT 004113 - BID FORM

1.1 BID INFORMATION

- A. **Bidder:** _____
- B. **Project Name:** Larkin Dam Removal / Parker River Restoration (Contract No. 25-07)
- C. **Project Location:**
1. **Larkin Dam:** access from Larkin Road approximately 400 feet southwest of the bridge over the Parker River (lat/long: 42.749945, -70.942368)
 2. **USGS Gage / I-95 Bridge:** access from the south end of the commercial plaza at 12 Kent Way (lat/long: 42.752709, -70.945558)
- D. **Project Contacts:**
- Owner:
Mason Ferrick
Conservation Agent
Town of Newbury
12 Kent Way, Suite 101
Byfield, MA 01922
(978) 465-0862
conscom@newburyma.gov
- Engineer:
Jill Griffiths, PE
Gomez and Sullivan Engineers, DPC
PO Box 2179
Henniker, NH 03242
(716) 402-6777
jgriffiths@gomezandsullivan.com

1.2 CERTIFICATIONS AND BID

- A. The undersigned Bidder, having carefully examined the Procurement and Contracting Requirements, Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, as prepared by Gomez and Sullivan Engineers, DPC, having visited the site if needed, and being familiar with all conditions and requirements of the Work, hereby agrees to furnish all material, labor, equipment and services, including all scheduled allowances, necessary to complete the construction of the above-named project, according to the requirements of the Procurement and Contracting Documents, for the bid stipulated sum shown in the bid table below.
- B. Descriptions of the bid items are provided in Section 011000 "Summary." Additional information can be found in the other specifications.

1.3 BID TABLE

A. LARKIN DAM REMOVAL

1. BASE BID

| Item No. | Item | Lump Sum Bid Amount | | | |
|----------------|---------------------------------|---------------------|-----|-----------------|--------------------|
| | | Unit | Qty | Amount in Words | Amount in Numerals |
| 1A | Mobilization/ Demobilization | LS | 1 | Dollars | \$ |
| 2A | Site Preparation | LS | 1 | Dollars | \$ |
| 3A | Water Control | LS | 1 | Dollars | \$ |
| 4A | Demolition & Excavation | LS | 1 | Dollars | \$ |
| 5A | Sediment Dredging & Disposal | CY | 250 | Dollars | \$ |
| 6A | NOT USED | | | | |
| 7A | Site Restoration | LS | 1 | Dollars | \$ |
| TOTAL BASE BID | | | | Dollars | \$ |

2. ADD ALTERNATES

| Item No. | Item | Amount | | | |
|----------|--|--------|-----|-----------------|--------------------|
| | | Unit | Qty | Amount in Words | Amount in Numerals |
| 8A | Additional Sediment Dredging & Disposal | CY | 1 | Dollars | \$ |
| 9A | Offsite Disposal of Regulated Sediment | CY | 1 | Dollars | \$ |
| 10A | Rock Excavation | CY | 1 | Dollars | \$ |

*LS = Lump Sum; CY = Cubic Yards

B. USGS WEIR REMOVAL / I-95 BRIDGE SCOUR COUNTERMEASURE

1. BASE BID

| Item No. | Item | Lump Sum Bid Amount | | | |
|-----------------------|---|---------------------|-----|-----------------|--------------------|
| | | Unit | Qty | Amount in Words | Amount in Numerals |
| 1B | Mobilization/ Demobilization | LS | 1 | Dollars | \$ |
| 2B | Site Preparation | LS | 1 | Dollars | \$ |
| 3B | Water Control | LS | 1 | Dollars | \$ |
| 4B | Demolition & Excavation (<i>Gage</i>) | LS | 1 | Dollars | \$ |
| 5B-1 | Sediment Dredging & Disposal (<i>Gage</i>) | CY | 340 | Dollars | \$ |
| 5B-2 | Sediment Dredging & Disposal (<i>Bridge</i>) | CY | 700 | Dollars | \$ |
| 6B-1 | Channel Stabilization (<i>Gage</i>) | LS | 1 | Dollars | \$ |
| 6B-2 | Channel Stabilization (<i>Bridge</i>) | LS | 1 | Dollars | \$ |
| 7B | Site Restoration | LS | 1 | Dollars | \$ |
| TOTAL BASE BID | | | | Dollars | \$ |

2. ADD ALTERNATES

| Item No. | Item | Amount | | | |
|----------|--|--------|-----|-----------------|--------------------|
| | | Unit | Qty | Amount in Words | Amount in Numerals |
| 8B | Additional Sediment Dredging & Disposal | CY | 1 | Dollars | \$ |
| 9B | Offsite Disposal of Regulated Sediment | CY | 1 | Dollars | \$ |
| 10B | Rock Excavation | CY | 1 | Dollars | \$ |

*LS = Lump Sum; CY = Cubic Yards

1.4 BID GUARANTEE

- A. The undersigned Bidder agrees to execute a contract for this Work in the above amount and to furnish surety as specified within 10 days after a written Notice of Award, if offered within 30 days after receipt of bids, and on failure to do so agrees to forfeit to Owner the attached bid bond, as liquidated damages for such failure, in the following amount constituting five percent (5%) of the Base Bid amount above:
- Surety: _____ Dollars (\$ _____)
- B. In the event Owner does not offer Notice of Award within the time limits stated above, Owner will return to the undersigned the bid bond.

1.5 TIME OF COMPLETION

- A. The undersigned Bidder proposes and agrees hereby to commence the Work of the Contract Documents on a date specified in a written Notice to Proceed to be issued by Engineer (anticipated by July 24, 2025) and shall fully complete all work by July 31, 2026.

1.6 ACKNOWLEDGEMENT OF ADDENDA

- A. The undersigned Bidder acknowledges receipt of and use of the following Addenda in the preparation of this Bid:
1. Addendum No. 1, dated _____
 2. Addendum No. 2, dated _____
 3. Addendum No. 3, dated _____
 4. Addendum No. 4, dated _____

1.7 BID SUPPLEMENTS

- A. The following supplements are a part of this Bid Form and are attached hereto.
1. Certificate of Non-Collusion (Section 1.10)
 2. Tax Compliance Certification (Section 1.11)
 3. Reference Form (Section 1.12)
 4. Bid Bond Form (such as EJCDC Document C-430, included in Document 004313)
 5. Certificate of Corporate Vote (Document 004810)
 6. Project Experience Statement
 7. Draft Proposed Water Control Plan

1.8 CONTRACTOR'S LICENSE

- A. The undersigned further states that it is a duly licensed contractor, for the type of work proposed, in the project jurisdiction.

1.9 SUBMISSION OF BID

Respectfully submitted this _____ day of _____, 20__

Submitted By: _____ (Name of bidding firm or corporation)

Authorized Signature: _____

Signed By: _____ (Type or print name)

Title: _____ (Owner/Partner/President/Vice President)

Street Address: _____

City, State, Zip: _____

Phone: _____

License No.: _____

Federal ID No.: _____ (Affix Corporate Seal)

1.10 CERTIFICATE OF NON-COLLUSION

- A. The undersigned certifies under penalties of perjury that this bid or proposal has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

Signature of individual submitting bid or proposal

Name of business

1.11 TAX COMPLIANCE CERTIFICATION

- A. Pursuant to M.G.L. c. 62C, §49A, I certify under the penalties of perjury that, to the best of my knowledge and belief, I am in compliance with all laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

Signature of individual submitting bid or proposal

Name of business

1.12 REFERENCES

A. Bidder must provide references for at least three similar projects completed within the past five years that demonstrate satisfactory execution by Bidder of the primary tasks listed in the project.

B. Reference: _____

Current Contact: _____

Phone: _____

Email: _____

Project Location: _____

Delivery Date: _____

Project Description: _____

C. Reference: _____

Current Contact: _____

Phone: _____

Email: _____

Project Location: _____

Delivery Date: _____

Project Description: _____

D. Reference: _____

Current Contact: _____

Phone: _____

Email: _____

Project Location: _____

Delivery Date: _____

Project Description: _____

END OF DOCUMENT 004113

DOCUMENT 004313 - BID BOND FORM

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):

Town of Newbury
12 Kent Way, Suite 101
Byfield, MA 01922

BID

Bid Due Date: July 8, 2025

Description (Project Name and Include Location): Larkin Dam Removal, Newbury, MA
12 Kent Way, Suite 101, Byfield, MA 01922 | administrator@townofnewbury.org

BOND

Bond Number:

Date (Not earlier than Bid due date):

Penal sum _____ \$ _____
(Words) (Figures)

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

BIDDER

SURETY

(Seal)
Bidder's Name and Corporate Seal

(Seal)
Surety's Name and Corporate Seal

By: _____
Signature

By: _____
Signature (Attach Power of Attorney)

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Note: Above addresses are to be used for giving any required notice. Provide execution by any additional parties, such as joint venturers, if necessary.

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

END OF DOCUMENT 004313

DOCUMENT 004810 - CERTIFICATE OF CORPORATE VOTE (CORPORATION ONLY)

At a duly authorized meeting of the Board of Directors of _____

held on _____, it was VOTED that _____

_____ of this company, be and hereby is authorized to execute
(Officer)

bidding, documents, contracts, and bonds in the name and on behalf of said company, and affix its corporate seal hereto; and such execution of any contract or obligation in this company's name on its behalf by such officer under seal of the company, shall be valid and binding upon this company.

I hereby certify that I am the clerk of the above named corporation and
that _____

_____ is the duly elected officer as above of said company, and that the above vote has not been amended or rescinded and remains in full force and effect as the date of this contract.

Clerk

Date

Affix Corporate Seal

END OF DOCUMENT 004800

DOCUMENT 006000 - FORMS

1.13 FORM OF AGREEMENT AND GENERAL CONDITIONS

- A. The following form of Owner/Contractor Agreement and form of the General Conditions shall be used for Project:
 - 1. EJCDC Document C-520, "Form of Agreement Between Owner & Contractor, Stipulated Price"
 - a. The General Conditions for Project are EJCDC Document C-700 "Standard General Conditions of the Construction Contract."
 - 2. The Form of Agreement and General Conditions are included in this Project Manual.
 - 3. The Supplementary Conditions for Project are separately prepared and included in this Project Manual.

1.14 ADMINISTRATIVE FORMS

- A. Copies of EJCDC standard forms may be purchased from the Engineers Joint Contract Documents Committee; <https://www.ejcdc.org/>.
- B. Preconstruction Forms:
 - 1. Form of Performance Bond and Labor and Material Bond: EJCDC Document P-610, "Performance Bond for Procurement Contracts," included in this Project Manual.
 - 2. Form of Payment Bond: EJCDC Document P-615, "Payment Bond for Procurement Contracts," included in this Project Manual.
- C. Information and Modification Forms:
 - 1. Change Order Form: "EJCDC Document C-941, Change Order," incorporated by reference.
 - 2. Form of Change Directive: EJCDC Document C-940, "Work Change Directive," incorporated by reference.
- D. Payment Forms:
 - 1. Payment Application: EJCDC Document C-620, "Contractor's Application for Payment," incorporated by reference.
- E. Certificate of Completion Forms:
 - 1. Certificate of Substantial Completion: EJCDC Document C-625, "Certificate of Substantial Completion," incorporated by reference.

FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

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

_____ (“Contractor”).

Owner and Contractor hereby agree as follows:

ARTICLE 1 – WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents.

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 three major elements of the project include 1) removal of the Larkin Dam on the Parker River, 2) installation of a scour countermeasure through the Interstate 95 (I-95) bridge located approximately 1,000 feet upstream of the dam to mitigate an existing scour condition, and 3) removal of an existing US Geological Survey (USGS) gage weir and channel stabilization approximately 180 feet upstream of the bridge to eliminate a potential post-dam removal fish passage barrier.

ARTICLE 3 – ENGINEER

3.01 The Project has been designed by Gomez and Sullivan Engineers, DPC (Engineer), who assumes 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 March 31, 2025, and completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions on or before July 31, 2026.

ARTICLE 5 – CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the amounts determined pursuant to Paragraphs 5.01.A below:

A. For all Work, a lump sum of: \$ _____.

All specific cash allowances are included in the above price in accordance with Paragraph 11.02 of the General Conditions.

ARTICLE 5 – PAYMENT PROCEDURES

5.02 Submittal and Processing of Payments

- A. Contractor shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.
- B. Any work completed through June 30th of a given year must be invoiced through the period ending June 30th and the invoice must be submitted to the Engineer no later than July 15th so that the Owner may process it for payment by July 31st in accordance with grant reimbursement requirements.

5.03 Progress Payments; Retainage

- A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the last day of each month during performance of the Work as provided in Paragraph 6.02.A.1 below. All such payments will be measured by the schedule of values established as provided in Paragraph 2.07.A of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements.
 - 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 Engineer may determine or Owner may withhold, including but not limited to liquidated damages, in accordance with Paragraph 14.02 of the General Conditions.
 - a. 90 percent of Work completed. (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. 90 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).
- B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 95 percent of the Work completed, less such amounts as Engineer shall determine in accordance with Paragraph 14.02.B.5 of the General Conditions and less 200 percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the tentative list of items to be completed or corrected attached to the certificate of Substantial Completion.

5.04 Final Payment

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

ARTICLE 6 – CONTRACTOR'S REPRESENTATIONS

6.01 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: drawings of physical conditions relating to existing surface or subsurface structures at the Site, if any, that have been identified in Paragraph 4.02.A of the Supplementary Conditions as containing reliable "technical data."
- E. Contractor has considered the information known to Contractor; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Contract Documents; and (3) Contractor's safety precautions and programs.
- F. Based on the information and observations referred to in Paragraph 7.01.E above, Contractor does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.
- 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.

ARTICLE 7 – CONTRACT DOCUMENTS

7.01 Contents

- A. The Contract Documents consist of the following:
 - 1. This Agreement (pages 1 to _____, inclusive).

2. Performance bond (pages ____ to ____, inclusive).
3. Payment bond (pages ____ to ____, inclusive).
4. General Conditions (pages ____ to ____, inclusive).
5. Supplementary Conditions (pages ____ to ____, inclusive).
6. Specifications as listed in the table of contents of the Project Manual.
7. Drawings consisting of 16 sheets with each sheet bearing the following general title: “Parker River Restoration Project – Drawings – Issued for Bid”, as listed below:
 1. Cover Sheet
 2. General Notes
 3. Overview of Existing Project Area
 4. Overview of Proposed Project Area
 5. Erosion and Sediment Control Plan
 6. General Access, Erosion, & Water Control Details (Sheet 1 of 2)
 7. General Access, Erosion, & Water Control Details (Sheet 2 of 2)
 8. Larkin Dam Removal – Existing Plan
 9. Larkin Dam Removal – Access & Removal Plan
 10. Larkin Dam Removal – Existing & Proposed Elevations, Profiles, & Sections
 11. Larkin Dam Removal – Proposed Plan & Fishway & Intake Sections
 12. USGS Gage Weir Removal – Existing Plan, Profile, & Elevation
 13. USGS Gage Weir Removal – Proposed Plan, Profile & Elevation
 14. I-95 Bridge Scour Countermeasure – Existing Plan, Elevation, & Details
 15. I-95 Bridge Scour Countermeasure – Water Management Plan
 16. I-95 Bridge Scour Countermeasure – Proposed Plan, Elevation, & Profile
8. Addenda (numbers ____ to ____, inclusive).
9. Exhibits to this Agreement (enumerated as follows):
 - a. Contractor’s Bid (pages ____ to ____, inclusive).
 - b. Documentation submitted by Contractor prior to Notice of Award (pages ____ to ____, inclusive).
 - c. Permits, consisting of the following:
 1. MA Dept. of Environmental Protection, Bureau of Water Resources – 401 Water Quality Certification
 2. US Army Corps of Engineers, New England Div. – MA General Permit
 3. Newbury Conservation Commission – Wetlands Protection Act Restoration Order of Conditions
 4. MA Dept. of Fish and Game, Div. of Marine Fisheries – Fishway Construction Permit
 5. MA Historical Commission – Approved Archaeological Site Avoidance and Protection Plan
 6. MA Dept. of Environmental Protection, Bureau of Water Resources – Chapter 91 Waterways Authorizations
 - a. Administrative Authorization for Demolition of Unlicensed Structures (Larkin Dam, Fish Weir, and Gage Weir)
 - b. Ch. 91 Dredge Permit for Larkin Dam & Gage Site

c. Ch. 91 License for I-95 Bridge Work
7. MA Dept. of Transportation, Highway Div. – State Highway Access Permit

10. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
- a. Notice to Proceed (pages ____ to ____, inclusive).
 - b. Work Change Directives.
 - c. Change Orders.
- B. The documents listed in Paragraph 8.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 8.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in Paragraph 3.04 of the General Conditions.

ARTICLE 8 – MISCELLANEOUS

8.01 Terms

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

8.02 Assignment of Contract

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

8.03 Successors and Assigns

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

8.04 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.

8.05 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 9.05:

1. “corrupt practice” means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process 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. Counterparts have been delivered to Owner and Contractor. All portions of the Contract Documents have been signed or have been identified by Owner and Contractor or on their behalf.

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

OWNER:

CONTRACTOR

By: Tracy Blais

By: _____

Title: Town Administrator

Title: _____

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

Attest: _____

Attest: _____

Title: _____

Title: _____

Address for giving notices:

Address for giving notices:

(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.)

License

No.: _____

(Where applicable)

Agent for service of process:

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly by



AMERICAN COUNCIL OF ENGINEERING COMPANIES

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PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
A Practice Division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

Endorsed by



CONSTRUCTION SPECIFICATIONS INSTITUTE

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

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 Defined Terms

- A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.
 3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
 5. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 6. *Bidder*—The individual or entity who submits a Bid directly to Owner.
 7. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).
 8. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and the Bid Form with any supplements.
 9. *Change Order*—A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.
 10. *Claim*—A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.
 11. *Contract*—The entire and integrated written agreement between Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.
 12. *Contract Documents*—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.
 13. *Contract Price*—The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).
 14. *Contract Times*—The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; and (iii) complete the Work so that

it is ready for final payment as evidenced by Engineer's written recommendation of final payment.

15. *Contractor*—The individual or entity with whom Owner has entered into the Agreement.
16. *Cost of the Work*—See Paragraph 11.01 for definition.
17. *Drawings*—That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.
18. *Effective Date of the Agreement*—The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.
19. *Engineer*—The individual or entity named as such in the Agreement.
20. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.
21. *General Requirements*—Sections of Division 1 of the Specifications.
22. *Hazardous Environmental Condition*—The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.
23. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
24. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
25. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.
26. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.
27. *Notice of Award*—The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.
28. *Notice to Proceed*—A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.
29. *Owner*—The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.
30. *PCBs*—Polychlorinated biphenyls.
31. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.
32. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.
33. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

34. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
35. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
36. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.
37. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
38. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.
39. *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.
40. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
41. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.
42. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
43. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.
44. *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.
45. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.
46. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.
47. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or Subcontractor.
48. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam,

liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.

49. *Unit Price Work*—Work to be paid for on the basis of unit prices.
50. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.
51. *Work Change Directive*—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 Terminology

- A. The words and terms discussed in Paragraph 1.02.B through F are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. Intent of Certain Terms or Adjectives:
52. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.
- C. Day:
53. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. Defective:
54. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
- a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

- c. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).
- E. Furnish, Install, Perform, Provide:
 - 55. 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.
 - 56. 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.
 - 57. 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.
 - 58. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, "provide" is implied.
- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 Delivery of Bonds and Evidence of Insurance

- A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 Copies of Documents

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

2.03 Commencement of Contract Times; Notice to Proceed

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

2.04 Starting the Work

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

2.05 Before Starting Construction

- A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:
 - 59. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;
 - 60. a preliminary Schedule of Submittals; and
 - 61. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 Preconstruction Conference; Designation of Authorized Representatives

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.07 Initial Acceptance of Schedules

- A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
 - 62. 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.

- 63. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
- 64. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 Intent

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.
- C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 Reference Standards

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

3.03 Reporting and Resolving Discrepancies

- A. Reporting Discrepancies:
 - 67. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers, or has actual knowledge of, and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.

68. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) any standard, specification, manual, or code, or (c) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.
69. 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:
70. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:
- a. the provisions of any standard, specification, manual, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference in the Contract Documents); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).
- 3.04 Amending and Supplementing Contract Documents
- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.
- B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:
- 71. A Field Order;
 - 72. Engineer's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3); or
 - 73. Engineer's written interpretation or clarification.
- 3.05 Reuse of Documents
- A. Contractor and any Subcontractor or Supplier shall not:
- 74. 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
 - 75. reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 Electronic Data

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

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

4.01 Availability of Lands

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 Subsurface and Physical Conditions

- A. *Reports and Drawings:* The Supplementary Conditions identify:
 - 76. those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and
 - 77. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and

drawings are not Contract Documents. Such “technical data” is identified in the Supplementary Conditions. Except for such reliance on such “technical data,” Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:

- 78. 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
- 79. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
- 80. any Contractor interpretation of or conclusion drawn from any “technical data” or any such other data, interpretations, opinions, or information.

4.03 Differing Subsurface or Physical Conditions

A. *Notice:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed either:

- 81. is of such a nature as to establish that any “technical data” on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or
- 82. is of such a nature as to require a change in the Contract Documents; or
- 83. differs materially from that shown or indicated in the Contract Documents; or
- 84. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

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

C. *Possible Price and Times Adjustments:*

- 85. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor’s cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and
 - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.
- 86. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:

- a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or
 - b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or
 - c. Contractor failed to give the written notice as required by Paragraph 4.03.A.
87. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 Underground Facilities

- A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:
88. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data provided by others; and
89. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
- a. reviewing and checking all such information and data;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents;
 - c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and
 - d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.
- B. *Not Shown or Indicated:*
90. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

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

4.05 Reference Points

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

4.06 Hazardous Environmental Condition at Site

- A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
- 92. 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
 - 93. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 - 94. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.

- D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 4.06.E.
- E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.
- F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.
- G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H

shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

- I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 – BONDS AND INSURANCE

5.01 Performance, Payment, and Other Bonds

- A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.
- B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed each bond.
- C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 Licensed Sureties and Insurers

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

5.03 Certificates of Insurance

- A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.
- B. Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of

insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.

- C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor's obligation to maintain such insurance.
- D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.
- E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner in the Contract Documents.

5.04 Contractor's Insurance

- A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:
 - 95. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
 - 96. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
 - 97. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
 - 98. claims for damages insured by reasonably available personal injury liability coverage which are sustained:
 - a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
 - b. by any other person for any other reason;
 - 99. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and
 - 100. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.
- B. The policies of insurance required by this Paragraph 5.04 shall:
 - 101. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

102. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
103. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;
104. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by Contractor pursuant to Paragraph 5.03 will so provide);
105. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and
106. include completed operations coverage:
 - a. Such insurance shall remain in effect for two years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 Owner's Liability Insurance

- A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 Property Insurance

- A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
 107. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;
 108. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.

109. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
 110. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
 111. allow for partial utilization of the Work by Owner;
 112. include testing and startup; and
 - 113.** be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.
- B. Owner shall purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.
- C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.
- D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.
- E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under this Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 Waiver of Rights

- A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any

- of the insureds or loss payees thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for:
114. 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
115. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 Receipt and Application of Insurance Proceeds

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

5.09 Acceptance of Bonds and Insurance; Option to Replace

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

5.10 Partial Utilization, Acknowledgment of Property Insurer

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

ARTICLE 6 – CONTRACTOR'S RESPONSIBILITIES

6.01 Supervision and Superintendence

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

6.02 Labor; Working Hours

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit

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

6.03 Services, Materials, and Equipment

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

6.04 Progress Schedule

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.
 - 116. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.
 - 117. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 Substitutes and "Or-Equals"

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.
 - 118. *"Or-Equal" Items:* If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's

sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

- a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole; and
 - 3) it has a proven record of performance and availability of responsive service.
- b. Contractor certifies that, if approved and incorporated into the Work:
 - 4) there will be no increase in cost to Owner or increase in Contract Times; and
 - 5) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

119. Substitute Items:

- a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.
- b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.
- c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Engineer may decide is appropriate under the circumstances.
- d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - 6) shall certify that the proposed substitute item will:
 - a) perform adequately the functions and achieve the results called for by the general design,
 - b) be similar in substance to that specified, and
 - c) be suited to the same use as that specified;
 - 7) will state:

- a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,
 - b) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and
 - c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;
 - 8) will identify:
 - a) all variations of the proposed substitute item from that specified, and
 - b) available engineering, sales, maintenance, repair, and replacement services; and
 - 9) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.
- B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.
- C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.
- D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- E. *Engineer's Cost Reimbursement:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

- F. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 Concerning Subcontractors, Suppliers, and Others

- A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.
- B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.
- C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:
120. 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
121. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.
- D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.
- E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.
- F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is

with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 Patent Fees and Royalties

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

6.08 Permits

- A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of

opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 Laws and Regulations

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.
- D. The Contractor shall comply with all ordinances and rules and regulations of the Town affecting the construction in public ways, as well as any permits issued by the Town to the Contractor relating to the work under this Contract.

6.10 Taxes

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

6.11 Use of Site and Other Areas

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

- 122. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.
- 123. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
- 124. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and

charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

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

6.12 Record Documents

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

6.13 Safety and Protection

- A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
 - 125. all persons on the Site or who may be affected by the Work;
 - 126. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 127. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners

when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
- D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- F. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 Safety Representative

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

6.15 Hazard Communication Programs

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

6.16 Emergencies

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.
- B. Contractor shall furnish an emergency telephone number in writing to the Weymouth Public Works Department, the Owner's Representative, the local Fire Department and to the local Police Station and all other interested parties for use after hours in the event of any emergency affecting the work of the Contractor.

- C. During days when inclement weather prevents scheduled work from being accomplished, or in the event of any emergency resulting from the Contractor's operation, the Contractor shall have available, an emergency work force whose purpose will be to maintain the construction site in a safe, passable condition and to protect the works from damage, as directed by the Owner's Representative.

6.17 Shop Drawings and Samples

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

128. Shop Drawings:

- a. Submit number of copies specified in the General Requirements.
- b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

129. Samples:

- a. Submit number of Samples specified in the Specifications.
- b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

- B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. Submittal Procedures:

130. Before submitting each Shop Drawing or Sample, Contractor shall have:

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

131. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.

132. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the

Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. Engineer's Review:

133. 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.

134. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

135. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. Resubmittal Procedures:

136. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 Continuing the Work

A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 Contractor's General Warranty and Guarantee

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

B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

137. 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

- 138. 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:
 - 139. observations by Engineer;
 - 140. recommendation by Engineer or payment by Owner of any progress or final payment;
 - 141. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 - 142. use or occupancy of the Work or any part thereof by Owner;
 - 143. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;
 - 144. any inspection, test, or approval by others; or
 - 145. any correction of defective Work by Owner.

6.20 Indemnification

- A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .
- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
 - 146. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 - 147. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 Delegation of Professional Design Services

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.
- B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 Related Work at Site

- A. Owner may perform other work related to the Project at the Site with Owner's employees, or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:
 - 148. written notice thereof will be given to Contractor prior to starting any such other work; and
 - 149. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.
- B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the

Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.

- C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 Coordination

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

7.03 Legal Relationships

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

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.01 Communications to Contractor

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

8.02 Replacement of Engineer

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

8.03 Furnish Data

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

8.04 Pay When Due

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

8.05 Lands and Easements; Reports and Tests

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

8.06 Insurance

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

8.07 Change Orders

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

8.08 Inspections, Tests, and Approvals

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

8.09 Limitations on Owner's Responsibilities

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

8.10 Undisclosed Hazardous Environmental Condition

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

8.11 Evidence of Financial Arrangements

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

8.12 Compliance with Safety Program

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

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.01 Owner's Representative

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

9.02 Visits to Site

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 Project Representative

- A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 Authorized Variations in Work

- A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 Rejecting Defective Work

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

9.06 Shop Drawings, Change Orders and Payments

- A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.
- B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.
- C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.
- D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 Determinations for Unit Price Work

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 Decisions on Requirements of Contract Documents and Acceptability of Work

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.

- B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.
- C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.
- D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 Limitations on Engineer's Authority and Responsibilities

- A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 Compliance with Safety Program

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

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 Authorized Changes in the Work

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).
- B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 Unauthorized Changes in the Work

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.D.

10.03 Execution of Change Orders

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

10.04 Notification to Surety

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

10.05 Claims

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

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

11.01 Cost of the Work

- A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be

reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 11.01.B, and shall include only the following items:

159. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.
160. 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.
161. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.
162. 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.
163. 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 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.
 - g. The cost of utilities, fuel, and sanitary facilities at the Site.
 - h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, express and courier services, and similar petty cash items in connection with the Work.
 - i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.
- B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:
- 164. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by Contractor's fee.
 - 165. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
 - 166. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
 - 167. 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.
 - 168. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A.
- C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a

Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.

- D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 Allowances

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

11.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:
171. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

- 172. there is no corresponding adjustment with respect to any other item of Work; and
- 173. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 Change of Contract Price

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

12.02 Change of Contract Times

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

12.03 Delays

- A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.
- B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.
- D. Owner, Engineer, and their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.
- E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

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

13.01 Notice of Defects

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

13.02 Access to Work

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

13.03 Tests and Inspections

- A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
 - 179. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
 - 180. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and
 - 181. as otherwise specifically provided in the Contract Documents.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.
- E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation.
- F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 Uncovering Work

- A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.
- B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.
- C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.
- D. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 Owner May Stop the Work

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

13.06 Correction or Removal of Defective Work

- A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).
- B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 Correction Period

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract

Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

182. repair such defective land or areas; or
 183. correct such defective Work; or
 184. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 185. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

13.08 Acceptance of Defective Work

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and for the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 Owner May Correct Defective Work

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct, or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.
- C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. 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 13.09.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 Schedule of Values

- A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 Progress Payments

- A. Applications for Payments:
 - 186. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the

basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

187. 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.

188. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. Review of Applications:

189. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

190. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

- a. the Work has progressed to the point indicated;
- b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and any other qualifications stated in the recommendation); and
- c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

191. By recommending any such payment Engineer will not thereby be deemed to have represented that:

- a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or
- b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

192. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

- a. to supervise, direct, or control the Work, or

- b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
- 193. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
 - d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.
- C. Payment Becomes Due:
 - 194. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.
- D. Reduction in Payment:
 - 195. Owner may refuse to make payment of the full amount recommended by Engineer because:
 - a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
 - b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - c. there are other items entitling Owner to a set-off against the amount recommended; or
 - d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.
 - 196. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor remedies the reasons for such action.

197. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

14.03 Contractor's Warranty of Title

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

14.04 Substantial Completion

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the tentative certificate to Owner, notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will, within said 14 days, execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.
- E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the tentative list.

14.05 Partial Utilization

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents,

or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

198. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 14.04.A through D for that part of the Work.
199. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
200. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
201. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 Final Inspection

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

14.07 Final Payment

- A. Application for Payment:
 202. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.
 203. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.6;
 - b. consent of the surety, if any, to final payment;
 - c. a list of all Claims against Owner that Contractor believes are unsettled; and

- d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.
- 204. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.
- B. Engineer's Review of Application and Acceptance:
 - 205. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.
- C. Payment Becomes Due:
 - 206. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.08 Final Completion Delayed

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

14.09 Waiver of Claims

- A. The making and acceptance of final payment will constitute:

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

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 Owner May Suspend Work

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 Owner May Terminate for Cause

- A. The occurrence of any one or more of the following events will justify termination for cause:
 - 209. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);
 - 210. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;
 - 211. Contractor's repeated disregard of the authority of Engineer; or
 - 212. Contractor's violation in any substantial way of any provisions of the Contract Documents.
- B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:
 - 213. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);
 - 214. 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
 - 215. complete the Work as Owner may deem expedient.
- C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work,

such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, 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.

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

15.03 Owner May Terminate For Convenience

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 216. 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;
 - 217. 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;
 - 218. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and
 - 219. reasonable expenses directly attributable to termination.
- B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 Contractor May Stop Work or Terminate

- A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy

such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 – DISPUTE RESOLUTION

16.01 Methods and Procedures

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

ARTICLE 17 – MISCELLANEOUS

17.01 Giving Notice

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

17.02 Computation of Times

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

17.03 Cumulative Remedies

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

17.04 Survival of Obligations

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

17.05 Controlling Law

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

17.06 Headings

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

SUPPLEMENTARY CONDITIONS

The following supplements modify, change, delete from, or add to the “STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT,” EJCDC 2007 Edition. Where Articles of the General Conditions are modified or Paragraphs, Subparagraphs, or Clauses thereof are modified or deleted by these supplements, the unaltered provisions of those Articles, Paragraphs, Subparagraphs, or Clauses shall remain in effect.

ARTICLE 1 DEFINITIONS AND TERMINOLOGY

- 1.01 Insert the following definitions in the proper place in alphabetical order:

Final Completion—The work has been fully completed and ready for its intended use as required by Contract Documents and to the satisfaction of Engineer and Owner, and Contractor's other obligations under the Contract Documents have been fulfilled. If a tentative list of items to be completed or corrected was issued with a certificate by Substantial Completion or issued subsequent thereto, such items shall be completed or corrected before work is considered fully completed.

Lump Sum— A fixed-price measurement of payment for an Item of Work, paid as a percentage of the overall Item of Work complete at the time of submittal of Contractor's application for payment, unless otherwise noted in the Contract Documents.

Owner's Representative—The individual or entity named by the Owner as being the Owner's Representative and having the rights, duties, and responsibilities presented in this Contract.

ARTICLE 3 CONTRACT DOCUMENTS: INTENT, AMENDING, AND REUSE

Add the following Subparagraphs:

- 3.07 The language of the Contract Documents is directed to the Contractor unless stated otherwise.
- 3.08 If Work is described or indicated in a manner to make it impossible to carry out the requirements of the Contract Documents, or should discrepancies appear among the Contract Documents, request interpretation before proceeding with Work. If Contractor fails to make such a request, no excuse will be entertained for failure to carry out Work of Contract Documents. Should a conflict occur in or between Contract Documents, Contractor is deemed to have estimated on the more expensive way of doing the Work.
- 3.09 Division 01, General Requirements, governs the execution of all sections of the specifications.

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

- 4.02.A Delete Paragraph 4.02A in its entirety and insert the following in its place:

A. *Reports and Drawings* – There have been no reports of explorations and tests of subsurface conditions utilized by the Engineer in preparation of the Contract

Documents. All existing structures and subsurface structures (except Underground Facilities) identified by the Engineer were based on the best information available.

ARTICLE 5 BONDS AND INSURANCE

5.04 Contractor's Insurance – Add the following new paragraph immediately after Paragraph 5.04.B:

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

1. Workers' Compensation, and related coverages under Paragraphs 5.04.A.1 and A.2 of the General Conditions:

- | | |
|---|-----------|
| a. State: | Statutory |
| b. Applicable Federal (e.g., Longshoreman's): | Statutory |
| c. Employer's Liability: | Statutory |

2. Contractor's General Liability under Paragraphs 5.04.A.3 through A.6 of the General Conditions which shall include completed operations and product liability coverages and eliminate the exclusion with respect to property under the care, custody and control of Contractor:

- | | |
|--|-------------|
| a. General Aggregate | \$5,000,000 |
| b. Products – Completed Operations Aggregate | \$1,000,000 |
| c. Personal and Advertising Injury | \$1,000,000 |
| d. Each Occurrence (Bodily Injury & Property Damage) | \$1,000,000 |
| e. Property Damage liability insurance will provide explosion, collapse, and underground coverages where applicable. | |
| f. Excess or Umbrella Liability: | |
| General Aggregate | \$5,000,000 |
| Each Occurrence | \$5,000,000 |

3. Automobile Liability under Paragraph 5.04.A.6 of the General Conditions:

- | | |
|---------------------|-------------|
| a. Bodily Injury: | |
| Each Person | \$1,000,000 |
| Each Accident | \$1,000,000 |
| b. Property Damage: | |
| Each Accident | \$1,000,000 |

4. The Contractual Liability coverage required by Paragraph 5.04.B.3 of the General Conditions shall provide coverage for not less than the following amounts:

- a. Bodily Injury:
 - Each Person \$1,000,000
 - Each Accident \$1,000,000
- b. Property Damage:
 - Each Accident \$1,000,000
 - Annual Aggregate \$1,000,000

5. Additional Insureds will include the following:

- a. Town of Newbury
- b. Gomez and Sullivan Engineers, DPC

5.06.A Delete Paragraph 5.06.A in its entirety.

ARTICLE 6 CONTRACTOR'S RESPONSIBILITIES

6.06 Add a new paragraph immediately after Paragraph 6.06.G:

- H. 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 a particular Subcontractor or Supplier.
- I. Contractor shall not award Work to Subcontractor(s), in excess of fifty percent (50%) of the Contract Price, without prior written approval of the Owner.

6.11 Add a new paragraph immediately after Paragraph 6.11.D:

- E. Contractor shall furnish and erect a sign at the Project site to identify the project in accordance with the permit conditions. Place the sign in a prominent location as directed by the Engineer. Do not place or allow the placement of other advertising signboards at the Project site or along rights-of-way furnished for the project work. See Drawings and Permits for details.

6.13 Add a new paragraph immediately after Paragraph 6.11.F:

- G. Contractor shall at all times so conduct his work as to assure minimal obstruction to traffic. The safety and convenience of the general public and the residents along the work site route and the protection of property shall be provided for by the Contractor. The Contractor shall be responsible for timely notification to local residents before causing any interruptions of their access.

Fire hydrants and water holes for fire protection on or adjacent to the work site shall be kept accessible to fire apparatus at all times, and no obstructions shall be placed within 10 feet of any such facility. No footways, gutters, drain inlets, or portions of highways adjoining the work site shall be obstructed. In the event that all or part of a roadway is officially closed to traffic during construction, the Contractor shall provide and maintain safe and adequate traffic accessibility, satisfactory to the Engineer, for residences and businesses along and adjacent to the roadway.

When the maintenance of traffic is considered by the Engineer to be minimal, the Contract may not show this as a pay item. In such cases, the Contractor shall bear all expenses of maintaining traffic over the sections of approaches utilized during construction for access to the Project site as may be necessary, without direct reimbursement.

ARTICLE 9 ENGINEER'S STATUS DURING CONSTRUCTION

- 9.01 Delete Owner's Representative in its entirety.

ARTICLE 11 COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

- 11.01 Delete Cost of the Work in its entirety.
- 11.02 Delete Allowances in its entirety.

ARTICLE 16 METHODS AND PROCEDURE

- 16.01 Delete Paragraph 16.01.C in its entirety and insert the following in its place:

- C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:
1. elects in writing to demand arbitration of Claim, pursuant to Paragraph 16.02; or
 2. agrees with the other party to submit Claim to another dispute resolution process.

Add the following new paragraph immediately after Paragraph 16.01:

16.02 Arbitration

- A. All Claims or counterclaims, disputes, or other matters in question between Owner and Contractor arising out of or relating to the Contract Documents or the breach thereof (except for Claims which have been waived by the making or acceptance of final payment as provided by Paragraph 14.09) including but not limited to those not resolved under the provisions of Paragraphs 16.01A and 16.01.B will be decided by arbitration in accordance with the rules of American Arbitration Association, subject to the conditions and limitations of this Paragraph 16.02. 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 30 day period specified in Paragraph 16.01.C, and in all other cases within a reasonable time after the Claim or counterclaim, dispute, or other 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 Claim or other dispute or matter in question would be barred by the applicable statute of limitations.

- C. No arbitration arising out of or relating to the Contract Documents 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: (i) a concise breakdown of the award; (ii) a written explanation of the award specifically citing the Contract Document 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 Controlling Law 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.

PERFORMANCE BOND

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*):

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 Performance Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

(Seal)
Contractor's Name and Corporate Seal

(Seal)
Surety's Name and Corporate Seal

By: _____
Signature

By: _____
Signature (*Attach Power of Attorney*)

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

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

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner for the performance of the Contract, which is incorporated herein by reference.
2. If Contractor performs the Contract, Surety and Contractor have no obligation under this Bond, except to participate in conferences as provided in Paragraph 3.1.
3. If there is no Owner Default, Surety's obligation under this Bond shall arise after:
 - 3.1 Owner has notified Contractor and Surety, at the addresses described in Paragraph 10 below, that Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with Contractor and Surety to be held not later than 15 days after receipt of such notice to discuss methods of performing the Contract. If Owner, Contractor, and Surety agree, Contractor shall be allowed a reasonable time to perform the 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 Contractor and Surety have received notice as provided in Paragraph 3.1; and
 - 3.3 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 Surety's expense, take one of the following actions:
 - 4.1 Arrange for Contractor, with consent of 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 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 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 Owner resulting from Contractor 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 therefor to Owner; or
 2. Deny liability in whole or in part and notify Owner citing reasons therefor.
5. If Surety does not proceed as provided in Paragraph 4 with reasonable promptness, 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 Surety perform its obligations under this Bond, and Owner shall be entitled to enforce any remedy available to Owner. If Surety proceeds as provided in Paragraph 4.4, and Owner refuses the payment tendered or 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 Contractor's right to complete the Contract, and if 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 the 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, 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 of 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 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 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 requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory 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 Contract after all proper adjustments have been made, including allowance to Contractor of any amounts received or to be received by 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 Contractor under the Contract.
 - 12.2 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 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.

FOR INFORMATION ONLY – (*Name, Address and Telephone*):

Surety Agency or Broker:

Owner's Representative (*Engineer or other party*):

PAYMENT BOND

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*):

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 Performance Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal

Surety's Name and Corporate Seal

By: _____
Signature

By: _____
Signature (*Attach Power of Attorney*)

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Note: Provide execution by additional parties, such as joint venturers, 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 addresses 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 (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 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 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.

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.

FOR INFORMATION ONLY – (*Name, Address and Telephone*):

Surety Agency or Broker:

Owner's Representative (*Engineer or other party*):

END OF DOCUMENT 006000

DIVISION 01 - GENERAL REQUIREMENTS

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes:
 - 1. Project information
 - 2. Work covered by Contract Documents
 - 3. Access to site
 - 4. Interpretation and Intent of Drawings and Specifications

1.2 PROJECT INFORMATION

- A. **Project Identification:** Larkin Dam Removal (Contract No. 25-07)
- B. Project Location:
 - 1. **Larkin Dam:** access from Larkin Road approximately 400 feet southwest of the bridge over the Parker River (lat/long: 42.749945, -70.942368)
 - 2. **USGS Gage / I-95 Bridge:** access from the south end of the commercial plaza at 12 Kent Way (lat/long: 42.752709, -70.945558)
- C. Project Contacts:
 - Owner:
Mason Ferrick
Conservation Agent
Town of Newbury
12 Kent Way, Suite 101
Byfield, MA 01922
(978) 465-0862
conscom@newburyma.gov
 - Engineer:
Jill Griffiths, PE
Gomez and Sullivan Engineers, DPC
PO Box 2179
Henniker, NH 03242
(716) 402-6777
jgriffiths@gomezandsullivan.com
- D. **Contractor:** Will be engaged to perform the work under the Construction Contract for this Project. The Contractor shall furnish all labor, materials, supplies, tools, and equipment necessary, or required, to furnish and install the work in strict accordance with the specifications, drawings, contract documents, regulations and codes.
- E. **Type of Contract:** Project will be constructed under a single prime contract.

- F. **Project Description:** The general summary of work to be done under this contract consists of, but shall not be limited, to the following: 1) removal of the Larkin Dam, 2) installation of a scour countermeasure through the I-95 bridge located approximately 1,000 feet upstream of the dam to mitigate an existing scour condition, and 3) removal of an existing USGS gage weir and channel stabilization approximately 180 feet upstream of the bridge to eliminate a potential post-dam removal fish passage barrier. These items are described in more detail below:
1. **Larkin Dam Removal:** Work at this site will involve demolition and removal of the dam and appurtenant structures, including the full horizontal and vertical extent of the approximately 38-foot-long, 5-foot-high concrete and stone spillway; the 65-foot-long concrete-faced stone left abutment wall; the 127-foot-long concrete right abutment wall; the concrete former mill intake; the 140-foot-long concrete fishway; and the 35-foot-long, 2- to 3-foot-high stone “fish weir” that spans the channel 30 feet downstream of the spillway. Sediment will be graded in the immediate area of the dam breach to construct a channel section, and a low-flow channel will be dredged between the dam and the downstream fish weir to accommodate fish passage. The fishway and former mill intake excavations will be filled and seeded to create a footpath.
 2. **I-95 Bridge Scour Countermeasure:** The proposed scour countermeasure for the I-95 bridge will involve placement of an approximately 3-foot-thick layer of rounded riprap (infilled with fines) within the channel through the approximately 38-foot-wide, 227-foot-long bridge. Existing steel struts connecting the bridge abutments under the channel will need to be protected from damage during riprap placement.
 3. **USGS Gage Weir Removal & Channel Stabilization:** Work at this site will involve removal of the approximately 18-foot-wide, 2-foot-high, concrete low-head weir and upstream concrete pad, removal of the right stone abutment and grading of the bank, and construction of a riffle with rounded riprap (infilled with fines) to stabilize the channel. A low-flow channel will be dredged between the upstream bridge face and the bottom of the proposed riffle to accommodate fish passage.
- G. **Work by Others:** The following work will be completed by others and should not be included in the bid:
1. **Tree Cutting:** Cutting of trees necessary for access has been completed by the Town. Contractor is responsible for clearing of felled trees. No tree cutting shall occur during the time-of-year (TOY) restriction for Northern long-eared bats (NLEB) without consultation with and approval from the US Fish and Wildlife Service (USFWS). The NLEB TOY is assumed to be April 1 through November 1 in a given year, but must be confirmed with USFWS for any proposed cutting. No stump removal or grubbing of root systems below ground surface will be permitted within sensitive archeological areas designated in the Archeological Site Avoidance and Protection Plan (ASAPP) provided in **Appendix B** and described in more detail below.
 2. **USGS Gage Replacement:** USGS will remove stream gaging equipment from the river at the gaging station prior to construction and will reset and recalibrate the equipment following construction. USGS shall approve the water control plan for the weir site. It is desired to have the gaging equipment reinstalled within 2 weeks of its removal. If this cannot be accommodated, the USGS may need to install a temporary gage upstream of the site. Contractor is responsible for installing a 2-inch-diameter Schedule 40 galvanized steel conduit upstream of the riffle to accommodate the pressure sensor line to be installed by USGS. The conduit shall be run horizontally across the channel bed to the thalweg and

- anchored to bedrock or a driven post. The conduit location shall be identified by USGS and its installation shall be inspected and approved by USGS.
3. **Archeological Monitoring & Inspection:** In accordance with the Archeological Site Avoidance and Protection Plan (provided in **Appendix B**), the Project Archaeologist, the Public Archaeological Laboratory, Inc. (PAL), will inspect and monitor sensitive archeological areas during construction to ensure that the avoidance and protection controls are being properly installed, maintained, and observed by the Contractor.
 4. **Water Control Fish Passage Inspection:** In accordance with the Fishway Construction Permit (provided in Appendix B), the Massachusetts Department of Fish and Game, Division of Marine Fisheries (DMF) must inspect and approve all installed water control measures.
- H. **References:** All work done under this Contract shall be in conformance with the requirements of the latest versions of the following references, as applicable:
1. Massachusetts Department of Transportation (MassDOT) Highway Division Standard Specifications for Highways and Bridges, Supplemental Provisions, and Construction Standard Details
 2. Contract Drawings (**Appendix A**)
 3. Permits (**Appendix B**)
 4. Specifications and Supplemental Provisions
- I. The Project Manual includes the following:
1. Contract Documents (Division 00)
 2. Project Specifications (Divisions 01-32)
 3. Construction Drawings (**Appendix A**)
 4. Permits (**Appendix B**)
 5. Prevailing Wage Rates (**Appendix C**)
 6. Sediment Sampling Results (**Appendix D**)
 7. Addenda (if issued)
- J. **Work Sequence:** Contractor shall submit to Owner and Engineer for approval a construction Phasing and Sequence Plan. The following sequence shall be adapted for the site-specific requirements:
1. Survey and stake the proposed limits of disturbance, protective fencing, and erosion controls. Allow archaeological consultant to inspect limits of proposed protective fencing.
 2. Install temporary erosion and pollution controls as indicated on the plans.
 3. Flag limits of clearing, to be approved by Owner and Engineer. Clear vegetation along approved access routes as needed. No tree removal (within TOY for bats), stumping, or grubbing will be permitted.
 4. Install temporary access/staging areas with bordering protective fencing (where required) as indicated on the plans.
 5. Install dewatering and/or water diversion measures as necessary in accordance with the approved water control plan.
 6. Commence site work (see detailed sequence on proposed access plan for each site).

7. Stockpile any excess dredged sediment for dewatering with containment measures indicated on the plans. Dewatered sediment to be reused onsite or transported offsite and for lawful reuse (subject to MassDEP approval) or disposal.
8. Remove temporary dewatering/water diversion measures.
9. Remove any temporary access routes. Restore access and staging areas to former conditions.
10. Seed and mulch disturbed areas with a native seed mixture approved by Engineer.
11. Remove erosion and pollution control measures only after all areas are stabilized with vegetative cover to the satisfaction of Engineer.

1.3 ACCESS TO SITE

- A. **Use of Site:** Limit use of Project site to areas within the Contract limits as indicated on Drawings. Do not disturb portions of Project site beyond areas in which the Work is indicated.
- A. **Access Agreements:** Access agreements have been executed between the Town of Newbury and 12 Kent Way, LLC for work on Parcel U14-0-2A to access the gage/bridge site, and between the Town of Newbury and Joanne C. Purinton for work on Parcel U14-0-1 for access to the gage/bridge site and removal of the gage weir.
- B. **Driveways, Walkways, and Entrances:** The staging area serving the premises should be closed to the public at all times during construction. Do not use the driveway to the staging area for parking or storage of materials. The staging area is to be used for parking and storage of materials. For access to the gage/bridge site via the 12 Kent Way plaza, use the rear truck loading/unloading route behind the buildings to the extent practicable.
- C. **On-Site Work Hours:** Work hours shall be limited to Monday through Friday from 7:00 a.m. to 7:00 pm, excluding weekends and legal holidays unless otherwise indicated. Work hours beyond those indicated in this paragraph require written approval from the municipal Fire and Police Departments and the Department of Public Works.
- D. **Deliveries:** Schedule deliveries to minimize use of entrances by construction operations and to minimize space and time requirements for storage of materials and equipment onsite.
- E. **Condition of Existing Structures:** Maintain and protect portions of existing structures affected by construction operations throughout construction period. Repair damage caused by construction operations at no cost to Owner.
- F. **Property Bounds:** The Contractor shall exercise due care when working around all property bounds which are to remain. Should any damage to a property marker result from the actions of the Contractor, the marker shall be replaced, realigned, and/or reset to its intended position and certified as to the correct location by a registered Professional Land Surveyor. No further compensation will be paid for the materials and labor required to re-establish the property marker.

1.4 WORK RESTRICTIONS

- A. **Access:** Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
- B. **Utilities:** Confirm the location of all utilities prior to the commencement of excavation per the Dig Safe requirements in Section 017300 "Execution."

- C. Permits: Comply with all conditions contained in relevant permits, attached in **Appendix B**, including, but not limited to:

1. Fish Passage Conditions

- a. The draft Fishway Construction permit issued by DMF on January 17, 2025 will be finalized in coordination with the Contractor.
- b. In-water or silt-producing work shall not be conducted during the TOY restriction of April 1 through June 15 of any given year.
- c. During in-water work between September 1 and November 15 of any given year, safe downstream fish passage shall be provided through any dewatered area via a bypass that is gravity-fed, 3' minimum diameter, smooth interior HDPE pipe with a maximum slope of no more than 1%, or other gravity-fed bypass system approved by DMF.
- d. A water control plan shall be developed by the Contractor (in accordance with Section 312319 – Care and Diversion of Water) and provided to DMF for review and approval. Installed water control features will be inspected and approved by DMF staff.

2. ESA Conditions

- a. No tree cutting shall occur during the time-of-year TOY restriction for NLEB without consultation with and approval from USFWS, unless trees to be removed are determined to not be located within 150 feet of occupied roost trees by a qualified professional. The NLEB TOY is assumed to be April 15th through September 30th of a given year, but must be confirmed with USFWS for any proposed cutting.
- b. Tree removal is defined herein as cutting down, harvesting, destroying, trimming, or manipulating in any other way any trees, saplings, snags, or other form of woody vegetation equal to or greater than 3 inches in diameter.
- c. If bats are observed flying from any tree that has been cut, stop activities immediately and contact the USFWS New England Field Office for guidance.

3. **Sensitive Archaeological Resource Conditions:** In accordance with the Archeological Site Avoidance and Protection Plan (provided in **Appendix B**), the Project Archaeologist, PAL, will inspect and monitor sensitive archeological areas during construction to ensure that the following avoidance and protection controls are being properly installed, maintained, and observed by the contractor:

- a. Contractor shall place a temporary, high-visibility protective fence along all edges of construction access and staging areas. The fence shall be posted with signs stating, "Sensitive resource area – no access permitted beyond the fence line."
- b. Any vegetation clearing or authorized tree removal within sensitive areas shall be limited to flush cuts using hand equipment with no stumping or grubbing of root systems below the ground surface.
- c. All temporary construction access roads and staging or dewatering areas within sensitive resource areas shall include a geotextile filter fabric underlayment and 12" minimum gravel subbase to protect against ground disturbance.
- d. At the USGS gage site, any access roads that cross the "stone wall enclosure" depicted on the plans shall have a sufficient depth of gravel subbase to reach the top of the

crossed stones so as to protect them from inadvertent disturbance. No stones shall be moved from existing locations without prior approval from the Owner, Engineer, PAL, and MHC.

4. Sediment Dredging & Disposal Conditions

- a. No later than 21 days prior to commencement of dredging activity, a construction phase water control plan shall be submitted to MassDEP for review and written approval (in accordance with Section 312319 – Care and Diversion of Water).
- b. No later than 21 days prior to commencement of dredging activity, a dredged material dewatering plan shall be submitted to MassDEP for review and written approval (in accordance with Section 312200 – Dredging). At a minimum, the dewatering plan shall include, but not be limited to, the type of containment, method of dewatering (i.e., mechanical or gravity), method of collecting the dewatered effluent, and method of disposal.
- c. MassDEP shall be notified in writing of the name and location of the upland licensed facility accepting the dredged material for disposal or reuse as daily cover material. If the licensed facility is located out of state, documentation shall be provided to MassDEP that the dredged material disposal/reuse has been approved and will be accepted by the receiving state in accordance with 314 CMR 9.07(13)(b). The dredged material shall not be transported to the facility without the concurrence of MassDEP.
- d. A Material Shipping Record (MSR) shall be used to track the dredged material to the licensed upland facility. A fully executed copy of the MSR shall be provided to MassDEP within 30 days of final shipment to the reuse location or facility.
- e. BMPs shall be implemented during transportation of the dredged material to the licensed receiving facility. At a minimum, when transported upon public roadways, all dredged material shall have no free liquid as determined by the Paint Filter Test or other suitably analogous methodology acceptable to MassDEP, and a tarpaulin or other means shall be used to cover the dredged material during transport.

1.5 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
 2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:

1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
2. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard and scheduled on Drawings.
3. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

1.6 INTERPRETATION AND INTENT OF DRAWINGS AND SPECIFICATIONS

- A. The data appearing in the specifications and/or drawings are included only for the assistance and guidance of Contractor in arriving at a more complete understanding of the intended scope of work. They are not intended, or to be construed, as relieving the responsibility of Contractor in conducting their own takeoffs and preparing a work plan.
- B. Contractor is responsible for taking measurements of existing conditions and elevations. These shall take precedence over dimensions provided in the Contract Documents. If an error should exist, deviations from the Contract Documents shall be made only after an agreement in writing is obtained from Engineer. The Owner shall not be responsible for errors in Contractor's drawings, even though approved by the Owner's Representative.
- C. In resolving conflicts and discrepancies the documents shall be given precedence in the following order: Agreement, Modifications, Addenda, Special Conditions, General Requirements, Specifications, and Drawings.
- D. In case of discrepancy in regard to the Contract Drawings, a more detailed drawing shall take precedence over a less detailed drawing.
- E. The drawings are not intended to show all details and requirements relating to the scope of work. Contractor shall advise Engineer immediately, in writing, when Contractor encounters obstacles or discrepancies that require minor changes or adjustments to the approved design and procedures.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

SECTION 011025 - MEASUREMENT AND PAYMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes descriptions of and methods for measuring and paying for each Contract Item.
- B. Related Requirements:
 - 1. Section 012900 "Payment Procedures" for administrative and procedural requirements necessary to prepare and process Applications for Payment

1.2 PROCEDURES

- A. For lump sum items, Contractor shall be paid in accordance with the progress schedule and schedule of values on the basis of actual work accepted until the work item is completed. Upon completion of the item, 100% of the lump sum price may be paid, less retained amounts.
- B. All units of measurement shall be standard United States convention as applied to the individual items of Work as specified and as interpreted by Engineer.
- C. At the end of Work each week, Contractor shall provide Engineer with a summary of quantities of lump sum price work accomplished and/or completed during the preceding week.
- D. Once each month, Contractor will prepare and sign an Application for Payment and submit for review and signature of Engineer as specified in Section 012900 "Payment Procedures." These completed forms will provide the basis upon which payment will be made to Contractor.

1.3 SCOPE OF PAYMENT

- A. Payments to Contractor will be made for the Agreement lump sum price items performed and accepted in accordance with the Contract Documents. Upon completion of Work, if actual quantities show either an increase or decrease from estimated quantities, the Agreement lump sum prices will still prevail, except as provided in the General Conditions, Supplementary Conditions or Special Conditions.
- B. No payment of any Application for Payment or of any retained percentage shall relieve Contractor of the obligation to repair or replace any defective parts of the Work or to be responsible for all damage due to such defects during the construction period or the one-year warranty period.

1.4 PARTIAL PAYMENTS

- A. Partial payments shall be made monthly as the Work progresses. All partial invoices and payments shall be subject to correction in the final Application for Payment.

1.5 PAYMENT FOR MATERIAL DELIVERED

- A. When requested by Contractor, and at the discretion of Engineer, payment may be made for all or part of the value of acceptable, non-perishable materials and equipment which are to be incorporated into the Work, which have not been used and which have been delivered to the construction site and placed in storage area acceptable to Engineer. The Application for Payment shall be accompanied by such data, satisfactory to Engineer, that will establish Owner's title to the material and equipment and protect Owner's interest therein, including insurance. Each

subsequent Application for Payment shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied to discharge in full all of Contractor's obligations reflected in prior Applications for Payment. Owner shall have the right to deduct from the next progress payment an amount equal to payment for said material and/or equipment if reasonable and adequate proof is not submitted.

- B. Materials and equipment, when so paid for by Owner, shall become the property of Owner and in the event of default on the part of Contractor, Owner may use, or cause to be used, these materials and equipment in the construction of the Work. Contractor shall be responsible for any damage to, or loss of, these materials and equipment. The amount paid by Owner shall reduce the estimated amounts due to Contractor as the material is incorporated into the Work.
- C. No partial payment shall be made for fuels, supplies, lumber, false work, or other expendable or temporary materials, or on temporary structures of any kind which are not a permanent part of the Agreement.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 GENERAL

- A. The items of Work required by the General Conditions, Supplementary Conditions, and Division 1 - General Requirements shall not be measured and paid separately, except as expressly indicated therein, but shall be included in the prices bid for each Contract Item.
- B. The payment for various Contract Items listed below shall include all materials, labor, tools, equipment and incidental work necessary to complete the item in accordance with the Drawings and Specifications whether or not the particular Work is mentioned in the following paragraphs.
- C. Estimated quantities provided in the sections below are for informational purposes only. All items are to be bid and paid as lump sum prices. No additional amount will be paid for any discrepancies in estimated and actual quantities.
- D. For unit price items of Work, quantities will be determined by the Contractor measured within the limits shown on the drawings and subject to the acceptance by and approval of the Engineer and Owner's Representative.

3.2 MOBILIZATION/DEMOBILIZATION (CONTRACT ITEM 1A & 1B)

- A. Measurement:
 - 1. Mobilization/Demobilization shall be measured lump sum. The lump sum price for mobilization shall not exceed 10% of the total or remaining base bid items plus any add alternate items included in the Agreement.
- B. Description:
 - 1. Mobilization/Demobilization shall consist of preparatory work and operations including, but not limited to, those necessary for the movement of personnel, equipment (cleaned and free of soil and plant material prior to delivery to the site), supplies, and incidentals to the Project site; for the establishment of Contractor's field office, and other facilities necessary for work on the Project and final site cleanout; documentation of Work including a record

survey; and for all other work and operations which must be performed prior to beginning and prior to closing out the Work.

2. Demobilization includes development of record drawings signed and sealed by a Professional Licensed Surveyor (PLS) licensed in Massachusetts. Digital copies of the record drawings shall be provided in PDF and CAD (Civil3D 2020 or more recent) format. Record drawings shall include 2-foot contours derived from post-construction bathymetric and topographic survey data within the project limits.

C. Payment:

1. Payment will be made at the contract item lump sum price, which price shall be full compensation for all costs incurred in furnishing all labor, tools, materials, equipment and incidentals for the preparatory work and operations associated with this contract item.
2. Payments for Mobilization/Demobilization will be made for up to 60% of the contract item lump sum price with the first Application for Payment following completion of at least 5% of the total Contract Price, 35% of the contract item lump sum price upon Substantial Completion, and the remaining 5% upon Final Completion.

3.3 SITE PREPARATION (CONTRACT ITEMS 2A & 2B)

A. Measurement:

1. Site Preparation shall be measured lump sum.

B. Description:

1. Site Preparation shall consist of site preparation work including, but not limited to, installation, daily maintenance, and removal of all temporary soil erosion, sedimentation, and pollution control measures; installation of high-visibility protective fencing along all access, staging, dewatering, and work areas; installation of stabilized construction entrances; clearing of the work area as necessary to install access routes; and all associated work. Typical items include:
 - a. Roadway flaggers (as needed; MassDOT 850.41)
 - b. Removal and resetting of chain link fence (MassDOT 666)
 - c. Sedimentation controls (compost filter socks or approved equal; MassDOT 761.121)
 - d. Straw bales (for containment of sediment dredge stockpiles)
 - e. High-visibility protective temporary fence
 - f. Clearing of vegetation (trees already felled by others; no grubbing; MassDOT 102)
 - g. Woven geotextile fabric (for temporary access/staging areas; MassDOT 698.3, 9.50.0)
 - h. Gravel borrow (for temporary access/staging areas; MassDOT 151, M1.03.0(b))
 - i. Crushed stone (for stabilized construction entrances; MassDOT 156, M2.01.3)
 - j. Dense-graded crushed stone (for former mill intake fill; MassDOT 402, M2.01.7)
 - k. Swamp mats (for access, as necessary)
 - l. Oil containment boom

C. Payment:

1. Payment will be made at the contract item lump sum price, which price shall be full compensation for all costs incurred in furnishing all labor, tools, materials, equipment and incidentals for the Work and operations associated with this contract item.

2. Payment will be made for up to 85% of the contract item lump sum price upon completion of installation, 10% of the contract item lump sum price upon Substantial Completion, and the remaining 5% upon Final Completion.

3.4 WATER CONTROL (CONTRACT ITEMS 3A & 3B)

A. Measurement:

1. Water Control shall be measured lump sum.

B. Description:

1. Water Control shall consist of care and control of water including, but not limited to, design, furnishing, installation, and removal of cofferdams and gravity bypass pipe(s), initial pumping and dewatering of work area, maintaining existing flows and safely passing fish through the project site, and all associated Work. Typical items may include:
 - a. Cofferdams (bulk sandbags or approved equal)
 - b. Bypass pipe(s) (to divert flow between cofferdams)
 - c. Dewatering pump system (for initial and maintenance dewatering, as needed)
 - d. Sediment filter bag(s) (for sediment control during dewatering)

C. Payment:

1. Payment will be made at the contract item lump sum price, which price shall be full compensation for all costs incurred in furnishing all labor, tools, materials, equipment and incidentals for the Work and operations associated with this contract item.
2. Payment will be made for up to 60% of the contract item lump sum price upon completion of installation of the water diversion system, 35% upon removal of the water diversion system, and the remaining 5% of the contract item lump sum price upon Substantial Completion.

3.5 DEMOLITION AND EXCAVATION (CONTRACT ITEMS 4A & 4B)

A. Measurement:

1. Demolition and Excavation shall be measured lump sum.

B. Description:

1. Demolition and Excavation shall consist of, but not be limited to, demolition and removal the Larkin Dam and all appurtenant structures (i.e., abutments/retaining walls, fishway, fish weir, former mill intake) and the USGS gage weir and right stone abutment, as well as associated earth excavation required to facilitate the work. Materials to be demolished and removed may include, but not be limited to, concrete, stone masonry, and soil. Sediment dredging will be covered under Contract Items 5A, 5B-1, and 5B-2. Typical items include:
 - a. Earth excavation (MassDOT 120)
 - b. Concrete and/or reinforced concrete excavation (MassDOT 127 and/or 127.1)
 - c. Removal and salvage of stone masonry for onsite reuse or stockpiling for Owner
2. This contract item includes demolition/removal of the following structures:
 - a. Contract Item 4A:
 - 1) 38-foot-long, 5-foot-high concrete and stone spillway

- 2) 35-foot-long, 2- to 3-foot-high stone “fish weir” that spans the channel 30 feet downstream of the spillway
 - 3) 65-foot-long concrete-faced stone left abutment wall
 - 4) 127-foot-long concrete right abutment wall
 - 5) 140-foot-long concrete fishway (including earth excavation)
 - 6) Concrete former mill intake and metal trashrack (including earth excavation)
 - b. Contract Item 4B:
 - 1) 18-foot-wide, 2-foot-high, concrete weir and upstream concrete pad at gage
 - 2) Right stone abutment at gage
 3. Demolished materials shall be hauled off-site for lawful reuse, disposal, or recycling. Stones from masonry structures may be reused onsite as deemed appropriate by Engineer or stockpiled onsite for Owner.
- C. Payment:
1. Payment will be made at the contract item lump sum price, which price shall be full compensation for all costs incurred in furnishing all labor, tools, materials, equipment and incidentals for the Work and operations associated with this contract item.
 2. Payment will be made as a percentage of the overall contract item complete at the time of submittal of Contractor’s application for payment as judged by Engineer.
- 3.6 SEDIMENT DREDGING AND DISPOSAL (CONTRACT ITEMS 5A, 5B-1, & 5B-2)
- A. Measurement:
1. Sediment Dredging and Disposal shall be measured per cubic yard.
- B. Description:
1. Sediment Dredging and Disposal shall consist of, but not be limited to, dredging of sediment and instream repositioning where possible, or removal to onsite dewatering areas as needed. Removed sediment shall be reused onsite where possible, or transported for offsite disposal (or reuse, if approved by MassDEP) as necessary. Typical items include:
 - a. Dredging and disposal of material (MassDOT 148)
 - b. Sediment testing by independent lab as required by any offsite disposal facility proposed by the Contractor
 2. The following dredging quantities are included in the base bid:
 - a. Approximately 250 CY from the area including Larkin Dam, immediate upstream impoundment, and downstream fish weir and low-flow channel (Contract Item 5A)
 - b. Approximately 340 CY from the USGS gage weir area and downstream low-flow channel (Contract Item 5B-1)
 - c. Approximately 700 CY from the I-95 bridge area (Contract Item 5B-2)
 3. Sediment sampling results are provided in **Appendix D**. The 401 WQC issued by MassDEP indicates that the sediment may be released downstream, repositioned instream, and/or reused onsite without further testing or approval. Any areas proposed for onsite reuse must be approved by the Owner and Engineer. The Contractor shall be responsible for any testing required for offsite disposal at their selected waste facility. If the contractor wishes to reuse

or dispose of the sediment offsite somewhere other than a landfill, required testing shall be conducted by the Contractor in consultation with DEP to inform and approve disposal options. Testing of sediment shall only be conducted as required for offsite disposal or offsite reuse.

C. Payment:

1. Payment will be made at the contract item cubic yard price up to the volume specified for the base bid contract item. The contract item price shall be full compensation for all costs incurred in furnishing all labor, tools, materials, equipment and incidentals for the Work and operations associated with this contract item.
2. Additional sediment dredging in excess of the volume assumed for the base bid as described in the contract items listed above will be paid under Add-Alternate Items 8A and 8B for Additional Sediment Dredging and Disposal (if required). Additional costs for disposal of regulated soil, if encountered, will be paid under Add-Alternate Items 9A and 9B for Offsite Disposal of Regulated Sediment (if required).

3.7 CHANNEL STABILIZATION (CONTRACT ITEMS 6B-1 & 6B-2)

A. Measurement:

1. Channel Stabilization shall be measured lump sum.

B. Description:

1. Channel Stabilization shall consist of the installation of channel protections at the USGS gage and I-95 bridge sites, including rounded riprap and geotextile and stone filter materials. Typical items include:
 - a. Class V rounded riprap ($D_{50} = 18''$)
 - b. Non-woven geotextile fabric (MassDOT 698, 9.50.0)
 - c. Dense-graded crushed stone (granular filter; MassDOT 402, M2.01.7)
 - d. Fines for infilling rounded riprap ($D_{50} = \text{No. 4 Sieve } (0.187'')$)

C. Payment:

1. Payment will be made at the contract item lump sum price, which price shall be full compensation for all costs incurred in furnishing all labor, tools, materials, equipment and incidentals for the Work and operations associated with this contract item.
2. Payment will be made as a percentage of the overall contract item complete at the time of submittal of Contractor's application for payment as judged by Engineer.

3.8 SITE RESTORATION (CONTRACT ITEMS 7A & 7B)

A. Measurement:

1. Site Restoration shall be measured lump sum.

B. Description:

1. Site restoration shall consist of restoring and seeding all disturbed areas once work is complete. Typical items include:
 - a. Native seed mix (MassDOT 765)
 - b. Loam, if needed (MassDOT 751)

- c. Straw mulch, if needed (MassDOT 767.31)

C. Payment:

1. Payment will be made at the contract item lump sum price, which price shall be full compensation for all costs incurred in furnishing all labor, tools, materials, equipment and incidentals for the Work and operations associated with this contract item.
2. Payment will be made as a percentage of the overall Contract Item 6 complete at the time of submittal of Contractor's application for payment as judged by Engineer.

3.9 ADDITIONAL SEDIMENT DREDGING AND DISPOSAL (ADD-ALTERNATE ITEMS 8A & 8B)

A. Measurement:

1. Additional Sediment Dredging and Disposal shall be measured per cubic yard.

B. Description:

1. Additional Sediment Dredging and Disposal shall consist of dredging and disposal of sediment in excess of the base bid volumes specified under Contract Items 5A, 5B-1, and 5B-2 above. See Section 3.6 above for additional description of the work. Typical items include:
 - a. Dredging and disposal of material (MassDOT 148)
 - b. Sediment testing by independent lab as required by any offsite disposal facility proposed by the Contractor

C. Payment:

1. Payment will be made at the add-alternate item cubic yard price. The contract item price shall be full compensation for all costs incurred in furnishing all labor, tools, materials, equipment and incidentals for the Work and operations associated with this contract item.
2. Additional costs for disposal of regulated soil, if encountered, will be paid under Add-Alternate Items 9A and 9B for Offsite Disposal of Regulated Sediment (if required).

3.10 OFFSITE DISPOSAL OF REGULATED SEDIMENT (ADD-ALTERNATE ITEMS 9A & 9B)

A. Measurement:

1. Offsite Disposal of Regulated Sediment shall be measured per cubic yard.

B. Description:

1. Offsite Disposal of Regulated Sediment shall consist of any additional costs that may be required for offsite disposal of sediments if deemed to be "regulated" sediment not meeting MCP thresholds approved under the 401 WQC issued by MassDEP. This cost would be in addition to the base cost for dredging and non-regulated disposal specified under Contract Items 5A, 5B-1, and 5B-2 or Add-Alternate Items 8A and 8B above. Typical items may include, but not limited to, the following:
 - a. Disposal of regulated soil, if required (in-state, MassDOT 181.12; or out of state, MassDOT 181.13)
 - b. Licensed Site Professional services, if required (MassDOT 180.03)
 - c. Sediment testing by independent lab as required by the offsite disposal facility proposed by the Contractor

C. Payment:

1. Payment will be made at the contract item cubic yard price, which price shall be full compensation for all costs incurred in furnishing all labor, tools, materials, equipment and incidentals for the Work and operations associated with this contract item.
2. Payment for sediment dredging and non-regulated disposal will be paid under Contract Items 5A, 5B-1, and 5B-2 or Add-Alternate Items 8A and 8B.

3.11 ROCK EXCAVATION (ADD-ALTERNATE ITEMS 10A & 10B)

A. Measurement:

1. Rock Excavation shall be measured per cubic yard.

B. Description:

1. Rock Excavation shall consist of bedrock/ledge removal for adaptive management for fish passage and/or for installation of riprap channel stabilization as directed in the field by Engineer and/or DMF. Typical items include:
 - a. Ledge, Removed from Dredged Area and Disposed (MassDOT 148.24)

C. Payment:

1. Payment will be made at the contract item cubic yard price, which price shall be full compensation for all costs incurred in furnishing all labor, tools, materials, equipment and incidentals for the Work and operations associated with this contract item.

END OF SECTION 011025

SECTION 012500 - SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for substitutions.

1.2 DEFINITIONS

- A. Substitutions: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

1.3 ACTION SUBMITTALS

- A. Substitution Requests: Submit electronic copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.

1. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.
 - b. Coordination information, including a list of changes or revisions needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
 - d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. Certificates and qualification data, where applicable or requested.
 - g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated, where applicable or requested.
 - h. Cost information, including a proposal of change, if any, in the Contract Sum.
 - i. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
2. Engineer's Action: If necessary, Engineer will request additional information or documentation for evaluation within 7 days of receipt of a request for substitution. Engineer will notify Contractor of acceptance or rejection of proposed substitution within

15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.

1.4 QUALITY ASSURANCE

- A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials.

PART 2 - PRODUCTS

2.1 SUBSTITUTIONS

- A. Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change, but not later than 15 days prior to time required for preparation and review of related submittals.

PART 3 - EXECUTION (Not Used)

END OF SECTION 012500

SECTION 012900 - PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements necessary to prepare and process Applications for Payment.
- B. Related Requirements:
 - 1. Section 011025 "Measurement and Payment" for descriptions of and methods for measuring and paying for each Contract Item
 - 2. Section 013200 "Construction Progress Documentation" for administrative requirements governing the preparation and submittal of Contractor's construction schedule

1.2 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as certified by Engineer and paid for by Owner.
 - 1. Initial Application for Payment, Application for Payment at time of Substantial Completion, and final Application for Payment involve additional requirements.
- B. Payment Application Times: Submit Application for Payment to Engineer by the 15th day of the month. The period covered by each Application for Payment is one month, ending on the last day of the month.
 - 1. Any work completed through June 30th of a given year must be invoiced through the period ending June 30th and the invoice must be submitted to the Engineer no later than July 15th so that the Owner may process it for payment by July 31st in accordance with grant reimbursement requirements.
- C. Application for Payment Forms: Use EJCDC Document C-620, "Application for Payment," or approved equal as form for Applications for Payment.
- D. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Engineer will return incomplete applications without action.
 - 1. Entries shall match data on the schedule of values and Contractor's construction schedule. Use updated schedules if revisions were made.
 - 2. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
- E. Transmittal: Submit electronic copies of each Application for Payment to Engineer via email. One copy shall include waivers of lien and similar attachments if required.
 - 1. Transmit each copy with a transmittal form listing attachments and recording appropriate information about application.
- F. Waivers of Mechanic's Lien: With each Application for Payment, submit waivers of mechanic's lien from entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment.

1. Submit partial waivers on each item for amount requested in previous application, after deduction for retainage, on each item.
 2. When an application shows completion of an item, submit conditional final or full waivers.
 3. Owner reserves the right to designate which entities involved in the Work must submit waivers.
 4. Waiver Forms: Submit executed waivers of lien on forms acceptable to Owner.
- G. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
1. List of subcontractors
 2. Schedule of values
 3. Contractor's construction schedule (preliminary if not final)
 4. Submittal schedule (preliminary if not final)
 5. List of Contractor's staff assignments
 6. List of Contractor's principal consultants
 7. Initial progress report
 8. Report of preconstruction conference
 9. Certificates of insurance and insurance policies (provided at time of contract)
 10. Performance and Payment Bonds (provided at time of contract)
- H. Application for Payment at Substantial Completion: After Engineer issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
 2. This application shall reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- I. Final Payment Application: After completing Project closeout requirements, submit final Application for Payment with releases and supporting documentation not previously submitted and accepted, including, but not limited, to the following:
1. Evidence of completion of Project closeout requirements.
 2. Insurance certificates for products and completed operations where required and proof that taxes, fees, and similar obligations were paid.
 3. Updated final statement, accounting for final changes to the Contract Sum.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 012900

SECTION 013100 - PROJECT MANAGEMENT AND COORDINATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
 - 1. Requests for Information (RFIs)
 - 2. Project meetings
- B. Related Requirements:
 - 1. Section 017300 "Execution" for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points

1.2 DEFINITIONS

- A. RFI: Request from Owner, Engineer, or Contractor seeking information required by or clarifications of the Contract Documents.

1.3 INFORMATIONAL SUBMITTALS

- A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design. Include the following information in tabular form:
 - 1. Name, address, and telephone number of entity performing subcontract or supplying products.
 - 2. Number and title of related Specification Section(s) covered by subcontract.
 - 3. Drawing number and detail references, as appropriate, covered by subcontract.

1.4 GENERAL COORDINATION PROCEDURES

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections, that depend on each other for proper installation, connection, and operation.
 - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
 - 3. Make adequate provisions to accommodate items scheduled for later installation.
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
 - 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.

- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 - 1. Preparation of Contractor's construction schedule
 - 2. Preparation of the schedule of values
 - 3. Installation and removal of temporary facilities and controls
 - 4. Delivery and processing of submittals
 - 5. Participation in preconstruction and progress meetings
 - 6. Project closeout activities
 - 7. Startup and adjustment of systems

1.5 REQUESTS FOR INFORMATION (RFIs)

- A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
 - 1. Project name
 - 2. Project number
 - 3. Date
 - 4. Name of Contractor
 - 5. Name of Engineer
 - 6. RFI number, numbered sequentially
 - 7. RFI subject
 - 8. Specification Section number and title and related paragraphs, as appropriate
 - 9. Drawing number and detail references, as appropriate
 - 10. Field dimensions and conditions, as appropriate
 - 11. Contractor's suggested resolution. If Contractor's solution(s) impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
 - 12. Contractor's signature
 - 13. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
- C. RFI Forms: Form provided by Engineer or otherwise approved by Engineer.
- D. Engineer's Action: Engineer will review each RFI, determine action required, and respond. Allow 7 working days for Engineer's response for each RFI. RFIs received by Engineer after 1:00 p.m. will be considered as received the following working day.
 - 1. Engineer's action may include a request for additional information, in which case Engineer's time for response will date from time of receipt of additional information.
- E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit updated log with the submission of each new RFI.
- F. On receipt of Engineer's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Engineer within 7 days if Contractor disagrees with response.

1. Include identification of related Field Order, Work Change Directive, and Proposal Request, as appropriate.
2. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Engineer in writing within 7 days of receipt of the RFI response.

1.6 PROJECT MEETINGS

- A. General: Engineer will schedule and conduct meetings and conferences at Project site unless otherwise indicated.
 1. Attendees: Engineer will inform participants and others involved, and individuals whose presence is required, of date and time of each meeting.
 2. Agenda: Engineer will prepare the meeting agenda and distribute to all invited attendees.
 3. Minutes: Engineer will record significant discussions and agreements achieved and distribute the meeting minutes to everyone concerned, including Owner, Owner's Representative, and Contractor, within 7 days of the meeting.
- B. Preconstruction Conference: Engineer will schedule and conduct a preconstruction conference before starting construction, at a time convenient to all parties involved.
 1. Attendees: Authorized representatives of Owner, Engineer, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; project partners; permitting agencies; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
 2. Agenda: Items of significance that could affect progress will be discussed, including the following:
 - a. Tentative construction schedule
 - b. Phasing
 - c. Critical work sequencing and long-lead items
 - d. Designation of key personnel and their duties
 - e. Permit requirements
 - f. Procedures for processing field decisions and Change Orders
 - g. Procedures for RFIs
 - h. Procedures for testing and inspecting
 - i. Procedures for processing Applications for Payment
 - j. Distribution of the Contract Documents
 - k. Submittal procedures
 - l. Preparation of record documents
 - m. Use of the premises
 - n. Work restrictions
 - o. Working hours
 - p. Responsibility for temporary facilities and controls
 - q. Procedures for disruptions and shutdowns
 - r. Construction waste management and recycling
 - s. Parking availability
 - t. Office, work, and storage areas
 - u. Equipment deliveries and priorities
 - v. First aid

- w. Security
 - x. Progress cleaning
3. Minutes: Engineer will record and distribute meeting minutes.
- C. Progress Meetings: Engineer will conduct progress meetings at approximately weekly intervals or as needed.
- 1. Attendees: In addition to representatives of Owner and Engineer, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. Other project partners and/or permitting agencies may be invited to attend. All participants at the meeting shall be familiar with Project and authorized to conclude matters relating to the Work.
 - 2. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of Project.
 - a. Contractor's Construction Schedule: Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - 1) Review schedule for next period.
 - b. Review present and future needs of each entity present, including the following:
 - 1) Interface requirements
 - 2) Sequence of operations
 - 3) Status of submittals
 - 4) Deliveries
 - 5) Off-site fabrication
 - 6) Access
 - 7) Site utilization
 - 8) Temporary facilities and controls
 - 9) Progress cleaning
 - 10) Quality and work standards
 - 11) Status of correction of deficient items
 - 12) Field observations
 - 13) Status of RFIs
 - 14) Status of proposal requests
 - 15) Pending changes
 - 16) Status of Change Orders
 - 17) Pending claims and disputes
 - 18) Documentation of information for payment requests
 - 3. Minutes: Engineer will record and distribute the meeting minutes to each party present and to parties requiring information.

- a. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

SECTION 013200 - CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for documenting the progress of construction during performance of the Work, including the following:
 - 1. Contractor's construction schedule
 - 2. Construction schedule updating reports
 - 3. Site condition reports

1.2 DEFINITIONS

- A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.
 - 1. Critical Activity: An activity on the critical path that must start and finish on the planned early start and finish times.
 - 2. Predecessor Activity: An activity that precedes another activity in the network.
 - 3. Successor Activity: An activity that follows another activity in the network.
- B. Critical Path: The longest connected chain of interdependent activities through the network schedule that establishes the minimum overall Project duration and contains no float.

1.3 INFORMATIONAL SUBMITTALS

- A. Contractor's Construction Schedule: Initial schedule, of size required to display entire schedule for entire construction period.
- B. Construction Schedule Updating Reports: Submit with Applications for Payment.
- C. Site Condition Reports: Submit at time of discovery of differing conditions.

1.4 COORDINATION

- A. Coordinate Contractor's construction schedule with the schedule of values, submittal schedule, progress reports, payment requests, and other required schedules and reports.
 - 1. Secure time commitments for performing critical elements of the Work from entities involved.
 - 2. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.

PART 2 - PRODUCTS

2.1 CONTRACTOR'S CONSTRUCTION SCHEDULE, GENERAL

- A. Time Frame: Extend schedule from date established for commencement of the Work to date of final completion.

1. Contract completion date shall not be changed by submission of a schedule that shows an early completion date, unless specifically authorized by Change Order.
- B. Activities: Treat each separate area as a separate numbered activity for each main element of the Work. Comply with the following:
 1. Activity Duration: Define activities so no activity is longer than 20 days, unless specifically allowed by Engineer.
 2. Procurement Activities: Include procurement process activities for the following long lead items and major items, requiring a cycle of more than 30 days, as separate activities in schedule. Procurement cycle activities include, but are not limited to, submittals, approvals, purchasing, fabrication, and delivery.
 3. Submittal Review Time: Include review and resubmittal times indicated in Section 013300 "Submittal Procedures" in schedule. Coordinate submittal review times in Contractor's construction schedule with submittal schedule.
 4. Substantial Completion: Indicate completion in advance of date established for Substantial Completion and allow time for Engineer's administrative procedures necessary for certification of Substantial Completion.
 5. Punch List and Final Completion: Include not more than 30 days for completion of punch list items and final completion.
- C. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule and show how the sequence of the Work is affected.
 1. Phasing: Arrange list of activities on schedule by phase.
 2. Work by Owner: Include a separate activity for each portion of the Work performed by Owner.
 3. Work Restrictions: Show the effect of the following items on the schedule:
 - a. Coordination with existing construction
 - b. Limitations of continued occupancies
 - c. Uninterruptible services
 - d. Use of premises restrictions
 - e. Provisions for future construction
 - f. Seasonal variations
 - g. Environmental control
 4. Work Stages: Indicate important stages of construction for each major portion of the Work.
- D. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed, Substantial Completion, and Final Completion.
- E. Upcoming Work Summary: Prepare summary report indicating activities scheduled to occur or commence prior to submittal of next schedule update. Summarize the following issues:
 1. Unresolved issues
 2. Unanswered Requests for Information
 3. Rejected or unreturned submittals
 4. Notations on returned submittals
 5. Pending modifications affecting the Work and Contract Time

- F. Recovery Schedule: When periodic update indicates the Work is 14 or more calendar days behind the current approved schedule, submit a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule.

2.2 REPORTS

- A. Site Condition Reports: Immediately on discovery of a difference between site conditions and the Contract Documents, prepare and submit a detailed report. Submit with a Request for Information. Include a detailed description of the differing conditions, together with recommendations for changing the Contract Documents.

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Contractor's Construction Schedule Updating: At weekly intervals, update schedule to reflect actual construction progress and activities. Issue schedule 2 days before each regularly scheduled progress meeting.
 - 1. Revise schedule immediately after each meeting or other activity where revisions have been recognized or made. Issue updated schedule concurrently with the report of each such meeting.
 - 2. Include a report with updated schedule that indicates every change, including, but not limited to, changes in logic, durations, actual starts and finishes, and activity durations.
 - 3. As the Work progresses, indicate final completion percentage for each activity.
- B. Distribution: Distribute copies of approved schedule to Engineer, Owner, Owner's Representative, separate contractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.

END OF SECTION 013200

SECTION 013300 - SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes requirements for the submittal schedule and administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.
- B. Related Requirements:
 - 1. Section 013200 "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule
 - 2. Section 017839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data

1.2 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Engineer's responsive action.
- B. Informational Submittals: Written and graphic information and physical samples that do not require Engineer's responsive action. Submittals may be rejected for not complying with requirements.

1.3 ACTION SUBMITTALS

- A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Engineer and additional time for handling and reviewing submittals required by those corrections.

1.4 SUBMITTAL ADMINISTRATIVE REQUIREMENTS

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 - 2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Engineer reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- B. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Engineer's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.

1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Engineer will advise Contractor when a submittal being processed must be delayed for coordination.
 2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Resubmittal Review: Allow 15 days for review of each resubmittal.
- C. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:
1. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
 2. Name file with submittal number or other unique identifier, including revision identifier.
 - a. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g., TD-061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., TD-061000.01.A).
 3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Engineer.
 4. Transmittal Form for Electronic Submittals: Use electronic form acceptable to Engineer, containing the following information:
 - a. Project name
 - b. Date
 - c. Name and address of Engineer
 - d. Name of Contractor
 - e. Category and type of submittal
 - f. Submittal purpose and description
 - g. Specification Section number and title
 - h. Specification paragraph number or drawing designation and generic name for each of multiple items
 - i. Drawing number and detail references, as appropriate
 - j. Location(s) where product is to be installed, as appropriate
 - k. Related physical samples submitted directly
 - l. Indication of full or partial submittal
 - m. Transmittal number, numbered consecutively
 - n. Submittal and transmittal distribution record
 - o. Other necessary identification
 - p. Remarks
- D. Options: Identify options requiring selection by Engineer.
- E. Deviations: Identify deviations from the Contract Documents on submittals.
- F. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
1. Note date and content of previous submittal.
 2. Note date and content of revision in label or title block and clearly indicate extent of revision.

3. Resubmit submittals until they are marked with approval notation from Engineer's action stamp.
- G. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- H. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Engineer's action stamp.

PART 2 - PRODUCTS

2.1 SUBMITTAL PROCEDURES

- A. General Submittal Procedure Requirements:
 1. Submit electronic submittals via email as PDF electronic files unless otherwise directed to use Engineer's FTP site.
 - a. Engineer will return annotated file. Annotate and retain one copy of file as an electronic Project record document file.
 2. Certificates and Certifications Submittals: Provide a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
- B. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data, unless submittal based on Engineer's digital data drawing files is otherwise permitted.
 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Identification of products.
 - b. Schedules.
 - c. Compliance with specified standards.
 - d. Notation of coordination requirements.
 - e. Notation of dimensions established by field measurement.
 - f. Relationship and attachment to adjoining construction clearly indicated.
 - g. Seal and signature of professional engineer if specified.
- D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements and for a comparison of these characteristics between submittal and actual component as delivered and installed.
- E. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location.
- F. Contractor's Construction Schedule: Comply with requirements specified in Section 013200 "Construction Progress Documentation."
- G. Application for Payment and Schedule of Values: Comply with requirements specified in Section 012900 "Payment Procedures."

- H. Closeout Submittals and Maintenance Material Submittals: Comply with requirements specified in Section 017700 "Closeout Procedures."
- I. Maintenance Data: Comply with requirements specified in Section 017823 "Operation and Maintenance Data."
- J. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of owners, and other information specified.
- K. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- L. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- M. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Action and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Engineer.
- B. Project Closeout and Maintenance Material Submittals: See requirements in Section 017700 "Closeout Procedures."
- C. Approval Stamp: Stamp each submittal with a uniform, approval stamp. Include Project name and location, submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.

3.2 ENGINEER'S ACTION

- A. General: Engineer will not review submittals that do not bear Contractor's approval stamp and will return them without action.
- B. Action Submittals: Engineer will review each submittal, make marks to indicate corrections or revisions required, and return it. Engineer will stamp each submittal with an action stamp and will mark stamp appropriately to indicate action, as follows:
 - 1. NO EXCEPTION TAKEN – Contractor may proceed with the work.
 - 2. MAKE CORRECTIONS NOTED – The submittal contains a minor amount of corrections. Contractor may fabricate all items at its own risk without further correction.
 - 3. REVISE AND RESUBMIT – The submittal contains a minor amount of corrections, but the noted items must not be fabricated without further correction. Details of items noted by checker are to be further clarified. All items not noted to be corrected can be fabricated at Contractor's risk under this designation.

- 4. REJECTED – The submittal is rejected as it is not in accordance with the Contract, contains too many corrections, or other justifiable reason. The submittal must be corrected and resubmitted. No items are to be fabricated under this stamp.
- 5. SUBMIT SPECIFIED ITEM – The submitted item is not as specified. Contractor must submit named manufacturer.
- C. Informational Submittals: Engineer will review each submittal and will not return it, or will return it if it does not comply with requirements. Engineer will forward each submittal to appropriate party.
- D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.

END OF SECTION 013300

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
 - 2. Requirements for Contractor to provide quality-assurance and -control services required by Engineer, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
 - 3. Specific test and inspection requirements are not specified in this Section.

1.2 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Engineer.
- C. Preconstruction Testing: Tests and inspections performed specifically for Project before products and materials are incorporated into the Work, to verify performance or compliance with specified criteria.
- D. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- E. Source Quality-Control Testing: Tests and inspections that are performed at the source, e.g., plant, mill, factory, or shop.
- F. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- G. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- H. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.

- I. Experienced: When used with an entity or individual, "experienced" means having successfully completed a minimum of five previous projects similar in nature, size, and extent to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.3 CONFLICTING REQUIREMENTS

- A. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer conflicting requirements that are different, but apparently equal, to Engineer for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Engineer for a decision before proceeding.

1.4 REPORTS AND DOCUMENTS

- A. Test and Inspection Reports: Prepare and submit certified written reports specified in other Sections.
- B. Manufacturer's Field Reports: Prepare written information documenting tests and inspections specified in other Sections.

1.5 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Manufacturer's Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to observe and inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

1.6 QUALITY CONTROL

- A. Contractor Responsibilities: Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.
- B. Manufacturer's Field Services: Where indicated, engage a manufacturer's representative to observe and inspect the Work. Manufacturer's representative's services include examination of substrates and conditions, verification of materials, inspection of completed portions of the Work, and submittal of written reports.
- C. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 TEST AND INSPECTION LOG

- A. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:
 - 1. Date test or inspection was conducted
 - 2. Description of the Work tested or inspected
 - 3. Date test or inspection results were transmitted to Engineer
 - 4. Identification of testing agency or special inspector conducting test or inspection
- B. Maintain log at Project site. Post changes and revisions as they occur. Provide access to test and inspection log for Engineer's reference during normal working hours.

3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
- B. Protect construction exposed by or for quality-control service activities.
- C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes requirements for temporary utilities, support facilities, protection facilities, temporary construction access facilities, and soil erosion and sedimentation control measures.
- B. Related Requirements:
 - 1. Section 011000 "Summary" for work restrictions and existing utility information
 - 2. Section 015723 "Temporary Stormwater Pollution Controls" for pollution prevention and control measures
 - 3. Section 311000 "Site Clearing" for preparation requirements for temporary construction access facilities
 - 4. Section 312000 "Earth Moving" for products and procedures related to temporary construction access facilities
 - 5. Section 312319 "Care and Diversion of Water" for control of river water and surface water during construction

1.2 USE CHARGES

- A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner, Owner's Representative, Engineer, project partners, permitting agencies, testing agencies, and authorities having jurisdiction.

1.3 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use as required. Obtain required certifications and permits.
- C. Owner shall designate an Environmental Monitor (EM) to oversee the wetland restoration area and any emergency placement of controls and regular inspection or replacement of sedimentation and turbidity control devices (if necessary). The EM shall inspect the installation of temporary erosion, sedimentation, and pollution controls prior to the start of work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.2 TEMPORARY UTILITIES

- A. General: Install temporary service or connect to existing service. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
- C. Electric Power Service: Provide electric power service and distribution system of sufficient size, capacity, and power characteristics required for construction operations.
- D. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.

3.3 SUPPORT FACILITIES

- A. Traffic Controls: Comply with requirements of authorities having jurisdiction. Protect existing site improvements to remain including paved driveway and utilities.
- B. Parking: Use designated areas of existing parking area and proposed expansion of parking area as specified on Drawings.
- C. Waste Disposal Facilities: Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."
- D. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with progress cleaning requirements in Section 017300 "Execution."

3.4 PROTECTION FACILITIES

- A. Protection of Existing Facilities: Protect existing vegetation, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
- B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
 - 1. Install oil boom/turbidity curtain as specified on Drawings to prevent potential contamination from excavation equipment from entering downstream waterway.
 - 2. Maintain an oil spill response kit on site at all times.
 - 3. An Incident Notification Procedure will be developed by the Engineer and filed with MassDEP in accordance with the 401 WQC prior to construction. Contractor shall comply with the notification procedure specified therein for any observed dead or distressed fish or other organisms, oil sheen on water surfaces, sediment spills, or non-permitted turbidity plumes beyond deployed erosion and sedimentation controls.
- C. Stormwater Control: Take precautions to prevent damage to work or equipment by high water or storms.
- D. Overhead Electric Utilities: Care must be taken to protect existing utility poles and avoid impacting overhead lines during construction. If Contractor feels that an existing utility pole may be

impacted by the Work, Contractor shall coordinate with the electric utility to provide a bracing truck as needed. Any temporary relocation/protection of overhead wires that may be needed to complete the Work shall be the responsibility of the Contractor.

- E. Tree Protection: Protect existing trees indicated on plans from damage from construction operations. Protect tree root systems from damage, flooding, and erosion. Erect high visibility fencing around drip line of individual trees or around perimeter drip line of groups of trees to remain. No tree removal is permitted for trees measuring 3 inches or greater in diameter at breast height (DBH) during TOY for bats (April 15 – September 30) without prior written authorization by Owner, Engineer, and the USFWS.

3.5 SOIL EROSION AND SEDIMENTATION CONTROL MEASURES

- A. Contractor shall submit a Phasing and Sequencing plan and Pollution Prevention and Control Plan in accordance with Section 015723, Paragraphs 1.4 A and B and 1.6 prior to the start of construction for review and approval.
- B. All soil erosion and sediment control practices are to be installed prior to any major soil or stream disturbance, or in their proper sequence, and maintained until permanent protection is established.
- C. All disturbed areas outside of the river channel that will be left exposed more than fourteen (14) days, and not subject to construction traffic will immediately receive a temporary seeding. Mulch, water and anchor as necessary to establish grass and prevent loss to wind or erosion. If the season prevents the establishment of a temporary cover, the disturbed areas will be mulched with small grain straw at a rate of two (2) tons per acre, in accordance with state standards. Other methods of temporary cover shall be approved by Engineer.
- D. All work shall be conducted in accordance with the Massachusetts erosion and sedimentation control guidelines and applicable National Pollutant Discharge Elimination System (NPDES) standards.
- E. Should the control of dust at the site be necessary, the site shall be sprinkled with water until the surface is wet, temporary vegetative cover shall be established or mulch shall be applied in accordance with state standards for erosion control.
- F. All soil washed, dropped, spilled, or tracked outside the limit of disturbance or onto public rights-of-way will be removed immediately.
- G. Stockpile and staging locations determined in the field shall be placed within the limit of disturbance. All soil stockpiles shall be temporarily stabilized in accordance with note 'C' above and protected by a silt fence around the perimeter of the stockpile at the toe of the slope.
- H. Contractor shall inspect disturbed areas of the construction site, areas used for storage of materials that are exposed to precipitation that have not been finally stabilized, stabilization practices, structural practices, and other controls at least once every seven (7) calendar days and within 24 hours of the end of any storm that produces 0.5 inch or more rainfall at the site. Where sites have been finally stabilized, such inspection shall be conducted at least once every month until final completion. Critical areas and areas where vehicles exit the site shall be inspected daily.

3.6 OPERATION, TERMINATION, AND REMOVAL

- A. Maintenance: Maintain facilities in good operating condition until removal.

- B. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.

END OF SECTION 015000

SECTION 015723 - TEMPORARY STORMWATER POLLUTION CONTROLS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for the following:
 - 1. Phasing and sequencing;
 - 2. Pollution prevention and control;
 - 3. Inspection Requirements.
- B. Related Requirements
 - 1. Section 015000 "Temporary Facilities and Controls" for additional details of materials and installation and maintenance of erosion and sediment controls.

1.2 DESCRIPTION

- A. General: Dewatering activities for the project are subject to the requirements of the Section 401 WQC (provided in **Appendix B**) but may also require NPDES permit coverage if the disturbance area exceeds 1.0 acres. Soil disturbance at the project is expected to be less than 1.0 acres, but if that threshold will be exceeded, Contractor shall notify Owner and Engineer prior to disturbance or dewatering so that appropriate permit coverage can be obtained.
- B. Contractor shall be responsible to install and maintain the applicable temporary stormwater and diversion control items as required or shown on the drawings before starting any grading or excavation to protect the site from sediment discharges. Contractor shall provide any temporary sediment and erosion control measures that may be required within limits of the work, including any staging areas, throughout construction in conformance with the Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas, and as directed by Owner to adequately protect the site and adjacent waterbodies. All permanent control practices required shall be placed before the removal of the temporary stormwater diversion and control items.
- C. During construction conduct operations in such a manner as to prevent or reduce to a minimum any damage to any water body from pollution by debris, sediment, chemical or other foreign material, or from the manipulation of equipment and/or materials in or near a stream or ditch flowing directly to a stream. Any water which has been used for wash purposes or other similar operations which become polluted with sewage, silt, cement, concentrated chlorine, oil, fuels, lubricants, bitumens, or other impurities shall not be discharged into any water body.
- D. In the event of conflict between these specifications and the regulation of other federal, state, or local jurisdictions, the more restrictive regulations shall apply.
- E. Contractor shall comply with all applicable regulatory requirements.

1.3 PAYMENT

- A. Unless indicated in the Unit Price Schedule as a pay item, no separate payment will be made for work performed under this Section. Include cost of work performed under this Section in pay items for which this work is a component.

1.4 SUBMITTALS

- A. Phasing and Sequencing Plan: Submit plan a minimum of 7 days prior to the Pre-Construction Site Assessment Conference.
- B. Pollution Prevention and Control Plan: Submit plan a minimum of 7 days prior to the Pre-Construction Site Assessment Conference.

1.5 QUALITY ASSURANCE

- A. Pre-Construction Site Assessment Conference: Conduct conference at the Project site prior to beginning construction to review project specific pollution prevention procedures and site requirements.
- B. Final Stabilization: Conduct a meeting at the Project site to review the stabilization of all areas disturbed as a result of construction activities. Routine construction duration inspections shall continue until final stabilization has occurred.

1.6 PHASING AND SEQUENCING PLAN

- A. General: A construction phasing plan and sequence of operations describing the intended order of construction, including clearing and grubbing, excavation and grading, utility and infrastructure installation and any other activity at the site that results in soil disturbance. The plan shall identify areas in acres of proposed disturbances. Contractor shall limit soil disturbances at the site to less than 1.0 acres.
- B. Erosion and Sediment Control Practices: A description of the minimum erosion and sediment control practices to be installed or implemented for each construction activity that will result in soil disturbance. Include a schedule that identifies the timing of initial placement or implementation of each erosion and sediment control practice and the minimum time frames that each practice should remain in place or be implemented.
- C. Temporary Soil Stabilization: A temporary soil stabilization plan that meets the requirements of the most current version of the technical standard, for each stage of the project, including initial land clearing and grubbing to project completion and achievement of final stabilization.
- D. Site Plan: A site plan showing the specific location(s), size(s), and length(s) of each erosion and sediment control practice to be installed as required to provide erosion and sediment control.
- E. Completion: Erosion and sediment control practices shall be maintained until final stabilization has occurred and has been approved by Engineer.

1.7 POLLUTION PREVENTION AND CONTROL PLAN

- A. Develop a pollution prevention and control plan. Plan shall consist of a description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a pollutant source in the stormwater discharges.
- B. Chemical Identification: Indicate anticipated types and quantities of construction chemicals used or stored on site for the Work. Construction chemicals include but are not limited to hazardous materials, fuels, lubricants, oils, etc. Include estimated quantities and assumptions for estimates. Identify construction chemicals used onsite as follows:
 - 1. List each type of construction chemical, fuel, lubricant or other oil to be used onsite along with estimated quantities and locations.

2. Indicate type, quantity and location of materials used to cleanup spills for each construction chemical identified.
- C. Should a fuel, lubricant, or chemical spill occur, the Owner shall be notified immediately to ensure proper reporting and clean up. Contractor shall proceed as appropriate in accordance with notification requirements and as required to contain and clean up the spill.

1.8 PROTECTION OF WATER RESOURCES

- A. All water resources (i.e., ground and surface waters), including all drains, shall be protected from leaching and/or run-off of chemical pollutants, solid wastes and construction site debris.
- B. Prior to construction, Contractor shall submit for review and approval by Owner, schedules and methods for accomplishment of site-specific pollution and erosion control plan for the duration of the project.
 1. The site-specific pollution and erosion control plan shall be submitted to Owner at least ten (10) days prior to commencement of the work.
 2. No work shall begin until the erosion and pollution control schedules and plans have been approved by Owner.
 3. If conditions change during construction, Contractor shall revise the plan and resubmit to Owner for review and approval.
- C. A chemical and oil spill prevention and cleanup plan shall be provided and implemented during the course of the Work. Contractor shall maintain, on site, sufficient quantities of absorbent materials for use in case of chemical or oil spills. In the event of any actual or suspected spill of any chemical, petroleum product, or waste water, Contractor shall immediately notify Owner and immediately take all measures necessary to control the spread of the spilled material, and to clean it up.
- D. Storage and/or use of chemicals, fuels, oils, greases, bituminous materials, solids, waste washings, and cement shall be handled appropriately as to prevent leaching or surface run-off into public waters or drains. All Owner approved storage areas for these materials must be diked.
- E. Disposal of any waste materials on the construction site is prohibited.
- F. Water resulting from or contaminated by construction operations shall not be directly discharged into any bodies of water or drainage systems.
- G. There shall be no discharge of suspended and/or settle-able solids in amounts that cause visible contrast to natural conditions.

1.9 DEWATERING

- A. Construction activities shall be performed in such a manner that the site shall be effectively drained in accordance with the approved water control plan described in Section 312319 Care and Diversion of Water.
- B. Water resulting from or contaminated by construction operations shall not be directly discharged to any water bodies or drain systems. Dewatering shall not cause visible contrast to natural conditions in existing water resources (i.e., ground and surface waters).
- C. Water discharged from pumps and associated equipment shall be handled to prevent ponding, sediment runoff, and creating hazardous conditions on paved surfaces. All discharges from pumps

shall be to an approved sediment filter bag used for dewatering. Direct discharge of pumped water to a water body is prohibited.

1.10 DRAIN AND CATCH BASIN PROTECTION

- A. Drains shall be kept open during the duration of the Work and rendered fully operational by Contractor at the completion of the project.
- B. Discharge of any liquids or solids into sanitary or storm piping system is prohibited unless specifically authorized in writing by Owner.
- C. All exterior drains and catch basins within or adjacent to work areas or grounds disturbed by Contractor's activities shall be protected from sediment runoff.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

- A. General: Implement approved Phasing and Sequencing Plan and Pollution Prevention Plan. Provide materials, signage, equipment, and other items as required to implement plans during the entire duration of the Contract.
- B. Training: Train workers, subcontractors, and suppliers on proper stormwater protection and pollution prevention procedures, as appropriate for the Work occurring at Project site.
- C. Site Access and Temporary Controls: Conduct construction operations to ensure minimum interference with onsite and adjacent waterbodies, roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- D. Designate and identify specific areas on Project site necessary for stabilized construction entrances. Sweep and clean streets daily where stabilized construction entrances are in use.

3.2 INSPECTION AND ENTRY

- A. Inspections: The following inspections shall take place until final stabilization has occurred.
Contractor shall conduct daily inspections during all soil disturbing activities and develop inspection reports indicating areas of disturbance and any erosion/pollution concerns.
- B. Retention of Records: Contractor shall maintain a copy of all inspection reports at the construction site until all disturbed areas have achieved final stabilization.

3.3 WORK AREAS

- A. Owner has the authority to limit the surface area of erodible earth exposed by earthwork operations and to direct Contractor to provide immediate temporary or permanent erosion measures to minimize damage to property and contamination of watercourses and water impoundments. Under no circumstances will the area of erodible earth material exposed at one time exceed 0.5 acres without the express written consent and approval of Owner. Owner may decrease this area of erodible earth material exposed at one time as determined by his analysis of project, weather and other conditions. Owner may limit the area of clearing and grubbing and earthwork operations in progress commensurate with Contractor's demonstrated capability in

protecting erodible earth surfaces with temporary, permanent, vegetative or biotechnical erosion control measures.

- B. Schedule the work so as to minimize the time that earth areas will be exposed to erosive conditions. Provide temporary structural measures immediately to prevent any soil erosion.
- C. Provide temporary seeding on disturbed earth or soil stockpiles exposed for more than 7 days or for any temporary shutdown of construction. In spring, summer or early fall apply rye grass at a rate of 1 pound per 1000 square feet. In late fall or early spring, apply certified Aroostook Rye at a rate of 2.5 pounds per 1000 square feet. Apply hay or straw at a rate of 2 bales/ 1000 sq. ft. or wood fiber hydromulch at the manufacturer's recommended rate. Hay or straw shall be anchored. On slopes steeper than 3H:1V, biodegradable erosion control blankets (e.g., jute mesh) shall be used.
- D. Coordinate the use of permanent controls or finish materials shown with the temporary erosion measures.
- E. All erosion and sediment control devices must be maintained in working order until the site is stabilized. All preventative and remedial maintenance work, including clean out, repair, replacement, re-grading, re-seeding, or re-mulching, must be performed immediately.
- F. After final stabilization has been achieved temporary sediment and erosion controls must be removed. Areas disturbed during removal must be stabilized immediately.

END OF SECTION 015723

SECTION 017300 - EXECUTION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes general administrative and procedural requirements governing execution of the Work including, but not limited to, the following:
 - 1. Construction layout
 - 2. Field engineering and surveying
 - 3. Installation of the Work
 - 4. Progress cleaning
- B. Related Requirements:
 - 1. Section 011000 "Summary" for limits on use of Project site
 - 2. Section 017700 "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of accepted deviations from indicated lines and levels, and final cleaning

1.2 INFORMATIONAL SUBMITTALS

- A. Final Topographic Survey: Submit an electronic PDF copy showing the Work performed and record survey data.

1.3 QUALITY ASSURANCE

- A. Land Surveyor Qualifications: A professional land surveyor who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing land-surveying services of the kind indicated.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Existing Conditions: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities, and other construction affecting the Work.
- B. Dig Safe: This project is subject to MGL Chapter 353 regarding the use of "Dig Safe" procedures. Comply with all regulations and laws concerning excavation, demolition, or explosive work and be advised of "Dig Safe" requirements.
 - 1. Contractor must notify "Dig Safe" of Massachusetts of contemplated excavation, demolition, or explosive work in public or private ways, any Utility Company Right of Way or Easement, or any public or privately owned land or way.
 - 2. Notify Dig Safe by dialing 811 or 1-888-344-7233 at least 72 hours, but no more than 60 days, prior to commencing any excavation, excluding Saturdays, Sundays, and legal

holidays. Such notice shall set forth the name of the street or the route number of said way and an accurate description of the location and nature of the proposed Work.

3. Contractor shall pre-mark areas where the Work will take place following applicable laws and regulations. Contractor shall not commence work until "Dig Safe" has responded and utility representatives have marked identified utilities within the Work area. The Work shall then be performed in such a manner, and with reasonable precautions taken to avoid damage to utilities. Work shall be conducted in compliance with applicable laws and regulations.
 4. Contractor shall ensure that utility marks remain visible through the duration of the Work. If the marks are compromised, Contractor shall notify Dig Safe and shall not conduct further Work in the location where utility marks have been compromised until such utilities have once again been marked.
- C. Examination and Acceptance of Conditions: Before proceeding with each component of the Work, examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.
- D. Proceed with Work only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Field Measurements: Take field measurements as required to complete the Work properly. Recheck measurements before completing the Work.
- B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.
- C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of Contractor, submit a request for information to Engineer according to requirements in Section 013100 "Project Management and Coordination."

3.3 CONSTRUCTION LAYOUT

- A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the existing benchmarks. If discrepancies are discovered, notify Engineer promptly.
- B. General: Engage a land surveyor to lay out the Work using accepted surveying practices.
 1. Establish benchmarks and control points to set lines and levels as needed to locate each element of Project.
 2. Establish limits on use of Project site.
 3. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
 4. Inform installers of lines and levels to which they must comply.
 5. Check the location, level and plumb, of every major element as the Work progresses.
 6. Notify Engineer when deviations from required lines and levels exceed allowable tolerances.

- 7. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.
- 8. Use datum consistent with the Construction Drawings.
- C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and rim and invert elevations.
- D. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Engineer.

3.4 FIELD ENGINEERING

- A. Reference Points: Locate existing permanent property bounds, benchmarks, control points, and similar reference points before beginning the Work. Preserve and protect permanent benchmarks and control points during construction operations.
- B. Benchmarks: Establish and maintain a minimum of two permanent benchmarks on Project site, referenced to data established by survey control points. Comply with authorities having jurisdiction for type and size of benchmark. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.
- C. Final Property Survey: Engage a land surveyor to prepare a final topographic survey showing significant features (real property) for Project. Include on the survey a certification, signed by land surveyor, that principal lines, and levels of Project are accurately positioned as shown on the survey.

3.5 INSTALLATION

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.
- D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.
- E. Sequence the Work and allow adequate clearances to accommodate movement of construction items on site and placement in permanent locations.
- F. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- G. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

3.6 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose of materials lawfully.
- B. Site: Maintain Project site free of waste materials and debris.

- C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.
- D. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways.

END OF SECTION 017300

SECTION 017419 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for salvaging, recycling or disposal of nonhazardous demolition and construction waste.
 - 1. The Contractor shall take composite sediment samples and perform tests to determine contaminant levels in sediment disposed of offsite.
- B. RELATED REQUIREMENTS:
 - 1. Section 024116 "Demolition" for disposition of waste resulting from demolition of structures and site improvements
 - 2. Section 311000 "Site Clearing" for disposition of waste resulting from site clearing and removal of above- and below-grade improvements
 - 3. Section 312000 "Earth Moving" for disposition of sediment resulting from excavation and earth moving activities

1.2 DEFINITIONS

- A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
- C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
- E. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

1.3 WASTE MANAGEMENT PLAN

- A. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
- B. Site shall be kept well organized, signed, and free of waste materials, debris, and rubbish at all times. Good housekeeping practices shall be maintained on a continuous basis. Disposal of any waste materials on the site is prohibited.
- C. Sanitary, waste disposal, and employee facilities shall be provided by Contractor.
- D. All water resources (e.g., ground and surface waters), including all drains and catch basins, shall be protected from leaching and/or run-off of chemical pollutants, solid wastes, and construction site debris. All catch basins shall be maintained free flowing.

- E. All combustible waste materials shall be placed in covered metal containers and promptly disposed of in an approved manner at an approved waste disposal facility.
- F. Storage and/or use of chemicals, fuels, oils, greases, bituminous materials, solids, waste washings, and cement shall be handled appropriately as to prevent leaching or surface runoff into public waters or drains. All authority approved storage areas for these materials must be diked.
- G. All roadways shall be maintained free of debris. Stabilized construction entrances shall be constructed to capture debris from wheels of construction vehicles. Vehicles shall be inspected at entrances before turning onto the roadway and excess debris shall be removed.
- H. Idling of construction equipment shall be limited to minimize emissions at the site.
- I. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads and other adjacent facilities.
 - 1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, reused, recycled, or disposed of.
 - 2. Comply with Section 015000 "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control.
- J. Disposal of surplus material on private property, within the Weymouth Town limits, will not be permitted unless the property owner has secured a permit from the Town Building Inspector, which allows dumping on the premises.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 017419

SECTION 017700 - CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
 - 1. Substantial Completion procedures
 - 2. Final completion procedures
 - 3. Warranties
 - 4. Final cleaning
- B. Related Requirements:
 - 1. Section 017839 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data

1.2 ACTION SUBMITTALS

- A. Contractor's List of Incomplete Items: Initial submittal at Substantial Completion.
- B. Certified List of Incomplete Items: Final submittal at Final Completion.

1.3 SUBSTANTIAL COMPLETION PROCEDURES

- A. Contractor's List of Incomplete Items: Prepare and submit a list of items to be completed and corrected (Contractor's punch list), indicating the value of each item on the list and reasons why the Work is incomplete.
- B. Submittals Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
 - 1. Submit closeout submittals specified in other Division 01 Sections, including project record documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, property surveys, and similar final record information.
 - 2. Submit closeout submittals specified in individual Sections, including specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents.
- C. Procedures Prior to Substantial Completion: Complete the following a minimum of 10 days prior to requesting inspection for determining date of Substantial Completion. List items below that are incomplete at time of request.
 - 1. Terminate and remove temporary facilities from Project site.
 - 2. Complete final cleaning requirements.
- D. Inspection: Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to date the work will be completed and ready for final inspection and tests. On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare the Certificate of Substantial Completion after

inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Engineer, that must be completed or corrected before certificate will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for final completion.

1.4 FINAL COMPLETION PROCEDURES

- A. Preliminary Procedures: Before requesting final inspection for determining final completion, complete the following:
 1. Submit a final Application for Payment according to Section 012900 "Payment Procedures."
 2. Certified List of Incomplete Items: Submit certified copy of Engineer's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Engineer. Certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.
- B. Inspection: Submit a written request for final inspection to determine acceptance. On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

1.5 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Organization of List: Include name and identification of each area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
 1. Submit list of incomplete items in MS Excel and PDF electronic file formats. Engineer will return annotated copy.

1.6 SUBMITTAL OF PROJECT WARRANTIES

- A. Submit written warranties on request of Engineer for designated portions of the Work where commencement of warranties other than date of Substantial Completion is indicated, or when delay in submittal of warranties might limit Owner's rights under warranty.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 FINAL CLEANING

- A. General: Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.
 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a designated portion of Project:

- a. Clean Project site in areas disturbed by construction activities of rubbish, waste material, litter, and other foreign substances.
- b. Remove tools, construction equipment, machinery, and surplus material (except those salvaged for use by Owner) from Project site.

END OF SECTION 017700

SECTION 017839 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements to support Engineer's preparation of project record documents, including the following:
 - 1. Redline Drawings
 - 2. Redline Specifications

1.2 CLOSEOUT SUBMITTALS

- A. Redline Drawings: Submit PDF electronic file of Contract Drawings with redline markups.
- B. Redline Specifications: Submit annotated PDF electronic files of Project's Contract Specifications, including addenda and contract modifications.

PART 2 - PRODUCTS

2.1 REDLINE DRAWINGS

- A. Record Prints: Maintain one set of marked-up electronic copies of the Contract Drawings, incorporating new and revised Drawings as modifications are issued.
 - 1. Preparation: Mark Contract Drawings to show the actual Work where Work varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to provide information for preparation of corresponding marked-up record prints.
 - a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
 - b. Record data as soon as possible after obtaining it.
 - c. Record and check the markup before enclosing concealed installations.
 - 2. Mark the Contract Drawings completely and accurately. Use personnel proficient at recording graphic information in production of marked-up record prints.
 - 3. Indicate changes on Contract Drawings with red marks. Use other colors to distinguish between changes for different categories of the Work at same location.
 - 4. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
- B. Record Digital Data Files: Immediately before inspection for Certificate of Substantial Completion, review marked up redline drawings with Engineer. When authorized, prepare a full set of corrected digital data files of the redline Contract Drawings, as follows:
 - 1. Format: Annotated PDF electronic file with comment function enabled.
 - 2. Incorporate changes and additional information previously marked on record prints. Delete, redraw, and add details and notations where applicable.

- C. Format: Identify and date each record Drawing; include the designation "REDLINE DRAWING" in a prominent location.

2.2 REDLINE SPECIFICATIONS

- A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.
 - 1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
 - 2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
 - 3. Record the name of manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
 - 4. Note related Change Orders and record Drawings where applicable.
- B. Format: Submit redline Specifications as annotated PDF electronic file.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

- A. Recording: Maintain one copy of each submittal during the construction period for project record document purposes. Post changes and revisions to project record documents as they occur; do not wait until end of Project.
- B. Maintenance of Redline Documents and Samples: Store redline documents and samples in the field office apart from the Contract Documents used for construction. Do not use project redline documents for construction purposes. Maintain redline documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to project redline documents for Engineer's reference during normal working hours.

END OF SECTION 017839

DIVISION 02 - EXISTING CONDITIONS

SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes demolition and disposal of all or part of the following structures and features noted below as required to complete the Work, as shown on the plans directed by Owner:
 - 1. Larkin Dam Site
 - a. Full horizontal and vertical extent of the approximately 38-foot-long, 5-foot-high concrete and stone spillway
 - b. 65-foot-long concrete-faced stone left abutment wall
 - c. 127-foot-long concrete right abutment wall
 - d. Concrete former mill intake
 - e. 140-foot-long concrete fishway
 - f. 35-foot-long, 2- to 3-foot-high stone "fish weir" that spans the channel 30 feet downstream of the spillway
 - 2. USGS Gage Site
 - a. 18-foot-wide, 2-foot-high, concrete low-head weir and upstream concrete pad
 - b. River-right (southwest) stone abutment
- B. Related requirements:
 - 1. Section 312319 "Care and Diversion of Water" for control of river water and surface water during construction
 - 2. Section 312000 "Earth Moving" for excavation required to remove items for disposal

1.2 SUBMITTALS

- A. Demolition Plan: Removal procedures and operational sequence for review and approval by Owner.
 - 1. The methods and operations shall include safety measures and special precautions to be used in the demolition work. Safety procedures shall be put in place for safe demolition and disposal including proper handling of any hazardous materials.

1.3 MATERIALS OWNERSHIP

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.
- B. Stones from masonry structures may be reused onsite as deemed appropriate by Engineer or stockpiled onsite for Owner.

1.4 FIELD CONDITIONS

- A. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Engineer and Owner.
- B. Condition of Structure: Owner assumes no responsibility for actual condition of structures to be demolished.
- C. Noise: Noise levels resulting from demolition activities shall comply with all local, state, and federal regulations.
- D. Explosives: Do not use explosives for demolition of structures.
- E. Provide interior and exterior shoring, bracing, or support to prevent movement, settlement, or collapse of any remaining structures.
- F. Damages: Promptly repair damages caused to adjacent facilities by demolition operations at no cost to Owner.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Review Project Record Documents of existing construction or other existing conditions and information provided in Contract Documents. Neither the Owner nor Engineer guarantees that existing conditions are same as those indicated in Contract Documents.

3.2 PROTECTION

- A. Perform demolition in such a manner as to eliminate hazards to persons and property; to minimize interference with use of adjacent areas, utilities and structures or interruption of use of such utilities; and to provide free passage to and from such adjacent areas of structures.

3.3 REMOVAL METHODS

- A. Contractor may use any legal and safe method for demolition except blasting, provided the operations do not damage any portion of the work or site that is to remain in place. All damage to existing structures to remain in place shall be repaired by Contractor at its own expense.
- B. Removal shall be to the lines and elevations indicated herein except as otherwise shown on the drawings or as directed by Owner.
- C. Concrete: Using power-driven saw, cut concrete to a depth of at least 3/4 inch (19 mm) at junctures with concrete to remain. Dislodge concrete from reinforcement at perimeter of areas being demolished, cut reinforcement flush with the finished surface, and then remove remainder of concrete.
- D. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, and then remove masonry between saw cuts.

3.4 DUST CONTROL

- A. Demolition debris that contains dust or other material that could become airborne or create a nuisance shall either be removed from the work site daily or shall be covered and secured with tarps or sheeting until removed from the site.
- B. Apply a water mist, or other means approved by Owner, on debris to control or mitigate airborne dust or airborne nuisances, unless the material will become friable (i.e., crumble easily) or will dissolve in water. Friable material and material that may dissolve in water shall be securely covered with tarps or sheeting.
- C. Demolition debris that becomes friable when wetted or will dissolve in water shall be stored only on impervious surfaces, field-installed ground sheeting, or other barriers.

3.5 DISCOVERIES

- A. In the event of an unanticipated and potentially significant discovery including human remains during any construction activities, Contractor will immediately stop all work at and in the vicinity of the discovery and take reasonable measures to avoid or minimize harm to the finds. Contractor will secure all discoveries and restrict access to discovery sites, with the assistance of the Project Archaeologist. Owner and Contractor will follow the provisions of applicable state laws, including Massachusetts General Laws Chapter 38, section 6 (discovery of skeletal remains likely to be Native American); Chapter 9, section 26A (state archaeologist; duties; reservation of lands from sale; cooperation of governmental agencies); Chapter 9, section 27C (projects; notice; adverse effect; review); and Chapter 7, section 38A (skeletal remains; preservation; excavation; analysis), or any amendments or supplanting laws and regulations.
- B. If the discovery consists of human remains, Owner will inform the Office of the Chief Medical Examiner (Dr. Mindy Hull, 617-267-6767), the State Historic Preservation Officer (SHPO) (Brona Simon, Massachusetts Historical Commission (MHC) 617-727-8470), and Lead Federal Agency (LFA) (Brian Kelder, National Oceanic and Atmospheric Administration (NOAA) 978-675-5993). The LFA will consult with the SHPO and Tribes including the Massachusetts Commission on Indian Affairs, if remains are of tribal origin. Work in sensitive areas may not resume until consultation is completed and appropriate measures have been taken to ensure that the project is in compliance with the National Historic Preservation Act (NHPA).

3.6 DISPOSAL

- A. Unless otherwise directed by Owner, all materials removed shall be legally disposed of off the site in accordance with local, state, and federal laws and regulations.
- B. Contractor shall make own arrangements for a disposal site and shall pay all costs involved.
- C. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- D. Do not burn demolished materials.

END OF SECTION 024113

DIVISION 31 - EARTHWORK

SECTION 311000 - SITE CLEARING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes:
 - 1. Protecting existing vegetation to remain
 - 2. Vegetation clearing
 - 3. Temporary erosion and sedimentation controls
- B. Work shall be performed in accordance with applicable permits (**Appendix B**).
- C. Related requirements:
 - 1. Section 015000 "Temporary Facilities and Controls" for protection facilities and erosion and sedimentation control measures

1.2 MATERIAL OWNERSHIP

- A. Except for materials indicated to be stockpiled or otherwise remain Owner's property, cleared materials shall become Contractor's property and shall be removed from Project site for lawful composting or disposal.

1.3 FIELD CONDITIONS

- A. Utility Locator Service: Notify utility locator service for area where Project is located before site clearing according to Dig Safe requirements in Section 017300 "Execution."
- B. Temporary Controls: Do not commence site clearing operations until temporary high-visibility protective fencing for sensitive archaeological areas and temporary erosion and sedimentation control measures are in place.
- C. Tree Protection: Protect existing trees indicated on plans from damage from construction operations. Protect tree root systems from damage, flooding, and erosion. Erect a plainly visible fence around drip line of individual trees or around perimeter drip line of groups of trees to remain.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect and maintain property bounds and survey control points from disturbance during construction.
- B. Verify that trees have been protected according to requirements above.

- C. Protect existing site improvements to remain from damage during construction. Restore damaged improvements to their original condition, as acceptable to Owner.

3.2 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- A. Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and roads, according to erosion and sedimentation control Drawings and requirements of authorities having jurisdiction.
- B. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.
- C. Inspect, maintain, and repair erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
- D. Once disturbed areas are restored and stabilized, remove erosion and sedimentation controls.

3.3 CLEARING

- A. No tree removal is permitted for trees measuring 3 inches or greater in diameter at breast height (DBH) during TOY for bats (April 15 – September 30) without prior written authorization by Owner, Engineer, and the USFWS.
- B. The Project Archaeologist will monitor the vegetation clearing within and adjacent to sensitive archaeological protection areas.
- C. All vegetation clearing in the archaeological protection areas will be limited to flush cuts with no stumping or grubbing of root systems below the ground surface.
- D. Vegetation clearing will be done using hand equipment only. No heavy equipment access or hand or mechanized grubbing of roots will be permitted inside the archaeological protection areas prior to the installation of protective filter fabric and gravel subbase on all temporary access and staging areas as indicated on the drawings.

3.4 DISPOSAL OF SURPLUS AND WASTE MATERIALS

- A. Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials including trash and debris from the site for legal composting or disposal.
- B. The Contractor shall not be allowed to burn any trees, stumps and brush within the project site. All such materials shall be removed and disposed of off the site.

END OF SECTION 311000

SECTION 312000 - EARTH MOVING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes:
 - 1. Earth excavation associated with demolition activities:
 - a. Earth excavation (MassDOT 120)
 - 2. Stone fill for temporary access and staging activities:
 - a. Gravel borrow (for temporary access/staging areas; MassDOT 151, M1.03.0(b))
 - b. Crushed stone (for stabilized construction entrances; MassDOT 156, M2.01.3)
 - c. Dense-graded crushed stone (for former mill intake fill; MassDOT 402, M2.01.7)
 - 3. Channel stabilization at gage and bridge sites:
 - a. Class V rounded riprap (D50 = 18")
 - b. Dense-graded crushed stone (granular filter; MassDOT 402, M2.01.7)
 - c. Fines for infilling rounded riprap (D50 = No. 4 Sieve (0.187"))
- B. Work shall be performed in accordance with:
 - 1. MassDOT Highway Division Standard Specifications for Highways and Bridges
 - a. Section 120, Excavation
 - b. Section 140.24, Channel Excavation
 - c. Section 150, Embankment
 - d. Section 170, Grading
 - e. Section 402, Dense Graded Crushed Stone for Sub-Base
 - f. Section 983, Revetment
 - 2. Applicable permits (**Appendix B**)
- C. Related requirements:
 - 1. Section 312200 "Dredging" for dredging and disposal of sediment and ledge

1.2 REQUIREMENTS

- A. Contractor shall provide all stripping, excavation, fill and backfill required to achieve lines and grades as shown on Project Drawings.
- B. Off-site borrow materials shall be provided by Contractor and shall meet the requirements specified herein.

1.3 DEFINITIONS

- A. Unclassified Excavation: Removal of material encountered above subgrade elevations to the lines and dimensions indicated. No distinction will be made under unclassified excavation for unconsolidated (i.e. soil) or consolidated (i.e. bedrock) materials.
- B. Backfill: Soil material used to fill an excavation.
- C. Bedrock: The solid rock underlying unconsolidated surface materials (as soil).

- D. Borrow Soil: Satisfactory soil imported from off-site for use as fill or backfill.
- E. Excavation: Removal of material encountered above subgrade elevations and to lines and dimensions indicated.
- F. Fill: Soil materials used to raise existing grades.
- G. Sediment: Channel substrate impounded upstream of the primary spillway structure of the dams to be removed, primarily consisting of sand, other fine-grained materials and particles up to 1.5 inches in diameter. Particles greater than 1.5 inches in diameter do not need to be removed.
- H. Structures: Dams, abutments, low-level outlets, retaining walls, foundations, intakes, fishways or other man-made stationary features constructed above or below the ground surface.
- I. Subgrade: Uppermost surface of an excavation, which may be bedrock or the top of fill or backfill, immediately below the bottom of a structure, subbase, drainage fill, drainage course, or topsoil materials.
- J. Utilities: On-site underground pipes, conduits, ducts, and cables as well as underground services within buildings.

1.4 QUALITY ASSURANCE

- A. Codes and Standards: Perform excavation work in compliance with applicable requirements of governing authorities having jurisdiction.
- B. Testing and Inspection Services: Owner shall be allowed to inspect all backfilled and graded areas and request additional modifications, if required to achieve desired grades. Contractor shall employ, at its expense, a testing laboratory to perform soil testing and inspection service for quality control testing during earthwork operations.

1.5 SUBMITTALS

- A. Action Submittals
 - 1. Material Test Reports: For each on-site and borrow soil material proposed for fill and backfill as follows:
 - a. Classification according to ASTM D 2487.
 - b. Laboratory compaction curve according to ASTM D 698.
- B. Informational Submittals
 - 1. Qualification Data: For qualified testing agency.
 - 2. Results of in-situ testing of placed fill and observations of the testing agency

1.6 REQUIRED TESTS

- A. Geotechnical Testing Agency Qualifications: Qualified according to ASTM E 329 and ASTM D 3740 for testing indicated.
- B. Tests, including the re-testing required because of non-conformance to specified requirements, shall be performed by the same agency on instructions by Owner and shall be at Contractor's expense.
- C. Make required inspections and tests including, but not necessarily limited to:

1. Visually inspect on-site and imported fill and backfill, making such tests and retests as are necessary to determine compliance with the Contract requirements and suitability for the proposed purpose.
2. Make field density tests on samples from in-place material as required.

PART 2 - PRODUCTS

2.1 SOILS AND RELATED MATERIALS

- A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from excavations.
- B. Satisfactory Soils: Soil Classification Groups GW, GP, GM, SW, SP, and SM according to ASTM D 2487, or a combination of these groups; free of rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.
- C. Unsatisfactory Soils: Soil Classification Groups GC, SC, CL, ML, OL, CH, MH, OH, and PT according to ASTM D 2487, or a combination of these groups.
 1. Unsatisfactory soils also include satisfactory soils not maintained within 2 percent of optimum moisture content at time of compaction.
- D. Geotextile Fabric: Woven or non-woven fabric consisting of only long-chain polymeric filaments or yarns such as polypropylene, polyethylene, polyester, polyamide, or polyvinylidene-chloride formed into a stable network such that the filaments of yarns retain their relative position to each other, in accordance with MassDOT Section 698 and Material 9.50.0.
 - a. Woven material is to be used for separation under temporary stabilized construction entrances, access roads, staging areas, and dewatering areas to separate the existing ground surface layer from the upper stone layer, and is to be removed following construction.
 - b. Nonwoven material is to be used to provide permanent separation between proposed stone fills and existing sediment for the gage riffle construction and I-95 bridge scour countermeasure construction.

2.2 AGGREGATES

- A. **Gravel Borrow:** Processed gravel for subbase on temporary access and staging areas and for filling in of the former fishway excavation shall conform to the requirements of MassDOT Section 151 and Material No. M1.03.0(b).
- B. **Crushed Stone:** Crushed stone for stabilized construction entrances shall conform to the requirements of MassDOT Section 156 and Material No. M2.01.3.
- C. **Dense-Graded Crushed Stone for Subbase:** Stone fill for protective layer on all temporary access and staging areas, for filling in of the former mill intake, and for a granular filter layer under riprap shall conform to the requirements of MassDOT Section 402 and Material No. M2.07.1.
- D. **Rounded Riprap:** Rounded riprap for channel stabilization shall conform to the requirements of Class V (18-inch) riprap, as specified below:

Rounded Riprap Gradation

| PERCENT PASSING BY WEIGHT | SIZE (INCHES) | |
|------------------------------|---------------|-----|
| | MIN | MAX |
| 100 | - | 36 |
| 85 | 24 | 28 |
| 50 | 17 | 21 |
| 30 | 14 | 17 |
| 15 | 11 | 16 |

- A. **Fine Material to Infill Rounded Riprap:** The fine material to infill voids in the rounded riprap shall meet the following gradation requirements:

Fine Material Gradation

| PERCENT PASSING BY WEIGHT | SIZE (INCHES OR SIEVE #) |
|------------------------------|-----------------------------|
| 100 | 1 |
| 85 | 0.75 |
| 50 | #4 |
| 15 | #200 |

PART 3 - EXECUTION

3.1 SUBGRADE INSPECTION

- A. Notify Engineer, Owner and Testing Agency when excavations have reached required subgrade.
- B. If Engineer, Owner or Testing Agency determines that unsatisfactory soil is present, continue excavation and replace with compacted backfill or fill material as directed.

3.2 MATERIAL DISPOSAL

- A. Contractor shall deliver any property of the Owner that is uncovered in the course of excavation deemed by the Owner to have value.

END OF SECTION 312000

SECTION 312200 - DREDGING

PART 1 - GENERAL

1.1 SUMMARY

A. Work includes:

1. Dredging and disposal of material (MassDOT Item 148). The following assumed dredging quantities are included in the base bid:
 - a. Approximately 250 CY from the area including Larkin Dam, immediate upstream impoundment, and downstream fish weir and low-flow channel
 - b. Approximately 340 CY from the USGS gage weir area and downstream low-flow channel
 - c. Approximately 700 CY from the I-95 bridge area
2. Sediment testing by independent lab as required by any offsite disposal facility proposed by the Contractor

B. Work shall be performed in accordance with:

1. MassDOT Highway Division Standard Specifications for Highways and Bridges
 - a. Section 148, Dredging and Disposal of Material
2. Applicable permits (**Appendix B**)

C. Related requirements:

1. Section 312000 "Earth Moving"
2. Section 312319 "Care and Diversion of Water" for control of river water and surface water during construction

1.2 REQUIREMENTS

- A. Contractor shall provide dredging to achieve subgrade elevations as shown Drawings.
- B. There shall be no disturbance of the area outside the limits of proposed work shown on Drawings, including wetland areas, during construction activities.
- C. Sediment sampling results are provided in **Appendix D**. The 401 WQC issued by MassDEP indicates that the sediment may be released downstream, repositioned instream, and/or reused onsite without further testing or approval. Any areas proposed for onsite reuse must be approved by the Owner and Engineer. The Contractor shall be responsible for any testing required for offsite disposal at their selected waste facility. If the contractor wishes to reuse or dispose of the sediment offsite somewhere other than a landfill, required testing shall be conducted by the Contractor in consultation with DEP to inform and approve disposal options. Testing of sediment shall only be conducted as required for offsite disposal or offsite reuse.
- D. BMPs shall be implemented during transportation of the dredged material to the licensed receiving facility. At a minimum, when transported upon public roadways, all dredged material shall have no free liquid as determined by the Paint Filter Test or other suitably analogous methodology acceptable to MassDEP, and a tarpaulin or other means shall be used to cover the dredged material during transport.

1.3 DEFINITION

- A. Dredging: Dredging includes removal, dewatering, loading, hauling, and disposal of all soils of every name and nature below Ordinary High Water (OHW) required to reach the subgrade elevations shown on the Drawings.

1.4 SUBMITTALS

A. Action Submittals

- 1. **Dredging Plan:** In accordance with the 401 WQC, no later than 21 days prior to commencement of dredging activity, a Dredging Plan stamped by a Professional Engineer licensed in the Commonwealth of Massachusetts shall be submitted to the Engineer and MassDEP for review and written approval. At a minimum, the Dredging Plan shall include, but not be limited to:

- a. Dredging Methods

- 1) Proposed methods to dredge sediments as shown on Drawings
 - 2) Equipment required to conduct dredging

- b. Dredged Material Dewatering Plan

- 1) Location of temporary stockpile locations
 - 2) Type of containment
 - 3) Method of dewatering dredged sediment (i.e., mechanical or gravity)
 - 4) Proposed sediment amendment measures, if applicable.
 - 5) Method of collecting the dewatered effluent
 - 6) Method of disposal

- c. Disposal/Reuse Plan

- 1) Plan for disposition of dredged sediment, including onsite reuse to the extent practicable, and/or offsite disposal or offsite reuse (if approved by MassDEP)
 - 2) Name and location of selected disposal facility

B. Informational Submittals

- 1. MassDEP shall be notified in writing of the name and location of the upland licensed facility accepting the dredged material for disposal or reuse as daily cover material. If the licensed facility is located out of state, documentation shall be provided to MassDEP that the dredged material disposal/reuse has been approved and will be accepted by the receiving state in accordance with 314 CMR 9.07(13)(b). The dredged material shall not be transported to the facility without the concurrence of MassDEP.
- 2. A Material Shipping Record (MSR) shall be used to track the dredged material to the licensed upland facility. A fully executed copy of the MSR shall be provided to MassDEP within 30 days of final shipment to the reuse location or facility.

1.5 QUALITY ASSURANCE

- A. Codes and Standards: Perform dredging and construction work in compliance with applicable requirements of governing authorities having jurisdiction.
- B. Unless otherwise specified, work shall be performed in accordance with MassDOT Standard Specifications.

- C. Work shall be performed in accordance with the Massachusetts Stormwater Standards.
- D. The Contractor shall monitor the turbidity conditions outside the turbidity controls as required by permit conditions and as required to assure protection of the environment, in addition to any monitoring or testing performed by the Owner.
- E. Contractor must demonstrate that all key personnel involved in the dredging operation are qualified to perform the work. Contractor shall conduct daily inspections during all substrate disturbing activities.
- F. Dredging operations shall protect the environment. Contractor will use industry standard controls for erosion and sediment and pollution prevention to prevent soil, sediment, or any other material from entering the water or traveling downstream of the work area unless permitted otherwise.
- G. All pollution prevention measures, including but not limited to oil booms, shall be installed before any dredging, soil material placement, or stockpiling begins. No dredging shall occur outside of an area protected by an oil boom.

1.6 JOB CONDITIONS

- A. Contractor shall contact and receive a reply from "Dig Safe" before start of construction. Locate any existing underground utilities in areas of work. If utilities are to remain in place, provide adequate means of support and protection during earthwork operations. Contractor shall contact the Engineer regarding any submerged utilities or structures.
 - 1. Should uncharted, or incorrectly charted, piping or other utilities be encountered during dredging or construction, cease operations and consult utility Authority immediately for instructions. Cooperate with Owner and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of utility owner.
 - 2. Protect adjacent trees, wetlands, and structures from damage caused by equipment operation, settlement, lateral movement, undermining, washout and other hazards created by earthwork and dredging operations.
- B. All pollution prevention measures shall be installed and maintained as described in Section 015000.
- C. The use of explosives is prohibited.
- D. The Contractor is responsible for all shoring required during dredging and shall be performed in accordance with current OSHA standards, as well as additional provisions to assure stability of contiguous structures, as field conditions dictate.
- E. The Contractor shall comply to the fullest extent with the latest standards of OSHA directives, or any other agency having jurisdiction for dredging and/or construction procedures. The Contractor is responsible for determining the "means and methods" required to meet the intent and performance criteria of OSHA, as well as any other entity that has jurisdiction for dredging and/or construction procedures.
- F. The Contractor shall follow the temporary access plan in the Drawings, unless an alternative access and construction plan is approved by the Engineer.
- G. Environmental Requirements:
 - 1. Comply with all permit conditions in applicable permits and certificates.
 - 2. Do not perform grading when weather or river conditions are unsuitable.

3. Exercise the necessary means and methods to prevent pollution on the site.
 4. Do not use frozen material in performing the work or place materials on frozen surfaces.
 5. When it is necessary to haul soft or wet soil material over waterways, use suitably tight vehicles to prevent spillage.
 6. Contractor shall be familiar with the weather and nature of flooding in the area and should protect their work, temporary facilities, and equipment accordingly.
- H. Contractor shall make provisions to work in turbid water inside the pollution prevention measures. This work may include additional pollution prevention control measures, addition of chemical flocculants, or dewatering. All designs for additional proposed turbidity control measures shall be submitted to the Engineer for approval prior to implementation; however, Contractor is responsible for protecting the work and the waterway.
- I. Protection: Assume all risks attending the presence or proximity of overhead or underground public utility and private lines, pipes, conduits and support work for the aforementioned infrastructure, as well as existing structures and property of whatever nature, in or over excavations or adjacent to such excavations. Complete responsibility for replacement and restitution work of whatever nature to the above, as damaged or destroyed by work of this Contract, rests solely with the Contractor and at no expense to the Owner. The Contractor shall take precautions to prevent damage to work, temporary facilities, or equipment by high water or by storms.
- J. Classification of Dredged Materials: No consideration will be given to the nature of materials encountered in site grading and dredging operations. Therefore, as unclassified excavation, no additional payment will be made for difficulties occurring in dredging and handling of materials. Geotechnical information provided as part of this contract is for reference purposes only. The Contractor is responsible to verify all geotechnical information.
- K. Excess Materials: No right of property in materials is granted to the Contractor of excess on site materials prior to completion of site work. This provision does not relieve the Contractor of his responsibility to remove and dispose of surplus excavated materials at the approved disposal location. Unsuitable material such as sod, stumps and spongy soil, as well as excess rock, shall become the property of the Contractor and shall be disposed of legally off-site.
- L. Material Storage and Dewatering: Temporary stockpiling of dredged materials within the designated area on the Drawings is acceptable. Stockpiles shall be placed, graded, and shaped for proper drainage. Cover to prevent wind-blown dust. Provide straw bales or other sedimentation control measures to prevent transport of waterborne sediments, in compliance with standard erosion and sediment controls. Dewatering must be carried out in accordance with all applicable laws and regulations, including the management of the effluent from the dewatering facility. Contractor shall construct or maintain a facility specifically for the dewatering of dredged material. Pumped surface water from dredging activities shall be treated with sediment filter bags or approved equal before being discharged into any surface waters.
- M. All equipment shall be washed and must be free of seed and sediment prior to entering the work site and before exiting the work site.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 CONTROL OF INSTALLATION

- A. The contractor is responsible for verification of existing topographic information prior to commencement of any construction.
 - 1. The Contractor shall conduct pre-construction and post-construction bathymetric surveys to determine dredging quantities. All survey data shall be submitted to Engineer. Pre-construction survey data shall be submitted prior to dredging activities.
- B. The contractor shall monitor quality control over suppliers to produce work of specified quality.
- C. 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.
- D. Have work performed by persons qualified to produce required and specified quality.
- E. Verify that field measurements are as indicated on drawings.

3.2 SEDIMENT SAMPLING AND TESTING

- A. Representative samples have been collected for pre-characterization of contaminated soil for disposal at a certified disposal facility. Refer to **Appendix D** for the representative sediment sampling results.
- B. Additional soil and water testing for contamination, if needed prior to disposal, will be at the Contractor's expense. Sediment sampling procedures shall be performed in accordance with the standards of the off-site facility receiving dredged materials.

3.3 FIELD QUALITY CONTROL

- A. Quality Control Testing During Construction: The Engineer shall inspect and approve limits of dredging before placement of any aggregate material.

3.4 DISPOSAL OF EXCESS AND WASTE MATERIALS

- A. Sediment may be released downstream, repositioned instream, and/or reused onsite without further testing or approval. Any areas proposed for onsite reuse must be approved by the Owner and Engineer.
- B. Any sediment not reused onsite shall be lawfully disposed offsite. Contractor shall be responsible for any testing required for offsite disposal at their selected waste facility.
- C. If the contractor wishes to reuse or dispose of the sediment offsite somewhere other than a landfill, required testing shall be conducted by the Contractor in consultation with DEP to inform and approve disposal options. Testing of sediment shall only be conducted as required for offsite disposal or offsite reuse.
- D. Contractor shall obtain acceptance for disposal from certified disposal facilities for the Engineer's consideration. After receiving the Engineer's approval, the Contractor shall obtain all permits and materials necessary to transport and dispose of the contaminated soil in an acceptable manner.

- E. Contractor shall utilize a standard bill of lading to track the volume of dredged material transported to the approved off-site facility. Copies of the forms shall be provided to the Engineer and Owner within 3 days of shipment.
- F. Dredged sediment shall be transported in a manner which shall prevent dispersion of the waste to the air, ground, or waterways.
 - 1. Stockpile all dredged sediment to be hauled off-site until dry. At a minimum, when transported upon public roadways, all dredged sediment shall have no free liquid as determined by the Paint Filter Test or other suitably analogous methodologies.
 - 2. A tarpaulin shall be used to cover soil and sediment materials during transport.

END OF SECTION 312200

SECTION 312319 - CARE AND DIVERSION OF WATER

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. Control of river water, ground water and surface water during construction in accordance with approved Water Control Plan
2. The design, scheduling, installation, maintenance, monitoring and removal of all temporary cofferdams and dewatering systems required during the course of construction
3. The design, scheduling, installation, maintenance, monitoring and removal of all silt barriers, holding, pumping, and sedimentation facilities necessary or required to dewater, divert, remove, treat and dispose of water in the construction areas

B. Work shall be performed in accordance with:

1. MassDOT Highway Division Standard Specifications for Highways and Bridges, Section 140, Excavation for Structures
2. Massachusetts Erosion and Sediment Control Guidelines
3. Applicable permits (**Appendix B**) including, but not limited to, the Fishway Construction Permit.

C. Related Requirements:

1. Section 015000 "Temporary Facilities and Controls" for erosion, sedimentation, and water control measures
2. Section 312000 "Earth Moving" for excavation and backfilling specifications
3. Section 312200 "Dredging" for dredging specifications

1.2 SUBMITTALS

A. **Water Control Plan:** Contractor shall submit a Water Control Plan stamped by a Professional Engineer licensed in the Commonwealth of Massachusetts. The plan shall be submitted no later than 21 days prior to any instream activities and must be approved by the Engineer, MassDEP, DMF, and USGS prior to commencing instream activities.

B. The plan shall include the following:

1. A description of proposed water control measures and phasing. The Drawings indicate a preliminary water control plan; however, alternative water control plans may be submitted for approval by the Engineer.
2. Complete cofferdam details (if required for performance of the work), including drawings and calculations sealed by an engineer licensed to practice in Massachusetts. Calculations shall include appropriate stability analyses, allowable stresses used in the design, working loads, and load capacity of all supporting elements. Design loads shall be stated on the drawings. Cofferdam drawings shall be fully detailed, showing all cofferdam elements overlaid onto the site plan, as well as sizes, material specifications, and manufacturer's recommendations for installation. Any pre-fabricated cofferdams must be approved by

Engineer. Submission of the cofferdam plan and details shall in no way relieve Contractor of the full responsibility of the cofferdam.

3. Details of the proposed bypass plan that meets DMF requirements. During in-water work between September 1 and November 15 of any given year, safe downstream fish passage shall be provided through any dewatered area via a bypass that is gravity-fed, 3' minimum diameter, smooth interior HDPE pipe with a maximum slope of no more than 1%, or other gravity-fed bypass system to be approved by DMF.
4. The proposed length of time that the USGS gage site will be dewatered. It is desired to have the gaging equipment reinstalled within 2 weeks of its removal. If this cannot be accommodated, the USGS may need to install a temporary gage upstream of the site. As indicated on the Drawings, Contractor may propose to reinstall the cofferdam downstream of the gage site upon completion of the riffle construction to reduce the length of time that the gage site is dewatered.
5. A detailed water control contingency plan for the event that design storms are exceeded. Contractor is responsible for determining a design storm to be used in the water control plan.
6. Details of dewatering, pump filtering, or sedimentation control measures used to prevent the release of turbid water into the waterway and adjacent wetlands.
7. Any other information as may be required by the applicable permits or by the Engineer.

1.3 RESTRICTIONS

1. The draft Fishway Construction permit issued by DMF on January 17, 2025 will be finalized in coordination with the Contractor.
2. In-water work shall not be conducted during the TOY restriction of April 1 through June 15 of any given year.
3. During in-water work between September 1 and November 15 of any given year, safe downstream fish passage shall be provided through any dewatered area via a bypass that is gravity-fed, 3' minimum diameter, smooth interior HDPE pipe with a maximum slope of no more than 1%, or other gravity-fed bypass system approved by DMF.
4. Installed water control features will be inspected and approved by DMF staff.

1.4 RESPONSIBILITY

A. All dewatering operations shall be the responsibility of Contractor. The work shall include:

1. Removal of silt, debris and other unsuitable foundation materials existing at the location of the cofferdams to ensure a watertight seal at the foundation.
2. The installation of cofferdams to provide for dewatering in accordance with an approved water control plan stamped by a Professional Engineer licensed in Massachusetts.
3. Weekly inspection, monitoring, maintenance, and repair of all fabricated cofferdams.
4. Removal and disposal of all cofferdam materials upon completion of the work.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE

- A. Contractor shall install, maintain, and remove cofferdams in accordance with schedule approved by Owner.

3.2 PREPARATION

- A. Remove surface silts, loose material and debris to expose a sound and stable surface subject to approval of Owner.
- B. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
- C. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
- D. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations. Do not use excavated trenches as temporary drainage ditches.

3.3 INSTALLATION AND REMOVAL

- A. Extreme care shall be exercised during handling and installation of cofferdams. Contractor will be required to replace or repair any damaged cofferdams.
- B. Contractor shall install and remove cofferdams in accordance with approved schedule and local, state, and federal permits, as well as the approved cofferdam plan.

3.4 CARE AND HANDLING OF WATER

- A. Contractor shall provide sufficient pumping capacity and standby capacity to handle cofferdam leakage, bedrock leakage and surface runoff into the work area.
- B. All water pumped from the work area shall be discharged into a sediment filter bag or approved equal. Pump discharges shall not be directly discharged to a waterbody. There shall be no discharge of suspended and/or settle-able solids in amounts that cause visible contrast to natural conditions
- C. During the construction, the operation of all existing gate valves and existing fire hydrants, where necessary, shall be the responsibility of the municipal DPW personnel. The Contractor shall not operate any existing gate valve or existing fire hydrant except in case of emergencies.

3.5 SAFETY

- A. Contractor shall maintain the dewatered area in a safe condition. Suitable alarms, means of egress, and other appropriate safety facilities shall be provided.

END OF SECTION 312319

DIVISION 32 – EXTERIOR IMPROVEMENTS

SECTION 329200 - GRASSES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes specifications for seeding of disturbed areas.
- B. Work shall be performed in accordance with:
 - 1. MassDOT Highway Division Standard Specifications for Highways and Bridges, Section 765, Seeding

1.2 SUBMITTALS

- A. Seed Mix: Submit proposed seed mix to be approved by Engineer and Owner.

1.3 DEFINITIONS

- A. Planting Soil: Existing, on-site soil; imported soil; or manufactured soil that has been modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Seed and Other Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of compliance with state and federal laws, as applicable.

PART 2 - PRODUCTS

2.1 PLANTING SOIL

- A. If no satisfactory planting soil is salvaged from other site activities, use the following imported soil:
 - 1. Loam Borrow: Shall consist of loose friable topsoil with no admixture of refuse or material toxic to plant growth.

2.2 SEED

- A. Grass-Seed Mix: Use “New England Erosion Control/Restoration Mix for Dry Sites” from New England Wetland Plants, Inc. or approved equal.
 - 1. Intended Use: Mix provides an appropriate selection of native and naturalized grasses to ensure that dry and recently disturbed sites will be quickly revegetated and the soil surface stabilized. It is an appropriate seed mix for road cuts, steeper slopes, and areas requiring quick cover during the ecological restoration process.
 - 2. Species: Creeping Red Fescue, (*Festuca rubra*), Little Bluestem, (*Schizachyrium scoparium*), Switch Grass, (*Panicum virgatum*), Virginia Wild Rye, (*Elymus virginicus*), Big Bluestem, (*Andropogon gerardii*), Indian Grass, (*Sorghastrum nutans*), Deer Tongue, (*Panicum clandestinum*), Partridge Pea, (*Chamaecrista fasciculata*), Rough Bentgrass/Ticklegrass,

(*Agrostis scabra*), Path Rush, (*Juncus tenuis*), Soft Rush, (*Juncus effusus*), Upland Bentgrass, (*Agrostis perennans*).

2.3 MULCH

- A. Straw Mulch: Provide air-dry, clean, mildew- and seed-free, salt hay or threshed straw of wheat, rye, oats, or barley.

PART 3 - EXECUTION

3.1 SEEDING

- A. Apply a 3-inch-thick layer of planting soil or loam borrow to any disturbed areas to be seeded. Preparation of a clean, weed free seed bed is necessary for optimal results.
- B. Seed may be applied by hydro-seeding, by mechanical spreader, or on small sites it can be spread by hand. Do not broadcast or drop seed when wind velocity exceeds 5 mph.
 - 1. Evenly distribute seed by sowing equal quantities in two directions at right angles to each other.
 - 2. Do not use wet seed or seed that is moldy or otherwise damaged.
 - 3. Do not seed against existing trees. Limit extent of seed to outside edge of planting saucer.
- C. Sow seed at a total rate of 35 pounds per acre (1,250 square feet per pound).
- D. Lightly rake or roll seed into top 1/8 inch of soil to ensure proper soil-seed contact, and water with fine spray.
- E. Fertilization is not required unless the soils are particularly infertile.
- F. Seeding during dry periods shall be lightly mulched with weed-free straw to conserve moisture. If conditions are drier than usual, watering will be required.
- G. Seeding shall not occur after November 1. If seeding cannot be completed prior to November 1, Contractor shall return in the spring to complete the seeding.

3.2 MAINTENANCE PERIOD, INSPECTION, AND ACCEPTANCE

- A. Maintenance:
 - 1. Begin maintenance immediately after planting/seeding and continue until acceptance.
 - 2. The Contractor shall do any work necessary (such as water or protect from wildlife) to maintain an acceptable stand of grass for one full year following planting.
- B. Inspection and acceptance:
 - 1. No planted and seeded areas will be inspected for acceptance prior to 60 days from the date of planting and seeding.

END OF SECTION 329200

APPENDIX A - PROJECT DRAWINGS

The attached “Parker River Restoration Project – Final (100%) Design Plans” include the following:

1. Cover Sheet
2. General Notes
3. Overview of Existing Project Area
4. Overview of Proposed Project Area
5. Erosion and Sediment Control Plan
6. General Access, Erosion, & Water Control Details (Sheet 1 of 2)
7. General Access, Erosion, & Water Control Details (Sheet 2 of 2)
8. Larkin Dam Removal – Existing Plan
9. Larkin Dam Removal – Access & Removal Plan
10. Larkin Dam Removal – Existing & Proposed Elevations, Profiles, & Sections
11. Larkin Dam Removal – Proposed Plan & Fishway & Intake Sections
12. USGS Gage Weir Removal – Existing Plan, Profile, & Elevation
13. USGS Gage Weir Removal – Proposed Plan, Profile & Elevation
14. I-95 Bridge Scour Countermeasure – Existing Plan, Elevation, & Details
15. I-95 Bridge Scour Countermeasure – Water Management Plan
16. I-95 Bridge Scour Countermeasure – Proposed Plan, Elevation, & Profile

APPENDIX B – PERMITS

| ITEM | AGENCY / PERMIT |
|--------------|--|
| Appendix B-1 | MA Dept. of Environmental Protection, Bureau of Water Resources – 401 Water Quality Certification |
| Appendix B-2 | US Army Corps of Engineers, New England Div. – MA General Permit |
| Appendix B-3 | Newbury Conservation Commission – Wetlands Protection Act Restoration Order of Conditions |
| Appendix B-4 | MA Dept. of Fish and Game, Div. of Marine Fisheries – Fishway Construction Permit |
| Appendix B-5 | MA Historical Commission – Approved Archaeological Site Avoidance and Protection Plan |
| Appendix B-6 | MA Dept. of Environmental Protection, Bureau of Water Resources – Chapter 91 Waterways Authorizations B-6.1 – Administrative Authorization for Demolition of Unlicensed Structures (Larkin Dam, Fish Weir, and Gage Weir) B-6.2 – Ch. 91 Dredge Permit for Larkin Dam & Gage Site (expected by 6/13/25) B-6.3 – Ch. 91 License for I-95 Bridge Work (expected by 6/13/25) |
| Appendix B-7 | MA Dept. of Transportation, Highway Div. – State Highway Access Permit (pending) |

APPENDIX C – PREVAILING WAGE RATES

APPENDIX D – SEDIMENT SAMPLING RESULTS