

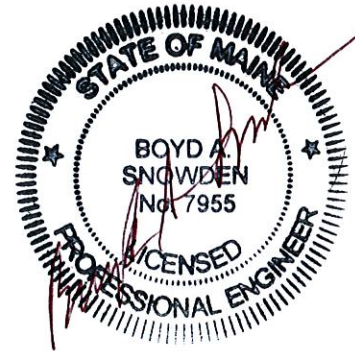
*Contract Documents
For*

*Belgrade Elementary School
Site Upgrades*

For

Regional School Unit 18

Document Prepared by



Snowden Consulting Engineers, Inc.

PO Box 86 Oakland, Maine 04963

Phone: 207-465-4400 Fax: 207-465-4441

Email: BoydSnowden@gmail.com

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Special Conditions

1. Compliance with Federal and State Laws

The Contractor, subcontractor and suppliers, as defined herein, are required to keep fully informed of and maintain compliance with all current federal and state laws during the construction of this project. The Contractor is also required to comply with local municipal ordinances and regulations during this Contract. This shall include those engaged in work included in this Contract, materials used, or any portion of labor and materials that anyway affect the conduct of the work. Should the Contractor find any inconsistency in the plans which affect the compliance with a State or Federal law or local ordinance, the Contractor is required to immediately inform the Engineer in writing of said inconsistency. The Engineer will notify the Contractor in writing on how to proceed in such an instance.

The Contractor is required to comply with all State and Federal laws and local ordinances throughout the period of this Contract. Throughout the Contract period, the Contractor shall indemnify and hold harmless the Owner and Engineer and all of their officers, agents and servants against any claims or liabilities arising from a known violation of any State or Federal law or local ordinance that either the Contractor, subcontractor or suppliers have performed.

2. Safety Regulations

The Contractor and associated subcontractors and suppliers providing labor or materials on this project shall be familiar with and comply with OSHA regulations. The Engineer or RSU 18 shall notify the Contractor in writing of any known violation on the site. It is the Contractor's responsibility, and not the responsibility of the Engineer or RSU 18 (hereafter referred to as the Owner), to maintain a safe working environment for all employees, Belgrade residents and other individuals working on or visiting the site. Once the Engineer or Owner has notified the Contractor of a potential violation, it is the Contractor's responsibility to correct the condition in violation. Should the Contractor refuse to correct the violation, the Engineer or Owner, may at their discretion, shut the construction activities down until the violation is corrected.

The Engineer or Owner shall not be responsible for any violations in safety and OSHA regulations. It is solely the Contractor's responsibility to maintain OSHA compliance and a safe working environment for all parties working or involved in the site construction.

3. Subcontractor and Supplier List

The Contractor is responsible for providing the Owner with a complete list of subcontractors and suppliers to be used on the project. This list shall be provided prior to the Contract signing and shall be kept up to date throughout the construction period. This list will be used by the Owner and Engineer to track partial and final lien waivers obtained throughout the construction period.

4. Pre-Construction Conference

A pre-construction conference will be scheduled after the low bidder has been awarded the Contract. The pre-construction conference will include topics such as construction scheduling, erosion control, traffic control, and the scope of work intended for the project. The Owner and Contractor shall also sign the Contract documents and execute the agreement at this meeting. The Owner shall notify the Contractor of the required documentation necessary for the Contract signing.

5. General Conditions

The Contractor shall be familiar with the general conditions and supplemental conditions in Division 00700 and Division 00800 of this Contract document.

6. Project Supervisor

At the pre-construction conference, the Contractor shall notify the Owner of the individual who will act as the project superintendent for the duration of this Contract. The project superintendent shall be present at the pre-construction conference and will be responsible for attending all subsequent monthly payment meetings. A list of emergency phone numbers will be provided to the Owner for weekend and nighttime contacts.

7. Monthly Project Meetings

At the pre-construction conference, all parties will agree to a set date for the first monthly project site meeting. This meeting will be required to discuss site issues, discuss partial pay requests, construction schedule, and any other project related items that are related to the construction activities in this Contract. The Contractor is required to bring up issues such as change order requests, time extension requests, or any other issues that will impact the completion date or general progression of the construction of this project.

8. Temporary Construction Easements

The Owner has not made any attempt to obtain temporary and permanent easements for surrounding areas abutting the project. Should the Contractor require any easements to perform the work, it is the responsibility of the Contractor to obtain written permission from the landowner prior to disturbing their private property. **Written permission shall also be required from each landowner that has requested project spoils to be dumped on their property. The Owner shall be provided with a copy of the written permission obtained by the Contractor. Spoils shall not be used to fill wetland areas or within flood plain areas. Written permission forms with landowner signature shall be provided to the Owner prior to any project spoils being deposited on private property.**

9. Coordination with Utilities

The Contractor is responsible for notifying any utilities (with either above ground or below ground facilities within or adjacent to the project site) of the work schedule, and any potential impacts or

required support of existing utility poles. The Contractor shall provide a minimum of 72 hour notice when notifying these utilities.

10. Contractor Supplied Work

The Contractor is responsible to provide all equipment necessary to construct the storm drain piping, catch basins, site grading, pavement, curbing, loam and seed and any other work indicated on the design plans. This shall include all equipment such as excavators, dozers, 5-ton sheepsfoot trench compaction equipment, 10-ton roller for compaction of materials within driveway and parking lot areas, or any other equipment required to successfully complete the project. The Contractor is also responsible for providing any appurtenances necessary to complete the construction of this project such as couplings, mortar and brick for catch basin rim and cover installations, couplings required to connect existing pipe to new pipe, and any materials and equipment necessary to repair any utility damage during construction, such as watermain or water service repairs from construction damage. The Contractor is responsible for all pavement repair, and lawn area repair in accordance with the contract documents.

11. As-built Drawings

The Contractor is required to maintain a clean working set of as built drawings for the project. The as-built drawings shall be maintained in a clean area and shall be updated throughout the construction project. At the end of the project, prior to the Certificate of Substantial Completion, the Contractor shall provide the clean markups (in red pencil) to the Engineer. The as-built plans shall indicate any revisions made to the original design plans.

12. Lien Waivers

Partial lien waivers will be required for each monthly payment made by the Owner. Partial lien waivers shall be filled out on the form found in the appropriate section of this document. **No other lien waiver forms will be accepted.** It is the responsibility of the Contractor to obtain lien waivers from each supplier or subcontractor paid on the previous pay requests. Partial lien waivers will be required the month after the payment was made by the Owner. Lien waivers not provided by the Contractor for past payments will be an automatic cause for withholding of future payment requests. The Contractor shall ensure all subcontractors and suppliers listed in the list provided to the Engineer have signed the lien waiver for previous payments.

13. Award of Contract

The award of this Contract shall be based on the lowest cost qualified bidder.

14. Dust Control for Project:

Once the Contractor begins work at the site, the Contractor is solely responsible for dust control until their work on site is complete.

15. Maintenance of Traffic

During the course of the project, the Contractor is required to keep work area to the minimum required to safely complete the work. The Contractor shall always maintain at least one lane of travel on Depot Street around work areas, with flaggers and appropriate signage on either end of the work area when working near that street. Under no circumstances will the Contractor be allowed to close the school access or Depot Street for any work on the project. All project signage should be approved by the Engineer and the RSU 18 prior to initiating construction.

16. Existing Site Condition Photos

The Owner will be taking photographs of the project site prior to and throughout the construction period. These documents are for the use of the Owner and Engineer. It is highly recommended that the Contractor maintain photos and videotape of the project site prior to and during construction for their own records (pre and post development).

17. Project Schedule

The construction on site cannot be initiated until after school has been released for summer recess. This date is June 24, 2019. The Contractor shall be substantially complete by August 16, 2019. Final completion will be completed on or before August 23, 2019. Liquidated damages will be assessed to the Contractor for any work completed after that date.

18. Non-Mandatory Pre-Bid Site Walk

A non-mandatory pre-bid site walk will be scheduled for March 28, 2019 at 10:00 a.m. on the site. Contractors will be able to review the site, and ask any questions of the Owner or their representative at this meeting. Any questions addressed during this site walk will be recorded and provided in a subsequent addendum.

ADVERTISEMENT FOR BID

Sealed bids for the **BELGRADE ELEMENTARY SCHOOL SITE UPGRADES** will be received at the RSU 18 Superintendent's Office at 41 Heath Street in Oakland, Maine until **10:00 AM local time on April 18, 2019**, where the bids shall then be publicly opened and read aloud.

Description: Project includes the removal and disposal of existing pavement and gravel from the driveways, parking lot areas and walkways, excavation and shaping of subgrade for proposed driveways, parking areas and walkways, compaction, installation of storm drain piping and catch basins, erosion control, pavement, striping, curbing, loam and seed, and all other work to complete the site improvements in accordance with the design plan set.

Location: In Kennebec County, project is located between Depot Street and Route 27 in Belgrade, Maine.

Outline of Work: This project shall consist of the installation of approximately 760 feet of 12" dia. HDEP smooth bore storm drain pipe, catch basins, F-structures, removal of existing pavement and gravel within driveways, parking lots and walkways to be regraded as part of this project, utility coordination and temporary support of utility structures, relocation of two small woodframe structures as shown on plans, grading of subgrade for new driveways, parking lots and walkway areas, gravel and pavement installation for those same areas, pavement striping, crushed stone along school building, loam, seed, riprap plunge pools, erosion control, traffic control, and any other materials or equipment required to complete the site modifications as outlined on the design plan set.

A non-mandatory site walk will be conducted at the project site on March 28, 2019 at 10:00 a.m.

The Contract Documents may be examined on or after March 18, 2019 at:

1. AGC Maine, 188 Whitten Road, Augusta, Maine 04332
2. Construction Summary, 734 Chestnut Street, Manchester, NH 03104
3. Works in Progress, 20 Farrell Street, So. Burlington, VT 05403
4. RSU 18 Superintendent's Office, 41 Heath Street, Oakland, Maine 04963

All requests for Contract Documents by mail shall be made to Snowden Consulting Engineers, Inc., PO Box 86, Oakland, Maine and shall include a \$15.00 non-refundable shipping and handling charge in addition to the \$125 payment. Make all checks payable to Snowden Consulting Engineers, Inc. **Only Prime Bidding Contractors that have ordered the plans from Snowden Consulting Engineers and paid the fee will be eligible for bidding the project.**

It is RSU 18's intent to award the contract on or about May 1, 2019. The successful Bidder will be able to mobilize on site on June 24, 2019 with substantial completion on August 16, 2019 and final completion on August 23, 2019.

Bid Bond

A certified check or bank draft payable to the OWNER or a satisfactory Bid Bond executed by the Bidder and a Surety Company in the amount equal to five percent (5%) of the Bid shall be submitted with each bid. No bid may be withdrawn for at least 60 days after receipt of bids unless released by the OWNER. Each bidder and bid must comply with the conditions provided in the General Conditions and Information to Bidders. The Payment and Performance Bond shall be equal to 100 percent of the Bid (required prior to Contract Signing).

Bidder Selection

The award of this Contract will be based on the lowest cost qualified bidder. Qualified bidder will be determined as the Contractor who has the lowest total bid and has included the proper qualification information forms with the bid. **“ALL BIDDERS MUST PROVIDE A LIST OF PAST PROJECTS WITH BIDS”, as well as a document indicating that they can complete the work in the timeframe indicated.**

Carl Gartley, Superintendent of RSU 18
March 18, 2019

Instructions to Bidders

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ARTICLE 1 - DEFINED TERMS

- 1.01 Terms used in these Instructions to Bidders will have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:
- A. Issuing Office--The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.

ARTICLE 2 - COPIES OF BIDDING DOCUMENTS

- 2.01 Complete sets of the Bidding Documents in the number and for the deposit sum, if any, stated in the *Advertisement for Bid* may be obtained from the Issuing Office.
- 2.02 Complete sets of Bidding Documents must be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.03 Owner and Engineer in making copies of Bidding Documents available on the above terms do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

ARTICLE 3 - QUALIFICATIONS OF BIDDERS

3.01 To demonstrate Bidder's qualifications to perform the Work, to be provided after the bid opening and prior to the Contract signing. Bidder shall submit written evidence such as previous experience, present commitments, and such other data as may be called for below.

1. Historical experience with site development projects that include storm water piping components, site grading and paving, Erosion and Sedimentation Control.
2. Evidence of Bidders ability to meet the schedule called out in the specifications.

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

4.01 Subsurface and Physical Conditions

A. The Supplementary Conditions identify:

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

B. Copies of reports and drawings referenced in paragraph 4.01.A will be made available by Owner to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the "technical data" contained therein upon which Bidder is entitled to rely as provided in paragraph 4.02 of the General Conditions has been identified and established in paragraph 4.02 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any "technical data" or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

4.02 Underground Facilities

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

4.03 Hazardous Environmental Condition

- A. The Supplementary Conditions identify those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that ENGINEER has used in preparing the Bidding Documents.
- B. Copies of reports and drawings referenced in paragraph 4.03.A will be made available by Owner to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the “technical data” contained therein upon which Bidder is entitled to rely as provided in paragraph 4.06 of the General Conditions has been identified and established in paragraph 4.06 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any “technical data” or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

4.04 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated conditions appear in paragraphs 4.02, 4.03, and 4.04 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work appear in paragraph 4.06 of the General Conditions.

4.05 On request, Owner will provide Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies as Bidder deems necessary for submission of a Bid. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies. Bidder shall comply with all applicable Laws and Regulations relative to excavation and utility locates.

4.06 Reference is made to Article 7 of the Supplementary Conditions for the identification of the general nature of other work that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) that relates to the Work contemplated by these Bidding Documents. On request, Owner will provide to each Bidder for examination access to or copies of Contract Documents (other than portions thereof related to price) for such other work.

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

- A. Examine and carefully study the Bidding Documents, the other related data identified in the Bidding Documents, and any Addenda;
- B. Visit the Site and become familiar with and satisfy Bidder as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
- C. Become familiar with and satisfy Bidder as to all Federal, State, and local Laws and Regulations that may affect cost, progress, or performance of the Work;

- D. Carefully study all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.02 of the General Conditions, and (2) reports and drawings of Hazardous Environmental Conditions at the Site which have been identified in the Supplementary Conditions as provided in paragraph 4.06 of the General Conditions;
- E. Obtain and carefully study (or accept consequences for not doing so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents, and safety precautions and programs incident thereto;
- F. Agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents;
- G. Become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;
- H. Correlate the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents;
- I. Promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder; and
- J. Determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

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

ARTICLE 5 - PRE-BID CONFERENCE

5.01 A non-mandatory pre-bid site walk has been scheduled for March 28, 2019 at 10:00 a.m. on site.

ARTICLE 6 - SITE AND OTHER AREAS

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

ARTICLE 7 - INTERPRETATIONS AND ADDENDA

7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by Engineer as having received the Bidding Documents. Questions received less than five days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

7.02 Addenda may be issued to clarify, correct, or change the Bidding Documents as deemed advisable by Owner or Engineer.

ARTICLE 8 - BID SECURITY

8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of 5 % of Bidder's maximum Bid price and in the form of a certified check or a Bid bond (EJCDC No. C-430, 2002 Edition) issued by a surety meeting the requirements of paragraphs 5.01 and 5.02 of the General Conditions.

8.02 The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract Documents, furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, Owner may annul the Notice of Award and the Bid security of that Bidder will be forfeited. The Bid security of other Bidders whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the Agreement or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be returned.

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

ARTICLE 9 - CONTRACT TIMES

9.01 The number of days within which, or the dates by which, the Work is to be substantially completed and ready for final payment are set forth in the Agreement.

ARTICLE 10 -LIQUIDATED DAMAGES

10.01 Provisions for liquidated damages are set forth in the Agreement.

ARTICLE 11 - SUBSTITUTE AND “OR-EQUAL” ITEMS

11.01 The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, or “or-equal” materials and equipment as defined in paragraph 6.05 of the General Conditions, or those substitute materials and equipment approved by the Engineer and identified by Addendum. The materials and equipment described in the Bidding Documents establish a standard of required type, function and quality to be met by any proposed substitute or “or-equal” item. Request for Engineer’s clarification of materials and equipment considered “or-equal” prior to the Effective Date of the Agreement must be received by the Engineer at least 5 days prior to the date for receipt of Bids. No item of material or equipment will be considered by Engineer as a substitute unless written request for approval has been submitted by Bidder and has been received by Engineer at least 15 days prior to the date for receipt of Bids. Each request shall conform to the requirements of paragraph 6.05 of the General Conditions. The burden of proof of the merit of the proposed item is upon the Bidder. Engineer’s decision of approval or disapproval of a proposed item will be final. If Engineer approves any proposed substitute item, such approval will be set forth in an Addendum issued to all prospective Bidders. Bidders shall not rely upon approvals made in any other manner.

ARTICLE 12 - SUBCONTRACTORS, SUPPLIERS, AND OTHERS

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

12.02 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest responsible Bidder that proposes to use acceptable Subcontractors, Suppliers, individuals, or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner and Engineer makes no written objection prior to the

giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to revocation of such acceptance after the Effective Date of the Agreement as provided in paragraph 6.06 of the General Conditions.

12.03 Contractor shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom Contractor has reasonable objection.

12.04 The Contractor shall not award work to Subcontractor(s) in excess of the limits stated in SC 6.06.

ARTICLE 13 - PREPARATION OF BID

13.01 The Bid form is included with the Bidding Documents. Additional copies may be obtained from Engineer.

13.02 All blanks on the Bid form shall be completed by printing in ink or by typewriter and the Bid signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each Bid Item and Unit Price item listed therein, or the words "No Bid," "No Change," or "Not Applicable" entered.

13.03 A Bid by a corporation shall be executed in the corporate name by the president or a vice-president or other corporate officer accompanied by evidence of authority to sign. If required by State where work is to be performed, the corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporation business address and state of incorporation shall be provided on the Bid Form.

13.04 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The business address of the partnership shall be provided on the Bid Form.

13.05 A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the business address of the firm must be provided on the Bid Form.

13.06 A Bid by an individual shall show the Bidder's name and business address.

13.07 A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid form. The business address of the joint venture must be provided on the Bid Form.

13.08 All names shall be typed or printed in ink below the signatures.

13.09 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers and dates of which shall be filled in on the Bid form.

13.10 The address and telephone number for communication regarding the Bid shall be shown.

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

ARTICLE 14 - BASIS OF BID; COMPARSION OF BIDS

14.01 Unit Price

- A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the Bid schedule.
- B. The total of all bid prices will be the sum of the products of the estimated quantity of each item and the corresponding unit price. The final quantities and Contract Price will be determined in accordance with paragraph 11.03 of the General Conditions.
- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.

ARTICLE 15 - SUBMITTAL OF BID

15.01 With each copy of the Bidding Documents, a Bidder is furnished one separate unbound copy of the Bid Form. The unbound copy of the Bid Form is to be completed and submitted with all the attachments outlined in Article 7 of the Bid Form.

15.02 A Bid shall be submitted no later than the date and time prescribed and at the place indicated in the *Notice to Contractors* and shall be enclosed in an opaque sealed envelope plainly marked with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate envelope plainly marked on the outside with the notation "BID ENCLOSED." When using the mail or other delivery system, the Bidder is totally responsible for the mail or other delivery system delivering the Bid at the place and prior to the time indicated in the *Notice to Contractors*. A mailed Bid shall be addressed to Owner at address in Article 1.01 of Bid Form.

ARTICLE 16 - MODIFICATION AND WITHDRAWAL OF BID

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

16.02 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a

material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid. Thereafter, if the Work is rebid or negotiated, that Bidder will be disqualified from further bidding on the Work. This provision to withdraw a Bid does not apply to Bidder's errors in judgment in preparing the Bid.

ARTICLE 17 - OPENING OF BIDS

17.01 Bids will be opened at the time and place indicated in the *Advertisement for Bid* and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.

ARTICLE 18 - BIDS TO REMAIN SUBJECT TO ACCEPTANCE

18.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form.

ARTICLE 19 - EVALUATION OF BIDS AND AWARD OF CONTRACT

19.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to be non-responsible. Owner also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder.

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

19.03 In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.

19.04 In evaluating Bidders, Owner will consider the qualifications of Bidders and may consider the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the Supplementary Conditions.

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

19.06 If the Contract is to be awarded, Owner will award the Contract to the responsible Bidder whose Bid, conforming with all the material terms and conditions of the Instructions to Bidders, is lowest, price and other factors considered.

ARTICLE 20 - CONTRACT SECURITY AND INSURANCE

20.01 Article 5 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner’s requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it must be accompanied by such bonds.

ARTICLE 21 - SIGNING OF AGREEMENT

21.01 When Owner gives a Notice of Award to the Successful Bidder, it shall be accompanied by the required number of unsigned counterparts of the Agreement with the other Contract Documents which are identified in the Agreement as attached thereto. Within 15 days thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to Owner. Within ten days thereafter, Owner shall deliver one fully signed counterpart to Successful Bidder with a complete set of the Drawings with appropriate identification.

21.02 This Contract is expected to be funded solely with funds from RSU 18.

ARTICLE 22 - SALES AND USE TAXES

22.01 OWNER is exempt from Maine State sales and use taxes on materials and equipment to be incorporated in the Work. Said taxes shall not be included in the Bid. Refer to paragraph 6.10 of the Supplementary Conditions for additional information.

ARTICLE 23 - CONTRACTS TO BE ASSIGNED

23.01 No Contracts to be assigned

ARTICLE 24 – PLAN REVIEW LOCATIONS

Plans and Specifications may be examined at:

RSU 18
41 Heath Street
Oakland, ME 04963

Snowden Consulting Engineers, Inc.
PO Box 86
Oakland, ME 04963

END OF INSTRUCTION TO BIDDERS

Bid Form

Project Identification: **Bids for Belgade Elementary School Site Upgrades**

Contract Identification and Number: **1**

TABLE OF ARTICLES

- Article 1 - Bid Recipient
- Article 2 - Bidder's Acknowledgments
- Article 3 - Bidder's Representations
- Article 4 - Further Representations
- Article 5 - Basis of Bid
- Article 6 - Time of Completion
- Article 7 - Attachments to Bid
- Article 8 - Defined Terms
- Article 9 - Bid Submittal

ARTICLE 1 - BID RECIPIENT

- 1.01 This Bid Is Submitted To: **RSU 18, Attn: Jeff Shieve, Facility Director, 41 Heath Street, Oakland, ME 04963**
- 1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in the Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 - BIDDER'S ACKNOWLEDGMENTS

- 2.01 Bidder accepts all of the terms and conditions of the Advertisement for Bid and Instructions to Bidders. The Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 - BIDDER'S REPRESENTATIONS

- 3.01 In submitting this Bid, Bidder represents that:
 - A. Bidder has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged.

Addendum No.	Addendum Date
_____	_____
_____	_____
_____	_____

- B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- C. Bidder is familiar with and is satisfied as to all Federal, State, and local Laws and Regulations that may affect cost, progress, and performance of the Work.
- D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in SC-4.02, and (2) reports and drawings of a Hazard Environmental Condition, if any, which has been identified in SC-4.06.
- E. Bidder has obtained and carefully studied (or accepts the consequences for not doing so) all additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by the Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents to be employed by Bidder, and safety precautions and programs incident thereto.
- F. Bidder does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of the Work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents.
- I. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer is acceptable to Bidder.
- J. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

- K. Bidder will submit written evidence of its authority to do business in the State where the Project is located not later than the date of its execution of the Agreement.

ARTICLE 4 - FURTHER REPRESENTATIONS

4.01 Bidder further represents that:

- A. This Bid is genuine and not made in the interest of or on the behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization, or corporation;
- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over Owner.

ARTICLE 5 - BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

**Bid Schedule for the
Belgrade Elementary School Site Upgrades
RSU 18**

Line No.	Item Description	Approx. Quantity	Units	Unit Price	Subtotal
1	Site Clearing, Grubbing and Excavation	1	LS		
2	12" dia. HDPE Smooth Bore Storm Drain Pipe	760	LF		
3	4' dia. Precast Concrete Catch Basins	6	EA		
4	Trench Ledge	50	CY		
5	Driveway and Parking Lot Geotextile	4,400	SY		
6	Driveway, Parking Lot and Walkway Gravel	3,050	CY		
7	Driveway & Parking Lot Base Pavement	600	TON		
8	Driveway, Parking Lot and Walkway Surface Pavement	410	TON		
9	Cast-in-place Concrete Curbing	1,255	LF		
10	Tapered Granite Curb for Island	203	LF		
11	Loam and Seed	3,000	SY		
12	Dust Control	1	LS		
13	Maint. Of Traffic Control Devices	1	LS		
14	Temporary Soil Erosion & Water Pollution Control	1	LS		
15	Mobilization	1	LS		
TOTAL BASE BID					

NOTE: Bid will be awarded to the lowest qualified bidder.

- A. Unit Prices have been computed in accordance with paragraph 11.03.A of the General Conditions.
- B. Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities, determined as provided in the contract Documents.

ARTICLE 6 - TIME OF COMPLETION

- 6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with paragraph 14.07.B of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the work within the Contract Times.

ARTICLE 7 - ATTACHEMENTS TO THIS BID

- 7.01 The following documents are attached to and made a condition of the Bid:
 - A. No attachments required other than the filled out and signed bid form items.

ARTICLE 8 - DEFINED TERMS

- 8.01 The terms used in this Bid with the initial capitol letters have the meanings indicated in the Notice to Contractors, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 - BID SUBMITTAL

9.01 This Bid submitted by:

If Bidder is:

An Individual

Name (typed or printed): _____

SEAL,
if required
by State

By: _____

(Individual's signature)

Doing business as: _____

A Partnership

Partnership Name: _____

SEAL,
if required
by State

By: _____

(Signature of general partner -- attach evidence of authority to sign)

Name (typed or printed): _____

A Corporation

Corporation Name: _____

State of Incorporation: _____

Type (General Business, Profession, Service, Limited Liability): _____

By: _____

(Signature -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

CORPORATE
SEAL,
if required by State

Attest _____

(Signature of Corporate Secretary)

Date of Qualification to do business in _____ [State where Project is located] is
____/____/____

A Joint Venture

Name of Joint Venture: _____

First Joint Venture Name: _____

SEAL,
if required
by State

By: _____
(Signature of joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

Second Joint Venture Name: _____

SEAL, if required by State

By: _____
(Signature of joint venture partner -- attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

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

Bidder's Business address:

Business Phone No. (_____)_____

Business FAX No. (_____)_____

Business E-Mail Address _____

State Contractor License No. _____. (If applicable)

Employer's Tax ID No. _____

Phone and FAX Numbers, and Address for receipt of official communications, if different from Business contact information:

9.02 Bid submitted on _____, 20__.

BID BOND

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

BIDDER (Name and Address):

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

OWNER (Name and Address):

**RSU 18
41 Heath Street
Oakland, ME 04963**

BID

Bid Due Date: **April 18, 2019**

Project (Brief Description Including Location):

This project is located on the site of the existing Belgrade Elementary School which is located on a parcel that is adjacent to Depot Street in Belgrade, Maine. This project shall consist of the installation of approximately 760 feet of 12" dia. HDEP smooth bore storm drain pipe, catch basins, F-structures, removal of existing pavement and gravel within driveways, parking lots and walkways to be regraded as part of this project, utility coordination and temporary support of utility structures, relocation of two small woodframe structures as shown on plans, grading of subgrade for new driveways, parking lots and walkway areas, gravel and pavement installation for those same areas, pavement striping, crushed stone along school building, loam, seed, riprap plunge pools, erosion control, traffic control, and any other materials or equipment required to complete the site modifications as outlined on the design plan set.

BOND

Bond Number:

Date (Not later than Bid due date):

Penal sum

(Words)

(Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Bid Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

BIDDER

SURETY

Bidder's Name and Corporate Seal (Seal)

Surety's Name and Corporate Seal (Seal)

By: _____
Signature and Title

By: _____
Signature and Title
(Attach Power of Attorney)

Attest _____
Signature and Title

Attest: _____
Signature and Title

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

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Surety's liability.
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 by 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.

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification.

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

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By

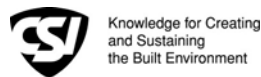


PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
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NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

AMERICAN COUNCIL OF ENGINEERING COMPANIES



This document has been approved and endorsed by



The Associated General Contractors of America

Construction Specifications Institute

This document has been accepted by
United States Department of Agriculture
Rural Utilities Service, Water and Waste Programs

This Suggested Form of Agreement has been prepared for use with the Standard General Conditions of the Construction Contract, Funding Agency Edition (C-710, 2002 Edition). Their provisions are interrelated, and a change in one may necessitate a change in the other. The language contained in the Suggested Instructions to Bidders (C-200, 2002 Edition) is also carefully interrelated with the language of this Agreement. Their usage is discussed in the Commentary on EJCDC Construction Documents. See also Guide to the Preparation of Supplementary Conditions (C-800, 2002 Edition).

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National Society of Professional Engineers
1420 King Street, Alexandria, VA 22314-2715

American Council of Engineering Companies
1015 15th Street, N.W., Washington, DC 20005

American Society of Civil Engineers
1801 Alexander Bell Drive, Reston, VA 20191-4400

Introduction

This Suggested Form of Agreement between Owner and Contractor for Construction Contract, Funding Agency Edition (Stipulated Price) ("Agreement") has been prepared for use with the Guide to the Preparation of Instructions to Bidders ("Instructions")(C-200, 2002 Edition) and with the Standard General Conditions of the Construction Contract, Funding Agency Edition ("General Conditions")(C-710, 2002 Edition). Their provisions are interrelated, and a change in one may necessitate a change in the others. For guidance in the preparation of Supplementary Conditions and coordination with Instructions to Bidders, see Guide to the Preparation of Supplementary Conditions ("Supplementary Conditions")(C-800, 2002 Edition). See also Suggested Bid Form ("Bid Form") (C-410, 2002 Edition). The EJCDC has not prepared a suggested form of Advertisement or Invitation to Bid because such documents will vary widely to conform to statutory requirements.

This form and the other Bidding Documents prepared and issued by the EJCDC assume acceptance of the Project Manual concept of the Construction Specifications Institute which provides for an organizational format for location of all bound documentary information for a construction project, namely: Bidding Requirements (which term refers to the Advertisement or Invitation to Bid, the Instructions, and any Bid Form that may be suggested or prescribed, all of which provide information and guidance for all Bidders) and the Contract Documents (defined in Article 1 of the General Conditions), which include the Agreement, bonds and certificates, the General Conditions, the Supplementary Conditions, the Drawings, and the Specifications. The Bidding Requirements are not considered part of the Contract Documents because much of their substance pertains to the relationships prior to the award of the Contract and has little effect or impact thereafter and because many contracts are awarded without going through the bidding process. In some cases, however, the actual Bid may be attached as an exhibit to the Agreement to avoid extensive retyping. (The terms "Bidding Documents" and "Bidding Requirements" are defined in Article 1 of the General Conditions.) The Project Manual concept is explained in the Manual of Practice issued by the Construction Specifications Institute.

Suggested language is presented herein with "Notes to User" to assist in preparing the Agreement. Much of the language should be usable on most projects, but modifications and additional provisions will often be necessary. The suggested language has been coordinated with the other standard forms produced by the EJCDC. When modifying the suggested language or writing additional provisions, the user must check the other documents thoroughly for conflicts and coordination of language usage and make appropriate revisions in all affected documents.

Refer to the discussions in EJCDC's Recommended Competitive Bidding Procedures for Construction Projects ("Bidding Procedures") (No. 1910-9-D, 1987 Edition) (to be reissued in 2002) on the particular paragraphs of which frequent reference is made below. For brevity, referenced paragraphs of the Instructions to Bidders are referenced with the prefix "I," those of the Bid Form are referenced with the prefix "BF," and those of this Agreement are referenced with the prefix "A."

NOTES:

1. EJCDC publications may be ordered from:

NSPE headquarters
1420 King Street
Alexandria VA 22314-2715
703-684-2800
www.nspe.org

ASCE headquarters
1801 Alexander Bell Drive
Reston, VA 20191-4400
800-548-2723
www.asce.org

ACEC headquarters
1015 15th Street NW
Washington DC 20005
202-347-7474
www.acec.org

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

THIS AGREEMENT is by and between RSU 18 (Owner)
And _____ (Contractor).

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

ARTICLE 1 - WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

This project is located on the site of the existing Belgrade Elementary School which is located on a parcel that is adjacent to Depot Street in Belgrade, Maine. This project shall consist of the installation of approximately 760 feet of 12" dia. HDEP smooth bore storm drain pipe, catch basins, F-structures, removal of existing pavement and gravel within driveways, parking lots and walkways to be regraded as part of this project, utility coordination and temporary support of utility structures, relocation of two small woodframe structures as shown on plans, grading of subgrade for new driveways, parking lots and walkway areas, gravel and pavement installation for those same areas, pavement striping, crushed stone along school building, loam, seed, riprap plunge pools, erosion control, traffic control, and any other materials or equipment required to complete the site modifications as outlined on the design plan set.

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:

Bids for Belgrade Elementary School Site Upgrades

ARTICLE 3 - ENGINEER

3.01 The Project has been designed by

Snowden Consulting Engineers, Inc.
PO Box 86
Oakland, Maine 04963

(Engineer), who is to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 - CONTRACT TIMES

4.01 Time of the Essence

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

4.02 Days to Achieve Substantial Completion and Final Payment

A. The Work will be substantially completed within **60** days after the date when the Contract Times commence to run as provided in Paragraph 2.03 of the General Conditions, and completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions within **75** days after the date when the Contract Times commence to run.

4.03 Liquidated Damages

A. Contractor and Owner recognize that time is of the essence of this Agreement and that Owner will suffer financial loss if the Work is not completed within the times specified in Paragraph 4.02 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty), Contractor shall pay Owner \$ **560.00** for each day that expires after the time specified in Paragraph 4.02 for Substantial Completion until the Work is substantially complete. After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by Owner, Contractor shall pay Owner \$ **560.00** for each day that expires after the time specified in Paragraph 4.02 for completion and readiness for final payment until the Work is completed and ready for final payment.

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, 5.01.B, and 5.01.C. All specific cash allowances are included in the prices and have been computed in accordance with Paragraph 11.02 of the General Conditions.

As provided in Paragraph 11.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer as provided in Paragraph 9.07 of the General Conditions. Unit prices have been computed as provided in Paragraph 11.03 of the General Conditions.

A. For all Work other than Unit Price Work, a Lump Sum of:

_____ \$ _____
(use words)

B. For all Unit Price Work, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the estimated quantity of that item as indicated in this Paragraph 5.01.B:

C. For all Work, at the prices stated in Contractor's Bid, attached hereto as an exhibit.

ARTICLE 6 - PAYMENT PROCEDURES

6.01 Submittal and Processing of Payments

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

6.02 Progress Payments; Retainage

A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment on or about the **21st** day of each month during performance of the Work as provided in Paragraphs 6.02.A.1 and 6.02.A.2 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. 95 percent of Work completed (with the balance being retainage); and

b. 95 percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

2. 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.

6.03 Final Payment

A. Upon receipt of the final Application for Payment accompanied by Engineer's recommendation of payment in accordance with Paragraph 14.07 of the General Conditions, Owner shall pay Contractor as provided in Paragraph 14.07 of the General Conditions the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 14.07, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages.

ARTICLE 7 - INTEREST

7.01 All moneys not paid when due as provided in Article 14 of the General Conditions shall bear interest at the maximum legal rate.

ARTICLE 8 – CONTRACTOR’S REPRESENTATIONS

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

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

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

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

D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in Paragraph 4.02 of the General Conditions and (2) reports and drawings of a Hazardous Environmental Condition, if any, at the Site which has been identified in the Supplementary Conditions as provided in Paragraph 4.06 of the General Conditions.

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

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

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

I. 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.

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

ARTICLE 9 - CONTRACT DOCUMENTS

9.01 Contents

A. The Contract Documents consist of the following:

1. This Agreement (pages 28 to 39, inclusive).
2. Other bonds (pages _____ to _____, inclusive).
 - a. _____ (pages _____ to _____, inclusive).
 - b. _____ (pages _____ to _____, inclusive).
 - c. _____ (pages _____ to _____, inclusive).
5. General Conditions (pages 57 to 110, inclusive).
6. Supplementary Conditions (pages 112 to 117, inclusive).
7. Specifications as listed in the table of contents of the Project Manual.
8. Drawings consisting of 4 sheets with each sheet bearing the following general title: **Belgrade Elementary Site Upgrades, Sheets 1-4.** **Sheets 5 and 6 of the plan set are for Planning Board submission only and are not part of this contract set.**
9. Addenda (numbers _____ to _____, inclusive).
10. Exhibits to this Agreement (enumerated as follows):
 - a. Notice to Award (pages 49 to 49, inclusive).
 - b. Contractor's Bid (pages 18 to 24, inclusive).
 - c. Documentation submitted by Contractor prior to Notice of Award.
 - d. _____.
11. 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 50 to 50, inclusive).
 - b. Work Change Directives.
 - c. Change Order(s).

B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).

C. There are no Contract Documents other than those listed above in this Article 9.

D. The Contract Documents may only be amended, modified, or supplemented as provided in Paragraph 3.04 of the General Conditions.

ARTICLE 10 - MISCELLANEOUS

10.01 Terms

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

10.02 Assignment of Contract

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

10.03 Successors and Assigns

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.

10.04 Severability

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

10.05 Other Provisions

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement in four copies. One counterpart each has been delivered to Owner, Contractor, and Engineer. All portions of the Contract Documents have been signed, initialed, or identified by Owner and Contractor or identified by Engineer on their behalf.

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

OWNER:

CONTRACTOR:

RSU 18

By:

By:

Title:

Title:

[CORPORATE SEAL]

[CORPORATE SEAL]

Attest:

Attest:

Title:

Title:

Designated Representatives:

Designated Representatives:

Name:

Name:

Title:

Title:

Address for giving notices:

Address for giving notices:

Phone:

FAX

:

Phone:

FAX

:

License

No.:

(Where applicable)

(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 Owner-Contractor Agreement.)

Agent for service or process:

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

(Space is provided below for signatures of additional parties, if required.)

Signature and Title
(Attach Power of Attorney)

Attest: _____
Signature and Title

CONTRACTOR AS PRINCIPAL
Company:

SURETY

Signature: _____ (Seal)
Name and Title:

Surety's Name and Corporate Seal (Seal)

By: _____
Signature and Title
(Attach Power of Attorney)

Attest: _____
Signature and Title:

EJCDC No. C-615 (2002 Edition)

Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, the American Institute of Architects, the American Subcontractors Association, and the Associated Specialty Contractors.

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):

RSU 18
41 Heath Street
Oakland, ME 04963

CONTRACT

Date:

Amount:

Description (Name and Location):

This project is located on the site of the existing Belgrade Elementary School which is located on a parcel that is adjacent to Depot Street in Belgrade, Maine. This project shall consist of the installation of approximately 760 feet of 12" dia. HDEP smooth bore storm drain pipe, catch basins, F-structures, removal of existing pavement and gravel within driveways, parking lots and walkways to be regraded as part of this project, utility coordination and temporary support of utility structures, relocation of two small woodframe structures as shown on plans, grading of subgrade for new driveways, parking lots and walkway areas, gravel and pavement installation for those same areas, pavement striping, crushed stone along school building, loam, seed, riprap plunge pools, erosion control, traffic control, and any other materials or equipment required to complete the site modifications as outlined on the design plan set.

BOND

Bond Number:

Date (Not earlier than Contract Date):

Amount:

Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Payment Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

Company:

Signature: _____ (Seal)

(Seal)

Name and Title: _____

Surety's Name and Corporate Seal

By: _____
Signature and Title
(Attach Power of Attorney)

(Space is provided below for signatures of _____)

additional parties, if required.)

Attest: _____
Signature and Title

CONTRACTOR AS PRINCIPAL
Company:

SURETY

Signature: _____ (Seal)
Name and Title:

Surety's Name and Corporate Seal (Seal)

By: _____
Signature and Title
(Attach Power of Attorney)

Attest: _____
Signature and Title:

EJCDC No. C-615 (2002 Edition)

Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, the American Institute of Architects, the American Subcontractors Association, and the Associated Specialty Contractors.

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 addresses described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.

4.2. Claimants who do not have a direct contract with Contractor:

1. Have furnished written notice to Contractor and sent a copy, or notice thereof, to Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials or

equipment were furnished or supplied, or for whom the labor was done or performed; and

2. Have either received a rejection in whole or in part from Contractor, or not received within 30 days of furnishing the above notice any communication from Contractor by which Contractor had indicated the claim will be paid directly or indirectly; and

3. Not having been paid within the above 30 days, have sent a written notice to Surety and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to Contractor.

5. If a notice by a Claimant required by Paragraph 4 is provided by Owner to Contractor or to Surety, that is sufficient compliance.

6. When a Claimant has satisfied the conditions of Paragraph 4, the Surety shall promptly and at Surety's expense take the following actions:

6.1. Send an answer to that Claimant, with a copy to Owner, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.

6.2. Pay or arrange for payment of any undisputed amounts.

7. Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by Surety.

8. Amounts owed by Owner to Contractor under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any performance bond. By Contractor furnishing and Owner accepting this Bond, they agree that all funds earned by Contractor in the performance of the Contract are dedicated to satisfy obligations of Contractor and Surety under this Bond, subject to Owner's priority to use the funds for the completion of the Work.

9. Surety shall not be liable to Owner, Claimants, or others for obligations of Contractor that are unrelated to the Contract. Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

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

11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the Work or part of the Work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Paragraph 4.1 or Paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

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 comply with the other terms thereof.

PERFORMANCE BOND

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

CONTRACTOR (Name and Address):
Business):

SURETY (Name and Address of Principal Place of

OWNER (Name and Address):

RSU 18
41 Heath Street
Oakland, ME 04963

CONTRACT

Date:

Amount:

Description (Name and Location):

This project is located on the site of the existing Belgrade Elementary School which is located on a parcel that is adjacent to Depot Street in Belgrade, Maine. This project shall consist of the installation of approximately 760 feet of 12" dia. HDEP smooth bore storm drain pipe, catch basins, F-structures, removal of existing pavement and gravel within driveways, parking lots and walkways to be regraded as part of this project, utility coordination and temporary support of utility structures, relocation of two small woodframe structures as shown on plans, grading of subgrade for new driveways, parking lots and walkway areas, gravel and pavement installation for those same areas, pavement striping, crushed stone along school building, loam, seed, riprap plunge pools, erosion control, traffic control, and any other materials or equipment required to complete the site modifications as outlined on the design plan set.

BOND

Bond Number:

Date (Not earlier than Contract Date):

Amount:

Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Performance Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

Company:

Signature:

(Seal)

Name and Title: _____

SURETY

(Seal)

Surety's Name and Corporate Seal

By: _____

Signature and Title

(Attach Power of Attorney)

(Space is provided below for signatures of additional parties, if required.)

Attest: _____
Signature and Title

CONTRACTOR AS PRINCIPAL

SURETY

Company:

Signature: _____ (Seal)

(Seal)

Name and Title: _____

Surety's Name and Corporate Seal

By: _____
Signature and Title
(Attach Power of Attorney)

Attest: _____
Signature and Title:

EJCDC No. C-610 (2002 Edition)

Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, and the American Institute of Architects.

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;
 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 a limit of the amount of this Bond, but subject to commitment by Owner of the Balance of the Contract Price to mitigation of costs and damages on the Contract, Surety is obligated without duplication for:

- 6.1. The responsibilities of Contractor for correction of defective Work and completion of the Contract;
- 6.2. Additional legal, design professional, and delay costs resulting from Contractor's Default, and resulting from the actions or failure to act of Surety under Paragraph 4; and
- 6.3. Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of Contractor.

7. Surety shall not be liable to Owner or others for obligations of Contractor that are unrelated to the 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.Contract 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 comply with the other terms thereof.

NOTICE OF AWARD

To: _____

PROJECT DESCRIPTION: Bids for Belgrade Elementary School Site Upgrades

The **OWNER** has considered the **BID** submitted by you for the above described **WORK** in response to its Advertisement for Bid dated **March 18, 2019** and Instructions to Bidders.

You are hereby notified that your **BID** has been accepted for items in the amount of _____.

You are required by the Instructions to Bidders to execute the Agreement and furnish the required **CONTRACTOR'S** bonds and certificates of insurance within fifteen (15) calendar days from the date of this Notice to you.

If you fail to execute said Agreement and to furnish said **BONDS** and **INSURANCE CERTIFICATE** within fifteen (15) days from the date of this Notice, said **OWNER** will be entitled to consider all your rights arising out of the **OWNER'S** acceptance of your **BID** as abandoned. The **OWNER** will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this **NOTICE OF AWARD** to the **OWNER**.

Dated this _____ day of _____, 2019.

RSU 18

By _____

Name _____

Title _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged

By _____

this the _____ day of _____, 2019.

By _____

Title _____

NOTICE TO PROCEED

To: _____

Date: _____

Project: **Bids for Belgrade
Elementary School Site
Upgrades**

You are hereby notified to commence **WORK** in accordance with Agreement dated _____, on or before _____ 2019, and you are expected to complete the **WORK** with **60** consecutive calendar days thereafter. The date of completion of all **WORK** is therefore _____ 2019.

_____ RSU 18
(Owner)

By _____

Name _____

Title _____

ACCEPTANCE OF NOTICE

Receipt of the above **NOTICE TO PROCEED** is hereby acknowledged

By _____

This the _____ day of _____, 2019

By _____

Title _____

APPLICATION FOR PAYMENT NO. _____

To: **RSU 18** _____ (OWNER)
From: _____ (CONTRACTOR)

Contract: **Bids for Belgrade Elementary School Site Upgrades**

Project: _____

OWNER's Contract No. 1 ENGINEER's Project No.

For Work accomplished through the date of: _____ **SITE-18-012**

1.	Original Contract Price:	\$ _____
2.	Net change by Change Orders and Written Amendments (+ or -):	\$ _____
3.	Current Contract Price (1 plus 2):	\$ _____
4.	Total completed and stored to date:	\$ _____
5.	Retainage (per Agreement):	
	_____ % of completed Work:	\$ _____
	_____ % of stored material:	\$ _____
	Total Retainage:	\$ _____
6.	Total completed and stored to date less retainage (4 minus 5):	\$ _____
7.	Less previous Application for Payments:	\$ _____
8.	DUE THIS APPLICATION (6 MINUS 7):	\$ _____

Accompanying Documentation:

CONTRACTOR'S Certification:

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

Dated _____ By: _____
CONTRACTOR (Authorized Signature)

State of _____

County of _____

Subscribed and sworn to before me this _____

day of _____, _____

Notary Public

My Commission expires: _____

Payment of the above AMOUNT DUE

THIS APPLICATION is recommended APPROVED

By: _____
ENGINEER (Authorized Signature)

By: _____
OWNER (Authorized Signature)

Title: _____

Title: _____

Date: _____

Date: _____

APPLICATION FOR PAYMENT

INSTRUCTIONS

A. GENERAL INFORMATION

The sample form of Schedule of Values is intended as a guide only. Many projects require a more extensive form with space for numerous items, descriptions of Change Orders, identification of variable quantity adjustments, summary of materials and equipment stored at the site and other information. It is expected that a separate form will be developed by Engineer and Contractor at the time Contractor's Schedule of Values is finalized. Refer to Article 14 of the General Conditions for provisions concerning payments to Contractor.

B. COMPLETING THE FORM

The Schedule of Values, submitted and approved as provided in paragraphs 2.05.B.3 and 2.07 of the General Conditions, should be reproduced as appropriate in the space indicated on the Application for Payment form. Note that the cost of materials and equipment is often listed separately from the cost of installation. Also, note that each Unit Price is deemed to include Contractor's overhead and profit.

All approved Change Orders affecting the Contract Price should be identified and included in the Schedule of Values as required for progress payments.

The form is suitable for use in the Final Application for Payment as well as for Progress Payments; however, the required accompanying documentation is usually more extensive for final payment. All accompanying documentation should be identified in the space provided on the form.

C. LEGAL REVIEW

All accompanying documentation of a legal nature, such as Lien waivers, should be reviewed by an attorney, and Engineer should so advise Owner.

ITEM	UNIT PRICE	ESTIMATED QUANTITY	SCHEDULE OF VALUES AMOUNT	QUANTITY COMPLETED	AMOUNT	%	MATERIAL STORED	AMOUNT COMPLETED AND STORED
1.	\$		\$		\$		\$	\$
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								
11.								
12.								
13.								
14.								
15.								
16.								
17.								
18.								
19.								
20.								
21.								
22.								
23.								
24.								
25.								
26.								
27.								
28.								
29.								
30.								
TOTAL			\$		\$		\$	\$

Note: Total Schedule of Values Amount should equal the current Contract Price.

CHANGE ORDER

No. _____

DATE OF ISSUANCE _____

EFFECTIVE DATE _____

OWNER _____

CONTRACTOR _____

Contract: _____

Project: _____

OWNER's Contract No. _____

ENGINEER's Contract No. _____

ENGINEER _____

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

Description (Include itemized increase (decrease) price of work):

Reason for Change Order:

Attachments: (List documents supporting change)

CHANGE IN CONTRACT PRICE:
Contract Price prior to this Change Order: \$ _____
Net increase (decrease) of this Change Order: \$ _____
Contract Price with all approved Change Orders: \$ _____

CHANGE IN CONTRACT TIMES:
Contract Times prior to this Change Order: Substantial Completion: Ready for final payment: (days or dates)
Net increase (decrease) this Change Order: Substantial Completion: Ready for final payment: (days)
Contract Times with all approved Change Orders: Substantial Completion: Ready for final payment: (days or dates)

RECOMMENDED:

APPROVED:

ACCEPTED:

By: _____
ENGINEER (Authorized Signature)

By: _____
OWNER (Authorized Signature)

By: _____
CONTRACTOR (Authorized Signature)

Date: _____

Date: _____

Date: _____

CHANGE ORDER

INSTRUCTIONS

A. GENERAL INFORMATION

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

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

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

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

B. COMPLETING THE CHANGE ORDER FORM

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

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

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

SUBCONTRACTOR/SUPPLIER LIEN WAIVER RELEASE
Project: Bids for Belgrade Elementary School Site Upgrades
Owner: RSU 18

Personally appeared before me _____ (subcontractor/supplier)

Personally known and states that all liens and claims against _____

(Contractor) and _____(Owner), its premises and property are hereby

waived and further represents that no other person or party has any right to a lien on account of

any work performed or material furnished to him.

Original Subcontract Amount	\$ _____
Approved Change Orders	\$ _____
Total Current Subcontract Amount	\$ _____
Previously Paid	\$ _____
Current Payment Made	\$ _____
Total Payments to Date	\$ _____
Total Retained	\$ _____
Balance to Finish	\$ _____

Witness:

Company Name: _____

Signature: _____

Officer/Owner: _____

Subscribed and sworn to before me this _____ day of _____, 2019.

Notary Public _____

My Commission expires on : _____

DIVISION 00700
General Conditions of Contract

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

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By



PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE
a practice division of the
NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

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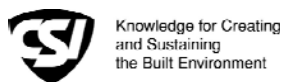
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These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor Funding Agency Edition No. C-521 (2002 Edition). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the EJCDC Construction Documents, General and Instructions (No. C-001, 2002 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (No. C-800, 2002 Edition).

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1420 King Street, Alexandria, VA 22314-2794
(703) 684-2882

American Council of Engineering Companies
1015 15th Street N.W., Washington, DC 20005
(202) 347-7474

American Society of Civil Engineers
1801 Alexander Bell Drive, Reston, VA 20191-4400
(800) 548-2723

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GENERAL CONDITIONS

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 Agency and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.
 10. *Claim* – A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.
 11. *Contract* – The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.
 12. *Contract Documents* – Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor's 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.A 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. The General Requirements pertain to all sections 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 in connection with the Work.
23. *Hazardous Waste* – The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
24. *Laws and Regulations; Laws or Regulations* – Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
25. *Liens* – Charges, security interests, or encumbrances upon Project funds, real property, or personal property.
26. *Milestone* – A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.
27. *Notice of Award* – The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.
28. *Notice to Proceed* – A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.
29. *Owner* – The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.
30. *PCBs* – Polychlorinated biphenyls.
31. *Petroleum* – Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

32. *Progress Schedule* – A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor’s plan to accomplish the Work within the Contract Times.
33. *Project* – The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
34. *Project Manual* – The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
35. *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. *Related Entity* – An officer, director, partner, employee, agent, consultant, or subcontractor.
37. *Resident Project Representative* – The authorized representative of Engineer who may be assigned to the Site or any part thereof.
38. *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.
39. *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.
40. *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.
41. *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.
42. *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.
43. *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.
44. *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.
45. *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.
46. *Successful Bidder* – The Bidder submitting a responsive Bid to whom Owner makes an award.
47. *Supplementary Conditions* – That part of the Contract Documents which amends or supplements these General Conditions.
48. *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 any Subcontractor.

49. *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.
50. *Unit Price Work* – Work to be paid for on the basis of unit prices.
51. *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.
52. *Work Change Directive* – A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and Agency upon recommendation of the 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 following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following meaning.
- B. *Intent of Certain Terms or Adjectives*
 1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action or determination will be solely to evaluate, in general, the Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.
- C. *Day*
 1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective*
 1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - A. does not conform to the Contract Documents, or
 - B. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents, or
 - C. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. *Furnish, Install, Perform, Provide*

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
 2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
 3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
 4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.
- F. Unless stated otherwise in the Contract Documents, words or phrases which 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 and Evidence of Insurance*

- A. *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.

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

2.06 *Preconstruction Conference*

- 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.

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.
 - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 - 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 - 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to 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 may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to Owner.
- C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

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

3.03 *Reporting and Resolving Discrepancies*

A. Reporting Discrepancies

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.
2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor knew or reasonably should have known thereof.

B. Resolving Discrepancies

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

3.04 *Amending and Supplementing Contract Documents*

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

3.05 *Reuse of Documents*

A. Contractor and any Subcontractor or Supplier shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or Engineer's consultants, including electronic media editions; or

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

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

4.01 *Availability of Lands*

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

4.02 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents; and
 2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Contract Documents.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general 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 Related Entities with respect to:

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

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

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

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

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

C. *Possible Price and Times Adjustments*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor’s cost of, or time required for, performance of the Work; subject, however, to the following:
 - A. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and
 - B. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:
 - A. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or
 - B. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas

required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or

C. Contractor failed to give the written notice as required by Paragraph 4.03.A.

3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, Owner and Engineer, and any of their Related Entities 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.

4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data; and
2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - A. reviewing and checking all such information and data,
 - B. locating all Underground Facilities shown or indicated in the Contract Documents,
 - C. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction, and
 - D. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *Reference Points*

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

4.06 *Hazardous Environmental Condition at Site*

- A. *Reports and Drawings:* Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the Engineer in the preparation of the Contract Documents.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general 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 Related Entities with respect to:
 - 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 - 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 - 3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for 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.
- 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 to Contractor written notice: (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, 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, 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 current 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 must be accompanied by a certified copy of the agent's authority to act.
- 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 insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from 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 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 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 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.

5.04 *Contractor's Liability Insurance*

- A. Contractor shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:
 - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
 - 2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
 - 3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
 - 4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:
 - A. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
 - B. by any other person for any other reason;
 - 5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and
 - 6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.
- B. The policies of insurance required by this Paragraph 5.04 shall:
 - 1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, 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, partners, employees, agents, consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
 - 2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
 - 3. include completed operations insurance;
 - 4. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;

5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);
6. 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
7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment.
 - A. 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, Contractor shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (Contractor shall be responsible for any deductible or self-insured retention.). This insurance shall:
 1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;
 2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss 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 caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;
 3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
 4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
 5. allow for partial utilization of the Work by Owner;
 6. include testing and startup; and
 7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.
- B. Contractor shall purchase and maintain such boiler and machinery 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, 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 an insured or additional insured.

- C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with 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 additional insured 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.

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 to be listed as insureds or additional insureds (and the officers, directors, 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 additional insureds thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, 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 to be listed as insured or additional insured (and the officers, directors, 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 Contractor as trustee or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for:
 - 1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 - 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, 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 Contractor and made payable to Contractor as fiduciary for the insureds, as their interests may appear,

subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Contractor 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.

- B. Contractor 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 Contractor's exercise of this power. If such objection be made, Contractor 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, Contractor as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Contractor as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Insurance; Option to Replace*

- A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the 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 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 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. The superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or received from the superintendent shall be binding on Contractor.

6.02 *Labor; Working Hours*

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

- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *Services, Materials, and Equipment*

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

6.04 *Progress Schedule*

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

6.05 *Substitutes and "Or-Equals"*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.
 - 1. *"Or-Equal" Items:* If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, 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;
 - 3) it has a proven record of performance and availability of responsive service; and
- B. Contractor certifies that, if approved and incorporated into the Work:
- 1) there will be no increase in cost to the Owner or increase in Contract Times, and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.
2. Substitute Items
- A. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.
- B. Contractor shall submit sufficient information as provided below to allow Engineer to determine that 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 procedure requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented in the General Requirements and as Engineer may decide is appropriate under the circumstances.
- D. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
- 1) shall certify that the proposed substitute item will:
 - a) will perform adequately the functions and achieve the results called for by the general design,
 - b) be similar in substance to that specified, and
 - c) be suited to the same use as that specified;
 - 2) will state:
 - a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time;
 - b) whether or not 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 or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;
 - 3) will identify:
 - a) all variations of the proposed substitute item from that specified, and
 - b) available engineering, sales, maintenance, repair, and replacement services;

- 4) and 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 either a Change Order for a substitute or 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 item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
 - F. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.
- B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

- C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:
 - 1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity, nor
 - 2. shall anything in the Contract Documents 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 an additional insured on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, 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, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, 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 primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *Taxes*

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

6.11 *Use of Site and Other Areas*

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

- 1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.
- 2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
- 3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, 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. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
 1. all persons on the Site or who may be affected by the Work;
 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.
- C. 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 , 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).
- D. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

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

6.15 *Hazard Communication Programs*

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

6.16 *Emergencies*

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

6.17 *Shop Drawings and Samples*

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

1. *Shop Drawings*

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

2. *Samples*

- A. Submit number of Samples specified in the Specifications.
 - B. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.
- B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Submittal Procedures*

- 1. Before submitting each Shop Drawing or Sample, Contractor shall have determined and verified:
 - A. all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - B. the suitability of all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;

- C. all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto; and
 - D. shall also have 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.
2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.
 3. With each submittal, Contractor shall give Engineer specific written notice of any variations, that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. *Engineer's Review*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. *Resubmittal Procedures*

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

6.18 *Continuing the Work*

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

6.19 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its Related Entities shall be entitled to rely on representation of Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
1. observations by Engineer;
 2. recommendation by Engineer or payment by Owner of any progress or final payment;
 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 4. use or occupancy of the Work or any part thereof by Owner;
 5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;
 6. any inspection, test, or approval by others; or
 7. any correction of defective Work by Owner.

6.20 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, 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 respective consultants, agents, officers, directors, partners, or employees 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, partners, employees, agents, consultants and subcontractors arising out of:
1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

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

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 *Related Work at Site*

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

acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 *Coordination*

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

7.03 *Legal Relationships*

- A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.
- B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's actions or inactions.
- C. Contractor shall be liable to Owner and any other contractor for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's 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 in respect of 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 in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by Engineer in preparing the Contract Documents.

8.06 *Insurance*

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

8.09 *Limitations on Owner's Responsibilities*

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

8.10 *Undisclosed Hazardous Environmental Condition*

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

8.11 *Evidence of Financial Arrangements*

- A. If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents, Owner's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

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 and will not be changed without written consent of Owner and Engineer.

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 believe 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.

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, subject to written approval by Agency 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.B.

10.03 *Execution of Change Orders*

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

10.04 *Notification to Surety*

- A. If notice 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) is required by the provisions of any bond to be given to a surety, the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 *Claims*

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

- E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.
- F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

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

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 include only the following items, and shall not include any of the costs itemized in Paragraph 11.01.B.
 - 1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.
 - 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
 - 3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.
 - 4. Costs of special consultants (including but not limited to Engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
 - 5. Supplemental costs including the following:
 - A. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - B. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

- C. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. 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, 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, expressages, 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:
- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.
 - 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
 - 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
 - 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
 - 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A and 11.01.B.
- 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
 - 1. Contractor agrees that:
 - A. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 - B. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.
- C. *Contingency Allowance*
 - 1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 *Unit Price Work*

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:
 - 1. the Bid price of a particular item of Unit Price Work amounts to more than 5 percent of the Contract Price and the variation in the quantity of that particular item of Unit Price Work performed by Contractor differs by more than 25 percent from the estimated quantity of such item indicated in the Agreement; and
 - 2. there is no corresponding adjustment with respect to any other item of Work; and

3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

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

12.01 Change of Contract Price

- A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:
 1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or
 2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or
 3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).
- C. Contractor's Fee: The Contractor's fee for overhead and profit shall be determined as follows:
 1. a mutually acceptable fixed fee; or
 2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - A. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;
 - B. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;
 - 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 Paragraph 12.01.C.2.a 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 the 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.B.
 - 1. delays caused by or within the control of Contractor; or
- D. Owner, Engineer and the Related Entities of each of them 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. All 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, inspecting, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's Site safety procedures and programs so that they may comply therewith as applicable.

13.03 *Tests and Inspections*

- A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
 - 1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
 - 2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in said Paragraph 13.04.C; and
 - 3. as otherwise specifically provided in the Contract Documents.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.
- E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, it must, if requested by Engineer, be uncovered 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 notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).
- B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. repair such defective land or areas; or
 - 2. correct such defective Work; or
 - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

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

13.08 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and 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*

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

B. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations on the Site 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, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and to any other qualifications stated in the recommendation); and
 - C. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - A. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or
 - B. that there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

- A. to supervise, direct, or control the Work, or
 - B. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - C. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - D. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or
 - E. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:
- A. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
 - B. the Contract Price has been reduced by Change Orders;
 - C. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
 - D. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. *Payment Becomes Due*

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

D. *Reduction in Payment*

1. Owner may refuse to make payment of the full amount recommended by Engineer 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. the Contractor's performance or furnishing of the Work is inconsistent with funding Agency requirements;
 - D. there are other items entitling Owner to a set-off against the amount recommended; or
 - E. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.
2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner

shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor corrects to Owner's satisfaction the reasons for such action.

3. If it is subsequently determined 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.

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, Agency, Contractor, and Engineer shall make a prefinal 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 complete or correct items on the tentative list.

14.05 *Partial Utilization*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions.
 1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor will certify to Owner and Engineer that such part of the Work is substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

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

14.06 *Final Inspection*

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

14.07 *Final Payment*

A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.
2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - A. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.7;
 - B. consent of the surety, if any, to final payment;
 - C. a list of all Claims against Owner that Contractor believes are unsettled; and
 - D. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

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

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and

Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. *Payment Becomes Due*

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

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. The remaining balance of any sum included in the final Application for Payment but held by OWNER for Work not fully completed and accepted will become due when the Work is fully completed and accepted.

14.09 *Waiver of Claims*

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

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

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

15.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will justify termination for cause:
 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or

equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);

2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;
 3. Contractor's disregard of the authority of Engineer; or
 4. Contractor's violation in any substantial way of any provisions of the Contract Documents.
- B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:
1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion),
 2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and
 3. complete the Work as Owner may deem expedient.
- C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, 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):
1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;

3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and
 4. reasonable expenses directly attributable to termination.
- B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 – DISPUTE RESOLUTION

16.01 *Methods and Procedures*

- A. Owner and Contractor may mutually 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. Timely submission of the request shall stay the effect of Paragraph 10.05.E.
- B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.
- C. If the claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:
1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions, or
 2. agrees with the other party to submit the Claim to another dispute resolution process, or
 3. gives written notice to the other party of their intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 – MISCELLANEOUS

17.01 *Giving Notice*

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:

1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or
2. delivered at or sent by 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.

17.07 *Environmental Requirements*

- A. When constructing a project involving trenching and/or other related earth excavations, Contractor shall comply with the following environmental constraints:
 1. Wetlands – When disposing of excess, spoil, or other construction materials on public or private property, Contractor shall not fill in or otherwise convert wetlands.
 2. Floodplains – When disposing of excess, spoil, or other construction materials on public or private property, Contractor shall not fill in or otherwise convert 100 year floodplain areas delineated on the latest Federal Emergency Management Agency Floodplain Maps, or other appropriate maps, i.e., alluvial soils on NRCS Soil Survey Maps.
 3. Historic Preservation – Any excavation by Contractor that uncovers an historical or archaeological artifact shall be immediately reported to Owner and a representative of Agency. Construction shall be temporarily halted pending the notification process and further directions issued by Agency after consultation with the State Historic Preservation Officer (SHPO).
 4. Endangered Species – Contractor shall comply with the Endangered Species Act, which provides for the protection of endangered and/or threatened species and critical habitat. Should any evidence of the presence of endangered and/or threatened species or their critical habitat be brought to the attention of Contractor, Contractor will immediately report this evidence to Owner and a

representative of Agency. Construction shall be temporarily halted pending the notification process and further directions issued by Agency after consultation with the U.S. Fish and Wildlife Service.

EXHIBIT GC-A

Certificate of Owner's Attorney

I, the undersigned, _____, the duly authorized and acting legal representative of _____, do hereby certify as follows:

I have examined the attached Contract(s) and performance and payment bond(s) and the manner of execution thereof, and I am of the opinion that each of the aforesaid agreements is adequate and has been duly executed by the proper parties thereto acting through their duly authorized representatives; that said representatives have full power and authority to execute said agreements on behalf of the respective parties named thereon; and that the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with the terms, conditions, and provisions thereof.

Date: _____

DIVISION 00800
Supplementary Conditions of Contract

Supplementary Conditions

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract Funding Agency Edition (No. C-710, 2002 Edition) and other provisions of the Contract Documents as indicated below. All provisions that are not so amended or supplemented remain in full force and effect.

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

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SC-9.03	Project Representative
SC-14.02.A.3	Applications for Payment
SC-14.02.C.1	Payment Becomes Due
<i>{SC-17.05.B</i>	<i>Tribal Sovereignty</i>
SC-18.08	Clean Air and Pollution Control Acts

SC-1.01.A.4. Add the following language to the end of Paragraph 1.01.A.4:

The Application for Payment form to be used on this Project is EJCDC No. C-620.

SC-1.01.A.10. Add the following language to the end of Paragraph 1.01.A.10:

The Change Order form to be used on this Project is EJCDC No. C-941.

SC-1.01.A.21. Add the following language to the end of Paragraph 1.01.A.21:

The Engineer's Consultants on this project are:

1. S. W. Cole Engineering – Geotechnical Consulting

SC-2.03.A. Delete Paragraph 2.03.A in its entirety and insert the following in its place:

- A. The Contract Times will commence to run 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.

{SC-4.02. Add the following new paragraphs immediately after Paragraph 4.02.B:

E. Copies of reports and drawings itemized in SC-4.02.C and SC-4.02.D that are not included with Bidding Documents may be examined at **Snowden Consulting Engineers, Inc.** during regular business hours. These reports and drawings are not part of the Contract Documents, but the “technical data” contained therein upon which the Contractor may rely as identified and established above are incorporated therein by reference. Contractor is not entitled to rely upon other information and data utilized by Engineer in the preparation of the Drawings and Specifications.

{SC-4.06. Add the following new paragraphs immediately after Paragraph 4.06.A:

1. In the preparation of Drawings and Specifications, Engineer relied upon the following reports of Hazardous Environmental Conditions at the Site:

a. See EJCDC No. C-800 for examples.

2. In the preparation of Drawings and Specifications, Engineer relied upon the following drawings of Hazardous Environmental Conditions which are at or contiguous to the Site:

a. See EJCDC No. C-800 for examples.

3. Copies of reports and drawings itemized in SC-4.06.A.1 and SC-4.06.A.2 that are not included with Bidding Documents may be examined at **Snowden Consulting Engineers, Inc.** during regular business hours. These reports and drawings are not part of the Contract Documents, but the “technical data” contained therein upon which the Contractor may rely as identified and established above are incorporated therein by reference. Contractor is not entitled to rely upon other information and data utilized by Engineer in the preparation of the Drawings and Specifications.

SC-5.03. Add the following new paragraph immediately after Paragraph 5.03.B:

- C. Failure of the Owner to demand such certificates or other evidence of full compliance with these insurance requirements or failure of the Owner to identify a deficiency from evidence provided shall not be construed as a waiver of Contractor’s obligation to maintain such insurance.

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

- C. The limits of liability for 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., Longshoremen's) Statutory
 - c. Employer's Liability *{\$ 500,000}*

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 the Contractor:
 - a. General Aggregate *{\$ 2,000,000}*
 - b. Products - Completed
Operations Aggregate *{\$ 1,000,000}*
 - c. Personal and Advertising
Injury *{\$ 1,000,000}*
 - d. Each Occurrence
(Bodily Injury and
Property Damage) *{\$ 1,000,000}*
 - e. Property Damage liability
insurance will provide Explosion,
Collapse, and Underground
coverages where applicable.
 - f. Excess or Umbrella Liability
 - 1) General Aggregate *{\$ 5,000,000}*
 - 2) Each Occurrence *{\$ 5,000,000}*

3. Automobile Liability under Paragraph 5.04.A.6 of the General Conditions:
 - a. Bodily Injury:

Each Person	<i>{\$ 1,000,000}</i>
Each Accident	<i>{\$ 1,000,000}</i>
 - b. Property Damage:

Each Accident	<i>{\$ 1,000,000}</i>
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 - c. Combined Single Limit of *{\$ 1,000,000}*

4. The Contractual Liability coverage required by paragraph 5.04.B.4 of the General Conditions shall provide coverage for not less than the following amounts:
 - a. Bodily Injury:

Each Person	<i>{\$ 2,000,000}</i>
Each Accident	<i>{\$ 2,000,000}</i>
 - b. Property Damage:

Each Accident	<i>{\$ 2,000,000}</i>
Annual Aggregate	<i>{\$ 2,000,000}</i>

5. *List by name other persons or entities to be included on policy as additional insureds.*
RSU 18
Snowden Consulting Engineers, Inc.
Cordia Capital Projects Group

SC-6.05.C. Amend the paragraph by making two subparagraphs under the title C. Engineer’s Evaluation. The paragraph text is retitled, 6.05.C.2 After Effective Date of Agreement. A new paragraph is added before this paragraph to read as follows:

1. During Bidding. The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, or “or-equal” materials and equipment as defined in paragraph 6.05 of the General Conditions, or those substitute materials and equipment approved by the Engineer and identified by Addendum. The materials and equipment described in the Bidding Documents establish a standard of required type, function, and quality to be met by any proposed substitute or “or-equal” item. Request for Engineer’s clarification of materials and equipment considered “or-equal” prior to the Effective Date of the Agreement must be received by the Engineer at least 5 days prior to the date for receipt of Bids. No item of material or equipment will be considered by Engineer as a substitute unless written request for approval has been submitted by Bidder and has been received by Engineer at least 15 days prior to the date for receipt of Bids. Each request shall conform to the requirements of Paragraph 6.05 of the General Conditions. The burden of proof of the merit of the proposed item is upon the Bidder. Engineer’s decision of approval or disapproval of a proposed item will be final. If Engineer approves any proposed substitute item, such approval will be set forth in an Addendum issued to all prospective Bidders. Bidders shall not rely upon approvals made in any other manner.

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

H. The Contractor shall not award work valued at more than fifty (50%) percent of the Contract Price to Subcontractor(s), without prior written approval of the Owner.

SC-6.10. Add a new paragraph immediately after Paragraph 6.10.A:

B. Owner is exempt from payment of sales and compensating use taxes of the State of Maine and of cities and counties thereof on all materials to be incorporated into the Work.

1. Owner will furnish the required certificates of tax exemption to Contractor for use in the purchase of supplies and materials to be incorporated into the Work.

2. Owner’s exemption does not apply to construction tools, machinery, equipment, or other property purchased by or leased by Contractor, or to supplies or materials not incorporated into the Work }

SC-7.02.A.1. Delete paragraphs 7.02.A.1-3 in their entirety and insert the following:

1. The _____ Contractor shall have the authority and be responsible for coordination of the activities among the other prime contractors and subcontractors on

the Site to ensure a safe, efficient working environment. This authority covers scheduling delivery of materials, storage of materials, sequencing of construction involving different crafts, resolving interface issues between crafts, scheduling testing, and all other aspects of the Work that do not impact the design or function of the Work.}

SC-9.03.A. Add the following language at the end of paragraph 9.03.A:

The Engineer will provide Resident Project Representative services for this project. The Duties, Responsibilities, and Limitations of Authority of the Resident Project Representative will be as stated in Exhibit D of the Agreement Between Owner and Engineer, E-510, 2002 Edition, as amended and executed for this specific Project.

SC-14.02.A.3 Add the following language at the end of paragraph 14.02.A.3:

No payments will be made that would deplete the retainage, place in escrow any funds that are required for retainage, or invest the retainage for the benefit of the Contractor.

SC-14.02.C.1. Delete Paragraph 14.02.C.1 in its entirety and insert the following in its place:

1. The Application for Payment with Engineer's recommendations will be presented to the Owner and Agency for consideration. If both the Owner and Agency find the Application for Payment acceptable, the recommended amount less any reduction under the provisions of Paragraph 14.02.D will become due twenty days after the Application for Payment is presented to the Owner, and the Owner will make payment to the Contractor.

DIVISION 01000
General Requirements

Work Summary	01000
List of Drawings	01010
Measurement and Payment	01011
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SECTION 01000

Work Summary

1000.01 Project Location

The location of this project is at the following locations in RSU 18, Maine:

In Kennebec County, project is located on roadways named Leeland street, Ginger Ave. Gail Street and Bizier Street.

1000.02 Work Description

This project is located on the site of the existing Belgrade Elementary School which is located on a parcel that is adjacent to Depot Street in Belgrade, Maine. This project shall consist of the installation of approximately 760 feet of 12” dia. HDEP smooth bore storm drain pipe, catch basins, F-structures, removal of existing pavement and gravel within driveways, parking lots and walkways to be regraded as part of this project, utility coordination and temporary support of utility structures, relocation of two small woodframe structures as shown on plans, grading of subgrade for new driveways, parking lots and walkway areas, gravel and pavement installation for those same areas, pavement striping, crushed stone along school building, loam, seed, riprap plunge pools, erosion control, traffic control, and any other materials or equipment required to complete the site modifications as outlined on the design plan set.

1000.02 Abbreviations and Symbols

The following abbreviations may be found in these specifications:

AASHTO – American Association of State Highway and Transportation Officials
ANSI – American National Standards Institute
AWWA – American Waterworks Association
ACI – American Concrete Institute
ASTM – American Society of Testing Materials
AISC – American Institute of Steel Construction
ASCE – American Society of Civil Engineers
CPI – Clay Pipe Institute
BOCA – Building Officials and Code Administrators
MDOT – Maine Department of Transportation
NEC – National Electric Code
NEMA – National Electrical Manufacturers Association
SDR – Surface Dimension Ratio (Pipe Classification)
FHWA – Federal Highway Administration

SECTION 01010
List of Drawings

<u>Title</u>	<u>Sheet No.</u>
Site Plan	1
Grading Plan	2
Site Detail Plan	3
Erosion Control Plan	4

SECTION 01011

Measurement and Payment

This section shall include the determined measurement and payment sections for the bid items as identified in the Bid Schedule within this Contract Document.

For all items other than those to be paid for by lump sum amounts, after the work is completed and before final payment is made, therefore, the Engineer shall make final measurements to determine the quantities of various items of work accepted as the basis for final settlement. The Contractor in case of unit price items will be paid for the actual amount of work accepted and for the actual amount of materials in place, as shown by the final measurements.

All units of measurement shall be standard United States convention as applied to the specific items of work by tradition and as interpreted by the Engineer.

At the end of each days work, the Contractor's Superintendent or other authorized representative of the Contractor shall meet with the RSU 18 representative and determine and agree upon quantities of unit price work accomplished and/or completed during the work day.

For payment, once each month the Contractor will prepare a monthly requisition form which shall be signed by both the Inspector and Contractor's representative indicating complete agreement and approval of quantities listed.

These completed forms will provide the basis of the Engineer's monthly quantity estimate upon which payment will be made. Items not appearing on both the Daily Progress Reports and Monthly Progress Summation will not be included for payment. Items appearing on forms not properly signed by the Contractor will not be included for payment.

SCOPE OF PAYMENT

Payments to the Contractor will be made for the actual quantities of Contract items performed and accepted in accordance with the plans and specifications. Upon completion of the construction, if these actual quantities show either an increase or decrease from the quantities given in the Proposal Form, the Contract unit prices will still prevail, except as provided hereinafter.

The Contractor shall accept in compensation, as herein provided, in full payment for furnishing all labor, tools, equipment, testing, cleanup and incidentals necessary to the completed work and for performing all work contemplated and embraced by the Contract; also for all loss or damage arising from the nature of the work, or from the action of the elements, or from any unforeseen difficulties which may be encountered during the prosecution of the work and until its final acceptance by the Engineer, and for all risks of every description connected with the prosecution of the work, except as provided herein, also for all expenses incurred in consequence of the suspension of the work as herein authorized.

The payment of any partial estimate or of any retained percentage except by and under the approved final invoice, in no way shall affect the obligation of the Contractor to repair or renew any defective parts of the construction or to be responsible for all damage due to such defects.

Contractual costs for work not specifically mentioned under a payment item and which are incidental to the overall conduct of the work shall be included in individual items at the Contractor's option. No additional charges shall be made to the Owner for items not specifically mentioned under individual payment items. Examples of these types of costs are, but not limited to, the following: bonds, insurances, mobilization, demobilization, permits, licenses, temporary offices, restoration of disturbed areas, traffic control, temporary facilities, soil erosion, temporary drainage, temporary utilities, temporary water and sewer utilities, surveying, layout, handling of water, erosion during construction and other items similar to the above.

PAYMENT FOR INCREASED OR DECREASED QUANTITIES

When alterations in the quantities of work not requiring supplemental agreement, as hereinbefore provided for, are ordered and performed, the Contractor shall accept payment in full at the Contract price for the actual quantities of work done. No allowance will be made for anticipated profits. Increased or decreased work involving supplemental agreements will be paid for as stipulated in such agreements.

OMITTED ITEMS

Should any items contained in the proposal form be found unnecessary for the proper completion of the work contracted, the Engineer may eliminate such items from the Contract, and such action shall in no way invalidate the Contract, and an allowance may be made at the discretion of the Engineer for items so eliminated in making final payment to the Contractor.

PARTIAL PAYMENT

Partial payments shall be made monthly as the work progresses. All partial invoices and payments shall be subject to correction in the final quantity invoice and payment. Applications shall be made on the enclosed or approved forms.

The partial payments will be based upon invoices prepared by the Engineer or the value of the work performed, and materials complete in place in accordance with the Contract. Payments and retainage shall be as indicated in the general conditions in Section 00700 of this specification.

FINAL PAYMENT

The Engineer shall make, as soon as practicable after the completion of the project, a final quantity invoice of the amount of work performed under the Contract and the value of such work and the Owner shall then pay the entire sum found to be due, after deducting therefrom all previous payments and all amounts to be retained or deducted under the provisions of the Contract may be held by the Owner for a period of sixty (60) days after the completion of the final quantity invoice, or until such time as the Contractor submits satisfactory evidence that all bills for labor and materials used under this Contract have been paid and all required documents submitted to the Engineer.

DESCRIPTION OF PAY ITEMS

The following sections describe the measurement of and payment for the work to be done under the respective items listed in the BIDDER'S PROPOSAL.

Each unit or lump sum price stated in the BIDDER'S PROPOSAL shall constitute full compensation, as herein specified, for each item of the work completed.

Bid Item Descriptions

The following paragraphs describe the bid items included in the Contractor's Bid for this project. Each payment item shall constitute full compensation, as herein specified, for each item as of work completed.

Bid Item No. 1 – Site Clearing, Grubbing and Excavation

This item shall include all labor and materials necessary to remove all existing vegetation and organic material in areas for the proposed storm drain components, walkways, driveways and parking areas. This item shall include but not necessarily be limited to excavation, removal and disposal of all grass and other vegetation, all organic material, all soils required to subgrade elevations as defined on the design plans, and all asphalt and gravel within existing walkways, driveways and parking areas within project scope. The Contractor shall not be allowed to reuse any gravel material excavated from the existing site. Existing asphalt and gravel must be removed from the site and disposed of in accordance with the State of Maine environmental laws. This item shall include any other labor and materials necessary to prepare the site for the construction identified in the contract plans.

Measurement for this item shall be on a lump sum basis for all site clearing, grubbing and excavation, trucking and disposal requirements within the project area. All costs for the labor and materials necessary to perform the tasks noted above are considered incidental to this bid item.

Payment for this bid item shall be at the lump sum price defined in the bid submitted by the Contractor and included in the signed Contract Documents and agreement. Payment shall include full compensation for the work included under this item.

Bid Item No. 2 – 12” dia. HDPE Smooth Bore Storm Drain Pipe

This item includes all labor and materials necessary to provide and install the 12” dia. HDPE Smooth Bore Storm Drain Pipe as described in the specifications and shown on the design plans. This includes but is not necessarily limited to all labor, equipment, cutting of existing pavement for trench excavation, removal and disposal of existing pavement not previously removed under Item No. 1, excavation, installation of piping, fittings, couplings, dewatering the trench, stone bedding, backfilling, surface restoration, cleanup, compaction, coordination with utilities, repair of damage to existing RSU 18 facilities, repair of disturbed utilities, temporary support of existing sports field backstop, temporary removal of existing fence to allow for storm drain pipe, and any other items required to allow for completion of this bid item in accordance with the design plans. This item shall also include furnishing all materials and equipment required to install the riprap plunge pools at the storm drain outlet locations in accordance with the design plans.

Payment for this item will be by the linear foot of pipe actually installed. This will be measured by the linear foot through all fittings to the face of the catch basins. This item will be in full compensation for all piping and fittings installed as per the plans and specifications.

The item will be paid based on the following percentages:

Installation and back filling	90%
As-built Plan Submission	10%

Bid Item No. 3 – 4’ dia. Precast Concrete Catch basins

This item shall include all labor and materials necessary to install the new precast concrete catch basins and F-structures at the locations indicated on the design plans. This shall include but not necessarily be limited to cutting of existing pavement for excavation, removal and disposal of existing pavement, excavation, installation of crushed stone base for new basins to set on, installation of new precast basin sections, installation of butyl rubber, flexible boot connectors, installation of crushed stone for pipe bedding, trench box and other safety requirements, backfill, compaction, furnish and install precast risers for frame and grate, installation of frame and grate, adjustment of frame and grate to proposed pavement surface, and any other labor or materials associated with the installation of the new manholes.

This item shall also include all labor and materials necessary to adjust the existing manhole risers for the existing septic tanks to be flush with the new grading identified on the design plans.

Measurement for this bid item shall be for each basin or F-Structure actually installed. All costs for the labor and materials necessary to perform the tasks noted above are considered incidental to this bid item.

Payment for this bid item shall be at the unit price defined in the bid submitted by the Contractor and included in the signed Contract Documents and agreement. Payment shall include full compensation for the work included under this item.

Bid Item No. 4 – Trench Ledge

This item includes all items necessary to remove the ledge and replace the ledge with fill or crushed stone as described in the specifications and shown on the plans. This includes all labor, materials, and equipment, necessary to remove the ledge as necessary to install the catch basins, F-structures and storm drain pipe as designed. This includes but is not necessarily limited to pre-blast survey inspections and videotaping of all buildings and structures within 500 feet of the blasting operation, use of seismographs to record impact of blasting at key locations such as the existing school, and abutters within the 500 foot radius, drilling, blasting, explosives, excavation and disposal of the ledge, pipe bedding, and backfill material. Any damage done by blasting will be repaired at the contractor’s expense.

Payment for this item will be on a Cubic Yard basis. This item will be in full compensation for all ledge covered under this item. Limits of payment to be 5’-0” wide and to 6” below the bottom of the pipe. Existing pipe trench will be deducted if applicable. Pre-blasting will be allowed if test drilling is done at 10’ intervals to allow a profile to be drawn and agreed upon. Rocks larger than 2 cubic yard will be paid for under this item. Limits of payment for the manholes shall be 2 feet outside of the catch basin or F-structure perimeter.

Bid Item No. 5 – Driveway and Parking Lot Geotextile

This item shall include all labor and materials necessary to install geotextile over the graded subgrade areas of all driveway and parking lot areas. This shall include but not necessarily be limited to furnishing all geotextile and installation in accordance with the manufacturer’s recommendations. This item shall only be installed in areas as directed by the Owner’s representative on site, and shall be based upon the underlying subgrade soils identified during the

excavation and preparation of the subgrade surface. Any geotextile installed by the Contractor not directed in writing by the Owner's representative shall be considered in non-compliance with these specifications and will not be measured or issued for payment.

Measurement for this items shall be per square yard of all prior approved geotextile actually installed. All costs for the labor and materials necessary to perform the tasks noted above are considered incidental to this bid item.

Payment for this bid item shall be at the unit price defined in the bid submitted by the Contractor and included in the signed Contract Documents and agreement. Payment shall include full compensation for the work included under this item.

Bid Item No. 6 – Driveway, Parking Lot and Walkway Gravel

This item shall include all labor and materials necessary to install new gravel aggregate (both base and subbase) for all driveway, parking lot or walkway areas. This item shall include but not necessarily be limited to grading/shaping of subgrade to match finish grades, installation of subbase and base gravel layers in appropriate lifts to ensure 95% compaction requirement is achieved. This shall include but not necessarily be limited to the excavation, trucking, grading of subgrade soils, compaction of shaped subgrade area, furnish and installation of gravel for subbase and base as shown on the plans, grading of gravel layers, compaction of gravel layers with 10-ton roller, provisions for water as needed for compaction efforts (water source not RSU 18 Belgrade School), and any other labor and materials necessary to complete the driveway, parking lot and walkway gravel areas in preparation for pavement and curbing installations.

This item shall also include all labor and materials necessary to relocate the existing buildings indicated on the design plans, including all geotextile and crushed stone to prepare the new building locations. Also included in this item shall be all labor and materials necessary to install the electrical conduit for future use as indicated on the design plans. This item shall also include the crushed stone and shrubbery area including all materials, coordination with the landscape contractor for installation of new trees and shrubbery (supply of trees, shrubbery and the costs of the landscape contractor are not part of this contract). All of these items shall be considered incidental to this bid item.

Measurement for this item shall be on a Cubic Yard basis for all gravel required for this project. All costs for the labor and materials necessary to perform the tasks noted above are considered incidental to this bid item.

Payment for this bid item shall be at the unit price defined in the bid submitted by the Contractor and included in the signed Contract Documents and agreement. Payment shall include full compensation for the work included under this item.

Bid Item No. 7 – Driveway & Parking Lot Base Pavement

This item shall include all labor and materials necessary to install the base permanent pavement required for all driveway and parking lot areas outlined on the proposed plans. This shall include but not necessarily be limited to square cutting of existing pavement edges after the work has been completed, fine grading of gravel surface within the proposed pavement areas, pre-paving compaction with vibratory rollers and watering as needed, bituminous tack coating for existing pavement edges as defined on the plans, installation of the hot bituminous asphalt base pavement

and compaction to the depths indicated in these specifications. This item shall include any pavement rollers, pavement equipment, or any other labor and materials necessary to complete the installation of the pavement within the project area. This item shall also include any pavement necessary after construction of the concrete and granite curbing to ensure that the base pavement extends to the face of curb after installation. This hand pavement to finish the curb installations shall be considered incidental to this bid item.

Measurement for this item shall be per ton of Base pavement actually installed. All costs for the labor and materials necessary to perform the tasks noted above are considered incidental to this bid item. The Contractor shall provide to the Owner pavement slips for each load of pavement delivered to the site. The delivery pavement slips shall be used to verify that the appropriate depth of pavement was installed. Pavement installed greater than the depths indicated on the plans shall be considered incidental to the work under this item. Pavement depths shall be measured in the field by the Engineer. Pavement that does not meet the depths indicated on the design plans shall be removed and replaced with new pavement to the appropriate depth as indicated on the design plans.

Payment for this bid item shall be at the unit price defined in the bid submitted by the Contractor and included in the signed Contract Documents and agreement. Payment shall include full compensation for the work included under this item.

Bid Item No. 8 – Driveway, Parking Lot and Walkway Surface Pavement

This item shall include all labor and materials necessary to install the surface permanent pavement required for all driveway, parking lot and walkway areas outlined on the proposed plans. This shall include but not necessarily be limited to grinding of pavement a minimum of 8 inches onto existing pavement where new pavement abuts existing pavement on Depot Street, bituminous tack coating for existing pavement edges and ground area previously described and as defined on the plans, installation of the hot bituminous asphalt pavement and compaction to the depths indicated in these specifications. This item shall include any pavement rollers, pavement equipment, or any other labor and materials necessary to complete the installation of the pavement within the project area. This item shall also include any shimming of pavement areas necessary to ensure the slopes defined on the finished grades for the project area.

Measurement for this item shall be per ton of surface (finished coat) pavement actually installed. All costs for the labor and materials necessary to perform the tasks noted above are considered incidental to this bid item. The Contractor shall provide to the Owner pavement slips for each load of pavement delivered to the site. The delivery pavement slips shall be used to verify that the appropriate depth of pavement was installed. Pavement installed greater than the depths indicated on the plans shall be considered incidental to the work under this item. Pavement depths shall be measured in the field by the Engineer. Pavement that does not meet the depths indicated on the design plans shall be removed immediately prior to compaction and replaced with new pavement to the appropriate depth as indicated on the design plans.

Payment for this bid item shall be at the unit price defined in the bid submitted by the Contractor and included in the signed Contract Documents and agreement. Payment shall include full compensation for the work included under this item

Bid Item No. 9 – Cast-in-place Concrete Curbing

This item shall include all labor and materials necessary to excavate new base pavement and gravel to prepare for cast-in-place concrete curbing, gravel and compaction after concrete curbing has cured, backfill on the back side of curbing (material dependant on area of curb placement), and any other work necessary to complete the concrete curbing as specified on the design plans. This item shall also include all labor and materials necessary to remove any existing concrete curbing to prepare for connection to new curbing installation, which shall be considered incidental to this bid item.

Measurement for this items shall be per linear foot of curbing actually installed. All costs for the labor and materials necessary to perform the tasks noted above are considered incidental to this bid item.

Payment for this bid item shall be at the unit price defined in the bid submitted by the Contractor and included in the signed Contract Documents and agreement. Payment shall include full compensation for the work included under this item.

Bid Item No. 10 – Tapered Granite Curb for Island

This item shall include all labor and materials necessary to excavate new base pavement and gravel to prepare for the tapered granite curb for the separation island as indicated in the design plans. This shall include but not be limited to installation of the slanted granted curbing, forming using 2” x 4” supports as needed to set the curbing, concrete fill support under granite curbing, gravel and compaction after concrete for the curbing has cured, backfill on the back side of curbing and any other work necessary to complete the concrete curbing as specified on the design plans.

Measurement for this item shall be per linear foot of curbing actually installed. All costs for the labor and materials necessary to perform the tasks noted above are considered incidental to this bid item.

Payment for this bid item shall be at the unit price defined in the bid submitted by the Contractor and included in the signed Contract Documents and agreement. Payment shall include full compensation for the work included under this item.

Bid Item No. 11 – Loam and Seed

This item shall include all labor and materials necessary to provide the loam and seeding at the project site for areas that are regraded or disturbed within the project area for this site (not including pavement areas). This shall include but not necessarily be limited to all grading of the disturbed areas, installation of 4 inch layer of loam, compacting of loam with water filled drum, raking of the compacted loam surface (or scarify with weighted chain link fence dragged behind equipment), furnish and installation of all fertilizer, lime and seed as specified, hand raking of the surface as necessary to ensure a smooth lawn area, mulching of the seeded area, and any watering necessary to ensure adequate vegetative growth. The Contractor will be required to return in the spring of 2020 to reseed any areas that do not contain vegetative cover by October of 2019.

Measurement for this item shall be per square yard of loam and seed areas actually installed. All costs for the labor and materials necessary to perform the tasks noted above are considered incidental to this bid item.

Payment for this bid item shall be at the unit price defined in the bid submitted by the Contractor and included in the signed Contract Documents and agreement. Payment shall include full compensation for the work included under this item.

Bid Item No. 12 – Dust Control

This item shall include all labor and materials necessary to provide and maintain dust control within the project area as directed in these specifications. This shall include but not necessarily be limited to the purchase or acquisition of water (RSU 18 Belgrade Elementary School well is not capable of providing water for the construction project), trucking of water to the site as necessary, use of water truck with spray bar to water down the surface, sweeping of any pavement areas, purchase and application of calcium chloride as required for areas if water application is deemed incapable of maintaining dust control (determined by the Owner's representative on site), and any other labor or materials necessary to ensure the dust from the project is maintained to a reasonable level throughout the construction period.

Measurement for this item shall be on a lump sum basis for all dust control requirements within the project area. All costs for the labor and materials necessary to perform the tasks noted above are considered incidental to this bid item.

Payment for this bid item shall be at the lump sum price defined in the bid submitted by the Contractor and included in the signed Contract Documents and agreement. Payment shall include full compensation for the work included under this item.

Bid Item No. 13 – Maintenance of Traffic Control Devices

This item shall include all labor and materials necessary to provide and maintain all traffic control devices such as signs, cones, flaggers, and barricades as required for the project area. This shall include but not necessarily be limited to the installation of construction signs as indicated in these specifications. All signing shall comply with the latest edition of the Manual on Uniform Traffic Control Devices for Streets and Highways. Also included in this item will be the installation and relocation of cones and barricades as necessary during the construction period to provide a safe working zone for the construction crew as well as the traveling public. All signs and other traffic devices will be maintained throughout the construction period of this project.

This item shall also include any labor and materials required to provide all pavement markings identified on the design plans for the finished asphalt surface. This shall include all directional arrows, parking spaces and handicap parking spaces in accordance with the design plans. This item shall include all labor and materials necessary to install permanent signs for the project, such as "Bus Traffic Only", "One-Way, Do Not Enter" and Handicap parking stall signage as indicated on the design plans.

Measurement for this item shall be on a lump sum basis for all traffic control devices installed for this project area. All costs for the labor and materials necessary to perform the tasks noted above are considered incidental to this bid item.

Payment for this bid item shall be at the lump sum price defined in the bid submitted by the Contractor and included in the signed Contract Documents and agreement. Payment shall include full compensation for the work included under this item.

Bid Item No. 14 – Temporary Soil Erosion & Water Pollution Control

This item shall include all labor and materials necessary to provide for temporary soil and erosion control for the site. This work shall include all labor and materials necessary to install construction entrance, “Dirt Bags” for catch basins during construction, silt fence, hay mulch, sweeping, and any other means necessary to control the amount of erosion or sedimentation leaving the site. This item shall include not only the installation of the erosion and sedimentation control structures, but shall also include continued maintenance of those items throughout the construction period.

Measurement for this item shall be on a lump sum basis for all temporary soil erosion and water pollution control devices installed for this project area. All costs for the labor and materials necessary to perform the tasks noted above are considered incidental to this bid item.

Payment for this bid item shall be at the lump sum price defined in the bid submitted by the Contractor and included in the signed Contract Documents and agreement. Payment shall include full compensation for the work included under this item.

Bid Item No. 15 – Mobilization

This item shall include all labor and materials necessary to provide mobilization and demobilization of all equipment, materials and other furnishings necessary to successfully complete the project. This shall include but not necessarily be limited to the installation of an office trailer (at the contractor’s discretion), costs for items such as insurance, bonds, and other general contract requirements, and any other mobilization expenses incurred by the contractor in order to set up the resources at the construction site. **The value of this item shall not exceed 10 percent of the total project cost for this project.**

Measurement for this item shall be on a lump sum basis for mobilization to this project area. All costs for the labor and materials necessary to perform the tasks noted above are considered incidental to this bid item.

Payment for this bid item shall be at the lump sum price defined in the bid submitted by the Contractor and included in the signed Contract Documents and agreement. Payment shall include full compensation for the work included under this item.

SECTION 01200

Project Submittals

1200.01 General

A. Construction Schedule:

The Contractor shall submit a full construction schedule for each project. This schedule shall be a bar chart and shall include all items included in the Bid Schedule. The following items are to be a part of this schedule.

1. Payment schedule projected over project construction period.
2. Schedule of values for bid items for use in determining project partial payments.
3. Provide complete sequence of construction by activity.

B. Shop Drawings, Project Data, Samples:

1. Submit six copies of shop drawings, project data and samples for all products, materials and equipment proposed for the completed project, unless otherwise indicated in other sections of this specification
2. Fourteen (14) day review period will be required for shop drawing review.

C. As-Built Drawings: The Contractor shall bring as-built plan markups to monthly meetings for the Owner and Engineer to review and approve.

D. Weekly Progress Sheets: The Contractor shall submit weekly progress sheets which shall include all bid item quantities completed for the week. The forms shall be signed by the Site Superintendent for the Contractor and Engineer.

E. Weekly Complaint Forms: The Contractor shall submit weekly complaint form resolution sheets showing updated progress and anticipated resolution of complaints. Copies of the weekly complaint forms will be attached to the weekly resolution form.

1200.02 Payment

Failure of the Contractor to perform any of the submitted tasks noted above will result in payment withholding of requested payments. Payments will be released once the submittals are received in accordance with these documents.

SECTION 01300

Quality Control

1300.01 General

The Contractor shall be responsible for maintaining all areas of the job site according to OSHA Safety Standards. The Contractor shall maintain a clean work area. All disposable materials such as cardboard, bottles, and other trash shall be picked up and properly disposed of each night.

1300.02 Construction Installation Standards

The Contractor is responsible for ensuring all materials and equipment are installed according to the manufacturer's recommendation, technical specifications included in this document and according to the design plans.

Should the Owner, Engineer or their representative recognize defects in the installation or material installed, the Engineer will notify the Contractor in writing of this defect. The Contractor shall be provided a reasonable amount of time to address the defective condition. The length of this time shall be dependent upon the degree of the problem.

1300.03 Access to the Site

The Owner, Engineer or their representative shall provide the inspection services they deem necessary for the project. The Contractor shall maintain site access at all times for these individuals.

1300.04 Testing

It is the Contractor's responsibility to provide and use only new materials or equipment that meet the requirements of the plans and specifications. Exceptions will only be allowed when specifically directed on the plans. An example of such an exception would be cleaning and reusing existing granite curbing on a road project.

The Engineer may request samples of any materials the Contractor proposes to use. Should the Engineer request such a sample, the Contractor shall provide a sample of the material in sufficient size for the testing. The Owner shall bear all costs for this testing unless in other sections of this document. If, however, the initial testing shows that the material does not meet these specifications, the Contractor shall pay for all additional tests until the material or installation meets the specifications.

SECTION 01400

Product Substitutions

1400.01 General

The Engineer has included in these specifications and design plans materials or equipment which are deemed most suitable for the project. Substitutions for those products shall comply with the requirements listed below.

The Contractor shall submit the shop drawings according to Section 01200. Upon receipt of the shop drawings, the Engineer shall review them in accordance with Section 01200. Should the Engineer determine that the submitted product is not deemed an appropriate equal, the Engineer shall reject the product and state the reasons for the product being rejected.

The Engineer is responsible for reviewing one (1) product substitution. Should the Contractor resubmit another product other than that specified, the Engineer will reserve the right to charge the Contractor a fee to review the second substituted product. The fee will include any time the Engineer has involved in reviewing the second or subsequent substitutions to the specified product.

DIVISION 02000
Site Construction

Site Preparation	02000
Site Cleanup	02020
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SECTION 02000

Site Preparation

2000.01 General

This specification shall include the preparation of the project site for the proposed activity.

2000.02 Shop Drawings

The Contractor shall provide shop drawings indicating:

- Silt fence and other erosion control measures to be used for the project
- Schedule for implementation of erosion control structures in relation to clearing of the area for the proposed activity.

2000.03 Installation

- The Contractor shall appropriately stakeout the facilities and areas to be constructed within the project. All stakeout areas shall be reviewed by the Engineer and the Contractor's foreman prior to initiating the clearing activities.
- All silt fence and other erosion control measures that are noted on the design plans shall be installed prior to clearing of the project site.
- All areas that are to be used for storage of materials or soil shall be appropriately protected with erosion control structures.
- Once erosion control structures are in place, the Contractor may begin to clear the area in question. All trees shall be cut and removed from the project site. All brush piles shall be appropriately disposed of depending upon the requirements of the RSU 18 in which the construction is taking place. Burn permits if received will be posted at the job trailer, and copies will be provided to the Engineer.

SECTION 02020

Site Cleanup

2020.01 General

This specification shall include the cleanup of the project site for the proposed activity.

2020.02 Shop Drawings

The Contractor shall provide shop drawings indicating:

- Supplier of loam to be used on the site.

2020.03 Installation

- The Contractor shall remove any construction materials or debris that is not required for the final product.
- All areas shall be free from trash or other such materials.
- All areas or facilities shall be cleaned, and shall be in a condition which promotes the immediate use of the facility for the intended use.
- Concrete spoils areas used to wash out concrete trucks during construction shall be cleaned up, graded and brought back to the original condition prior to construction of this project. All remaining concrete spoils shall be removed and disposed of in an appropriate manner.
- For piping projects, cleanup shall be maintained along with the pipe installation. The Contractor shall dedicate a portion of time each Friday to ensure that cleanup is being maintained with the installation. Areas shall be rough graded the day of the installation. Fine grading and temporary hay mulching shall take place at the discretion of the Contractor, but at no time shall an area go more than 5 calendar days between initial installation and fine grading and mulching. All driveways affected by the installation shall be regraded and gravel placed to ensure appropriate passage by the inhabitants. At no time will a driveway or entrance be blocked for a period exceeding 12 hours.
- For building projects, the site shall be maintained in a clean manner so as to promote a safe working environment for all employees of the Contractor and subcontractors. Materials to be used during construction shall be maintained in designated areas to maintain this safe working environment.
- All private properties affected by the project shall have their properties brought back to the original condition, unless otherwise indicated on the design plan. The Contractor shall obtain a signature on the foreman's daily logbook indicating that they are satisfied with the cleanup of their properties. All private property issues will be resolved prior to final payment by the Owner.

SECTION 02030

Dust Control

2030.01 General

This specification shall include all labor and materials necessary to provide dust control over the project area site throughout the construction period.

2030.02 Materials

Materials used for dust control shall be either water or calcium chloride.

Water shall be non-brackish water free from oil, acid, injurious alkali or vegetable matter. The Contractor shall make arrangements with the local water utility to use water for dust control.

Calcium chloride shall conform to the requirements of AASHTO M144 (ASTM D98).

2030.03 Construction

Water shall be applied with a tanker truck or other means of equipment that contains a pressure pump and nozzle spray bar.

Water shall be applied periodically throughout the day to maintain dust control.

The Engineer reserves the right to stop work production if the Contractor is not maintaining dust control throughout the day. The work stoppage will exist until the Contractor has satisfactorily watered down the site roadway.

Calcium chloride shall be used when authorized by the Engineer in the project area. Calcium chloride shall be applied by mechanical spreaders or by hand at a rate specified by the manufacturer.

The Contractor may use a mechanized broom sweeper only when the pavement areas being swept have been watered down sufficiently to reduce the dust cloud generated during sweeping.

The Engineer reserves the right to halt the sweeping of a paved roadway section if he/she feels that the Contractor has not sufficiently watered the area before sweeping.

Calcium chloride will not be allowed for use on paved surfaces.

Contractor shall sweep work area at the end of each work day with a power sweeper.

SECTION 02040

Traffic Control

2040.01 Approaches

Approach signing shall include the following signs as per Maine Department of Transportation Construction Traffic Control Details found in “Standard Details, Highways and Bridges”, April 2004 edition.

- Road Work Ahead
- Road Work 1000 Feet
- Road Work 500 Feet with 25 MPH Advisory Speed Plate
- End Road Work

2040.02 Work Areas

At each work site, signs and channelizing devices shall be used as directed by the Engineer.

Signs include:

- End Work Zone Speed
- Work Zone
- Speed Limit Plate
- Fines Double
- Give ‘Em A Break
- Work Area Ahead with 25 MPH Advisory Speed Plate
- Work Area Ahead
- One Lane Road Ahead
- Flagger Sign
- Trucks Entering
- Be Prepared to Stop

Other typical signs include:

- Pavement Ends
- Sidewalk Closed
- Sidewalk Closed Use Other Side
- Pedestrians Pass at Own Risk
- Low Shoulder
- Directional Arrow
- Bump

The above lists of Approach signs and Work Area signs are representative of the Contract requirements. Other sign legends may be required.

The Contractor shall provide a minimum roadway width of 6.7 m (22 feet) for two-way traffic whenever possible and at all times when the Contractor is not working. Where one-way traffic is approved by the Engineer it shall be controlled through work areas by flaggers and the minimum roadway width shall be 3.35 m (11 feet). Flaggers equipped with radios, field telephones or

other means of direct communication shall be used to control one-way traffic during paving operations and at other times when directed.

2040.03 Channelization

Channelization devices shall include the following:

- Type II Barricades
- Vertical Panel Markers
- Drums
- Cones

Channelization devices shall be installed and maintained at the spacing determined by the MUTCD through the work area.

Channelizing devices consisting of drums or barricades at a maximum spacing of 50 feet shall be used in guardrail areas when neither the existing guardrail nor the new guardrail is in place.

2040.04 Paving

When paving operations or shoulder grading leave a three inch or less exposed vertical face at the edge of the traveled way, channelizing devices shall be placed two feet outside the edge of pavement at intervals not exceeding 200 m (600 feet) and a 1200 mm x 1200 mm (48 inch x 48 inch) W8-9 Low Shoulder sign shall be placed at a maximum spacing of 0.8 km (1/2 mile).

When paving operations leave more than a three inch exposed vertical face at the edge of a traveled way, the Contractor shall place shoulder material for a width of at least 4 feet to meet the pavement grade and place channelizing devices as above before the lane is opened to traffic.

SECTION 02110

Common Excavation

2110.01 General

This specification shall include all labor and materials necessary to excavate any materials that are not included in other sections of this technical specification. This includes the removal of such items as pavement, loam, sod and vegetative materials, existing gravel and existing subgrade soils.

2110.02 Shop Drawings

The Contractor shall notify the Engineer in writing of the location selected for depositing the excavated material from the project site. Accompanying the letter must be written authorization from the landowner where the excavated material is to be dumped.

Existing pavement and stumps removed shall be disposed of in a manner which is acceptable to the Department of Environmental Protection standards. The Contractor shall comply with all State and local laws and ordinances for disposal of this material.

2110.03 Material

Common excavation shall consist of the removal of all stumps, existing base and subbase gravel, existing pavement from street and driveways, subgrade material necessary for installation of new sewer main and services, bushes, loam, sand, and any other materials not included in structural excavation necessary for construction of the new project.

Rock excavation shall consist of the removal of solid rock particles from a blasting and drilling operation of trench ledge. Rock excavation shall include the removal of all blasted and partially blasted materials to the grades and elevations required to construct the project as shown on the plans.

2110.04 Construction

The Contractor shall remove and dispose of asphalt for project areas. Existing pavement along Depot Street shall be precut prior to excavation.

The Contractor shall excavate the existing depth of gravel to the subgrade elevations as defined on the design plans.

The removal of materials from the construction area in preparation for the new gravel to be installed as part of this project shall be to the depths and grades specified in the design plans.

The Contractor shall excavate and dispose of all materials in a manner which meets all State and local laws and ordinances.

Unsuitable material, such as soils with a moisture content that prevents adequate compaction, shall be removed to the depths required by the Engineer and disposed of off site in a proper manner.

Should the Contractor locate material within the project area that is found to be contaminated with petroleum products or other such substances, he/she shall immediately halt all excavation from that immediate area and notify the Engineer and the Department of Environmental Protection of the potential contamination. The Contractor is not responsible for the costs incurred from this contamination unless the contamination is previously defined for removal under a separate section of this specification.

SECTION 02120

Common Borrow

2120.01 General

This specification shall include all labor and materials necessary to provide material that shall be used on an embankment or slope outside the roadway and sidewalk limits.

2120.02 Shop Drawings

The Contractor shall provide the Engineer with a letter indicating the location of the selected borrow pit.

2120.03 Materials

Common borrow shall consist of earth, suitable for embankment or side slopes outside the roadway, sidewalk, sewer or water main, or manhole limits.

Common borrow shall not contain any vegetative matter, perishable rubbish or other unsuitable material. Any borrow used in this project area shall not be frozen.

The moisture content shall be no greater than 4 percent above the optimum moisture content. Borrow shall be of sufficient makeup to ensure compliance with compaction requirements of 95% of the optimum density.

All borrow material shall have no rocks greater than 8 inches in diameter.

2120.04 Construction

Common Borrow shall be considered incidental to the sewer main and services construction, and shall be included in said item in sufficient quantity to construct the sanitary sewer system trenches as shown on the plans.

The Contractor shall notify the Engineer in writing of the borrow pit location in the shop drawing process prior to providing borrow material to the site.

Common borrow may be used in areas outside the roadway, sidewalk, sewer trench, or manhole areas to fill in holes created by common excavation efforts or to match areas outside these facilities to existing grade.

2120.05 Testing

The Engineer reserves the right to have the borrow material tested for moisture content if the material is considered too wet to meet compaction standards. The Owner shall pay for the laboratory costs to determine the moisture content.

Section 02130

Backfilling for Pipe Trench

2130.01 General

This specification shall include the requirements necessary to backfill the pipe trench at the locations shown on the design plans. All backfilling shall be completed to the depths and locations as shown on the design plans.

2130.02 Material

- A. **Site Excavated Material:** Site excavated material shall be used as backfill where applicable in the project area. Exceptions to excavated site material use may include but not be limited to :
- Excavated material contaminated with soils or other contaminants, which could adversely effect the final product.
 - Gravel or sand contaminated with silt, clay, loam, or other materials which will reduce it's ability to drain effectively.
 - Site excavated material may not be used in areas designated for aggregate base or subbase for gravel areas as indicated on the plans. These gravel areas shall be constructed using appropriate gravel in accordance with Section 02210.
 - Soils with a large percentage of rock or boulders will not be allowed for use in pipe trenches. Rocks or boulders 12 inches or larger shall be removed and not allowed to remain as backfill in the trench.
- B. **Common Borrow:** Common borrow shall consist of earth suitable for fill areas within the trench. Common borrow shall not contain organic matter or other such undesirable materials that may impact the final product. Common borrow material to be used shall be submitted to the Engineer prior to use. Borrow shall not have a moisture content greater than 4 percent above optimum water content. Common borrow shall not contain boulders and rocks larger than 12 inches in diameter.
- C. **Gravel Borrow:** Gravel borrow shall comply with the gravel requirements as described in Section 02210.
- D. **Crushed Stone:** Crushed stone shall be uniformly graded stone fragments that range in size from ¾" to 1.50" in size unless otherwise specified on the plans. Stone shall be free from organic material, soil, or any other substance that may restrict the permeability of the finished stone layer.
- E. **Structural fill:** Structural fill shall be supplied by an acceptable concrete plant and shall provide appropriate mix of soil and Portland Cement mix to provide for a fill area to eliminate the need for compaction. Structural fill can only be used in areas approved by the Engineer. A mix design for the structural fill will be provided to the Engineer to indicate the weight delineations of the soil and cement for one cubic yard of the material. Sieve anaysis shall be provided on the type of soil to be used in the product.

2130.03 Installation

- Backfill around pipe shall comply with the requirements described in the specific sections for watermain, gravity sewer main, sewer forcemain, underdrain or storm drain.
- Backfill of the pipe shall be in lifts no greater than 12 inches, unless the Contractor can prove to the Engineer by means of field testing of compaction equipment, that the lift compacted greater than 12 inches meets or exceeds a compaction of 95 percent of the field dry density. Any site testing to prove the increase in the allowed lift depth shall be paid by the Contractor. The Contractor shall have an independent testing consultant perform the nuclear density field tests on the compacted materials. The full report of the optimum density and field testing shall be provided to the Engineer prior to acceptance of the greater depth.
- Crushed stone and base gravel shall be installed in lifts no greater than 12 inches, and shall be compacted with a sheepsfoot vibratory compactor or approved compaction equipment. The first lift to be compacted will be 1 foot above the top of the pipe.
- The owner shall hire a certified laboratory to determine the proctors of each of the materials to be used on the site. The proctors will be identified and provided to all associated parties. The owner shall then have a soil technician visit the site at random periods to check density of the material in place. Any areas not meeting 95 percent of the optimum density shall be logged and reported to the contractor. These areas shall be excavated to a depth of a passing compaction result, or to the original grade, whichever is encountered first. All costs for excavation, recompaction, regrading, and the time for the soil technician (other than the initial test), shall be the responsibility of the contractor.

SECTION 02210

Aggregate Subbase and Base

2210.01 General

This specification shall include all labor and materials necessary to install the aggregate subbase and base in the areas shown on the plans. All aggregate subbase and base materials shall comply with this specification unless otherwise specified on the plans.

2210.02 Shop Drawings

The Contractor shall provide a sieve analysis of the material to be used as aggregate subbase and base for the project. The sieve analysis shall be performed by a third party testing laboratory approved by the Engineer. Samples shall be taken at the gravel pit proposed for use on the project. Three samples shall be taken in the pit to ensure uniform compliance with this specification.

The Contractor shall also have the independent testing laboratory complete a modified proctor test on the subbase and base material.

The Contractor shall provide the Engineer with six copies of the laboratory testing results for the subbase and base. The Engineer will return four copies to the Contractor after review.

2210.03 Quality Assurance

Subbase aggregate to be used on the project shall conform to the following gradation:

<u>Sieve Designation</u>	<u>Percentage by Weight Passing</u>
½ inch	35-80
¼ inch	25-65
No. 40	0-30
No. 200	0-7.0

Base aggregate to be used on the project shall conform to the following gradation:

<u>Sieve Designation</u>	<u>Percentage by Weight Passing</u>
½ inch	45-70
¼ inch	30-55
No. 40	0-20
No. 200	0-6.0

All subbase and base aggregate shall be comprised of hard durable particles free from vegetative matter, lumps or balls of clay or other deleterious substances.

Base aggregate shall contain particles which will pass a 2-inch square mesh sieve.

Subbase aggregate shall contain particles which will pass a 6-inch square mesh sieve.

2210.04 Installation

The Contractor shall install all aggregate in lifts no greater than 12 inches.

The Contractor shall remove particles which are not allowed as discussed above, such as lumps or balls of clay or deleterious materials.

The Contractor shall provide the necessary compaction equipment such as a vibratory roller or sheepsfoot roller to provide adequate compaction. The compaction equipment shall be in operation at all times during installation of base or subbase aggregate. The Engineer reserves the right to temporarily suspend the installation of aggregate if the compaction equipment is not present or operating effectively.

All aggregate subbase and base material installed shall be compacted to 95% of the optimum density as determined by the modified proctor. The Contractor is responsible for providing water or any other means to increase compaction to meet requirements.

For an existing roadway with traffic considerations, the Engineer will allow the Contractor to install the aggregate on half of the full width to allow traffic to be maintained through the project site.

The Contractor shall ensure that the desired compaction is consistently achieved through the full width and depth of the aggregate courses.

Once the Contractor has successfully installed the subbase course to the desired depth and density, the Contractor shall immediately install the base course. The subbase course shall not have traffic running over the newly installed aggregate course.

The Contractor is fully responsible for removing any aggregate course that becomes contaminated and replacing with the specified materials.

2210.05 Testing

The Contractor shall have all base and subbase aggregate tested for sieve gradation and modified proctor test by a third party independent laboratory.

The Contractor shall provide one (1) day of onsite testing of the aggregate installation and compaction process. The same third party independent testing company that performed the initial modified proctor tests and sieve gradations shall perform the on-site testing.

The third party testing company shall provide density testing at locations selected by the Engineer. The Contractor shall provide whatever means are necessary to ensure compaction requirements to the above-specified levels.

The Engineer may at any time request the independent laboratory to make another site visit if the Engineer deems the compaction is not meeting specified levels. Should the Engineer request an additional site visit, the Contractor must immediately schedule the visit and notify the Engineer in writing of the scheduled visit. If the compaction densities are found to be at or above the specified 95%, the Owner shall pay for the on-site testing laboratory time for that day. If however, more than 10% of the tests taken fail the compaction specifications, the Contractor will

be responsible for rectifying the compaction of the aggregate material, and shall pay for the third party independent laboratory testing for that day.

SECTION 02230

Stone Rip Rap

2230.01 General

This specification includes all labor and materials necessary to install stone riprap in all areas, within ditches and for plunge pools at culvert outlets at the locations directed on the design plans.

2230.02 Shop Drawings

The Contractor shall provide to the Owner the supplier of the stone for use in riprap areas.

2230.03 Materials

Stone for riprap shall consist of hard, durable rock that will not disintegrate by exposure to water or weather. Stone for riprap shall be angular and rough. Rounded, subrounded or long thin stones will not be allowed. The maximum length to width ratio for the stone shall be 3:1. Stone for riprap may be obtained from quarries or by screening oversized rock from earth borrow pits. The minimum stone size shall have an average dimension of 5 inches. The maximum stone size shall have an average dimension of 12 inches. Larger stones may be used if approved by the Engineer. Fifty percent of the stones by volume shall have an average dimension greater than 9 inches.

2230.04 Installation

Stones for riprap shall be placed upon properly graded ground, according to the elevations shown on the design plans.

Stone riprap shall be installed to the depths indicated on the plans, with the top of the stone riprap being the finished grade elevations. Riprap shall be machine placed to the line and grade required, without special handling or handwork.

Stones for riprap shall be placed in the location required in a well-knit, compact uniform layer. Larger stones shall be chinked with small stone or secured in place with spall to fill in voids around the larger stones.

Stones shall be comprised of the same source.

Stones shall be placed in close contact with the longer axis perpendicular to the plane of the slope to stagger joints. Larger stones shall be placed at the base of the slope.

Stone riprap areas are to be compacted with the use of an excavator bucket to ensure that the stones are jammed into place and appropriately secured.

SECTION 02400

Loam and Seed

2400.01 General

This specification includes all labor and materials necessary to install loam and seed in all areas, outside the pavement, gravel and sidewalk areas, that are disturbed during construction.

2400.02 Shop Drawings

The Contractor shall provide a small sample of the loam to be used on the site to the Engineer. The Contractor shall notify the Engineer in writing of the percentage of sand by volume that has been added to the loam.

The Contractor shall provide the seed mixture specifications for the seed intended for use on the site. The Contractor shall provide the Engineer with six copies of the seed specification for each seeded area use (ex. ditchline vs, embankment/slope).

2400.03 Material

Loam shall be loose and friable, and shall not contain roots, stones, or other undesirable material which could effect the future growth of grass and mowing capabilities. The loam shall also be free of roots, weeds or rhizomes of “witch grass” or other undesirable grasses. All loam to be used within the project area shall be screened.

Seed mixture specification shall be determined based upon the area of concern. Seed shall conform to the following specifications:

Ditches, Drainageways or Channels

Mowed areas

Creeping Red Fescue – 0.46 lbs /1000 sq. ft.
Redtop – 0.05 lbs / 1000 sq. ft.
Tall Fescue – 0.46 lbs / 1000 sq. ft.

Non-mowed areas

Creeping red Fescue – 0.45 lbs /1000 sq. ft.
Redtop – 0.05 lbs / 1000 sq. ft.
Crownvetch – 0.34 lbs / 1000 sq. ft.

Roadside Slopes (Lawns)

Mowed areas

Kentucky Bluegrass – 0.46 lbs / 1000 sq. ft.
Creeping Red Fescue – 0.46 lbs per sq. ft.
Perennial Ryegrass – 0.11 lbs / 1000 sq. ft.

Non-mowed areas

Red Canary Grass – 0.34 lbs / 1000 sq. ft.
Redtop – 0.11 lbs / 1000 sq. ft.
Birdsfoot Trefoil – 0.23 lbs / 1000 sq. ft.

Fertilizer shall be applied to all areas at a rate of 18.4 lbs per 1000 square feet. The fertilizer shall be a 10-20-20 (N-P205-K20) blend.

Lime shall be ground limestone (equivalent to 50% calcium plus magnesium oxide) and shall be applied at a rate of 3 tons per acre.

Mulching – See Section 02410

2400.04 Construction

The Contractor shall grade all areas defined in the design plans to require loam and seed. Loam shall then be applied to a depth of 4 inches. A variance of ½ inch in depth will be allowed for application of the loam.

Once loam is spread, the Contractor shall spread fertilizer and lime into the soil with hand rake, disc, or springtooth harrow or other suitable equipment to the full depth of the loam. Once the fertilizer and lime are adequately worked into the loam, the Contractor can roll the area to firm up the seedbed area.

The Contractor shall apply the seed uniformly over the entire site area using the seed mixtures specified earlier in this specification. Seed can be spread with a broadcast spreader, by hand, or any other suitable equipment that provides a uniform seed spread over the entire area.

The area shall then be mulched according to the Mulching specification in Section 02410.

The Contractor shall be responsible for watering the seeded areas in lawn locations and other mowed areas. Watering shall be performed daily in the morning if needed. Watering shall continue until a vegetative cover has been established.

SECTION 02410

Temporary and Permanent Mulch

2410.01 General

This specification shall include all labor and materials necessary to provide temporary and permanent mulch as required to promote erosion and sedimentation control of the project areas during and after construction activities.

2410.02 Shop Drawings

The Contractor shall indicate in writing to the Engineer the type of mulching to be provided at areas within the project area.

2410.03 Materials

Temporary mulching shall consist of an organic straw mulch. The organic mulch shall be free of weed seeds, coarse materials, and other undesirable seeds and materials.

Permanent mulching shall consist of plant residue such as wood chips or crushed stone that resists decomposition and can be applied directly to a prepared soil surface where vegetative stabilization is either impractical or not desired.

Wood chips shall be green or air dried and free of objectionable coarse material.

Crushed stone shall be washed, ¼ inch to 2½ inch in size, and shall be placed on protective plastic filter cloth to prevent germination of weed seeds or other vegetation.

2410.04 Construction

Temporary mulch shall be applied to disturbed areas treated with loam, seed lime and fertilizer. Mulch shall be applied at a rate of 90 lbs per 1000 square feet. The surface which mulch is being applied to shall be lightly covered.

Mulch shall be tacked down after initial application with water or other chemical applications. The Contractor can also use a mulch anchoring tool or disc to secure the mulch in place until a vegetative growth is established.

Wood chips used for permanent mulch shall be applied at a rate of 500-900 lbs per 1000 square feet.

Crushed stone used for permanent mulching shall be applied on top of a plastic filter cloth at a rate of 9 cubic yards per 1000 square feet.

The Contractor is required to maintain all temporary mulch over seeded areas until grass growth is established. Mulch may need to be reapplied as needed.

Temporary mulch shall also be applied to any disturbed areas within 100 feet of a lake, pond, river, stream or wetland before any storm event. Mulching shall be provided to disturbed areas

within 7 days of soil disturbance if the area is in an extremely sensitive area (such as within 100 feet of rivers, streams, wetlands and in lake and pond watersheds).

All other areas will require temporary mulching within 30 days of the initial soil disturbance. The Engineer reserves the right to require the Contractor to temporarily mulch areas within the project site if said areas are determined to require such treatment in order to prevent excessive soil erosion or sedimentation.

SECTION 02500 **Asphalt Pavement**

2500.01 General

This specification shall include the requirements necessary to provide permanent pavement to the depths and locations as shown on the design plans.

2500.02 Shop Drawings

Shop drawings for the permanent pavement for this project shall include the following information:

- Certified gradation of the plant mix to indicate conformation to the standards as noted below.
- Description of technique used to compact the pavement areas, and historical information from previous projects and test results that indicates this technique will meet the requirements of this specification.

2500.03 Material

- A. **Base Pavement Course:** All base pavement shall be at the depths indicated on the design plans. The base pavement course shall be in compliance with all relevant sections of the most recent Maine Department of Transportation “Standard Specifications for Highways and Bridges” for hot mix asphalt 19 mm pavement.
- B. **Surface Pavement Course:** All surface or wearing course shall be at the depth indicated on the design plans. The surface course shall be in full compliance with all relevant sections of the most recent Maine Department of Transportation “Standard Specifications for Highways and Bridges” for hot mix asphalt 9.5mm pavement.
- C. **Driveway or Sidewalk Course:** All driveways and sidewalk areas shall be installed at a depth of 2 inches unless otherwise indicated on the design plans. The driveway and sidewalk course shall be in full compliance with all relevant sections of the most recent Maine Department of Transportation “Standard Specifications for Highways and Bridges” for hot mix asphalt 9.5 mm pavement.

2500.04 Installation

- Contractor shall regrade the final base gravel course in preparation for pavement. Grades of final base gravel course shall be in accordance with the design plans.
- Contractor shall recut edges of trench areas where the original cut edge was disturbed during construction of the sewer piping and manholes. The Engineer or Owner shall mark out the edges to be recut.
- The Contractor shall prepare the areas to match the existing pavement depth.
- Contractor shall install tack coat on all existing pavement edges within project limits prior to paving.
- Install and compact base pavement course. Protect items such as gate boxes, manholes, and catch basins from the base pavement.
- Raise all valve boxes, manholes, catch basins, and any other structures to finish grade prior to installing the surface course.

- Coordinate with all utilities to be sure all structures are installed to grade in preparation of the surface course.
- Apply tack coat to existing pavement edges prior to paving final surface coat.
- Provide appropriate compaction of surface course to ensure compliance with Maine Department of Transportation specifications.

Section 02520

Stabilization Geotextile for Parking Lots and Driveways

2520.01 General

This specification includes all labor and material necessary to install the stabilization geotextile material on shaped subgrade soils in preparation for associated subbase and base aggregate material necessary to complete the installation at the locations indicated on the design plans.

2520.02 Shop Drawings

The Contractor shall submit six copies of the stabilization geotextile shop drawing material to the Engineer for review.

2520.03 Materials

- Stabilization Grid material shall be Mirafi HP370-Series woven High-Performance polypropylene Geotextile as manufactured by TenCate Mirafi or approved equal.
- Mirafi HP 370-Series shall have a wide width tensile strength of 3,600 lbs/foot.
- Meets ASTM D4595, D4884, D4751 and D4491 standards.

2520.04 Construction

- The contractor shall install the stabilization onto shaped subgrade soils in accordance with the manufacturer's recommendation.
- Contractor shall be sure that all sticks or other sharp debris that could create a point load and tear the fabric is removed from the subgrade surface before installation of the geotextile.
- Contractor shall overlap the joints of the geotextile in accordance with the manufacturers recommendation to ensure continuous sheet of fabric over shaped subgrade surface.
- Contractor shall stable or other support the geotextile material in place to ensure shifting does not occur prior to or during installation of the subbase gravel layer.
- Geotextile fabric shall only be installed on the subgrade surface after all piping, conduit and other such materials to be installed below the subbase gravel layer are installed. This is to minimize any potential breaks in the continuous application of the fabric on the subgrade material.

Section 02600 **Granite Curb**

2600.01 General

This specification shall include all labor and materials necessary to install new granite curbing at the locations indicated on the design plans.

2600.02 Shop Drawing

The contractor shall provide six copies of the shop drawing submittals to the engineer. The engineer shall return five copies after review.

2600.03 Material

Granite shall be provided from approved sources. The granite shall be hard and durable and shall be predominately gray in color. The dimensions shall be as indicated on the plans.

All vertical curb shall have a sawed top surface that has deviations of less than 1/8 inch. The front surface (street side) shall be sawed or dressed and pitched straight and true at a right angle to the top surface. The front face shall have deviations no greater than 1/4 inch.

The back surface shall be sawed or dressed and pitched straight and true at a right angle to the top surface. The back surface shall have deviations no greater than 1/4 inch. Curb ends shall be sawed or dressed and shall be at right angles to the top, back and front surfaces.

Curb inlets shall conform to the requirements of granite curbing as noted above, and shall be constructed to the dimensions as indicated on the detail sheet of the plans.

All granite curbing shall be constructed to dimensions of not less than 4 feet, nor greater than 10 feet. All radius curb shall be cut to fit the radius specified on the plans.

Tapered granite curbing shall contain a smooth exposed face with no deviations greater than 1/8 inch. The top, front and side faces shall be at right angles to each other. Slanted granite curbing to be installed on a curve shall be shaped and cut to fit the curve required.

2600.04 Construction

The granite curbing shall be installed on a compacted base and shall be installed so that front face and top face are installed according to the lines and grades indicated on the plans.

The contractor shall install a string line to correctly align the front and top face.

The curbing shall be installed so that the joint between the curbing sections shall be between 1/4 inch and 5/8 inch.

All spaces under granite curbs shall be filled with concrete containing 3,000 psi compressive strength. Concrete shall be allowed to set at least 24 hours prior to initiating backfill. Areas behind the curb, above the concrete support, shall be backfilled with appropriate backfill material and hand tamped for compaction.

Any curbing that has had the surface discolored or otherwise disturbed from its original coloration shall be cleaned and restored to satisfactory condition.

DIVISION 03000

Concrete

Precast Catch Basins, Frames and Grates
Slipform Concrete Curb

03420
03800

Section 03420

Precast Catch Basins, Frames and Covers

3420.01 General

This specification includes the precast products, accessories and installation procedures for providing the precast catch basin and F-Structure installations as shown on the attached plans. All materials and installation procedures shall comply with this specification unless otherwise indicated on the plans.

3420.02 Shop Drawings

The contractor shall provide shop drawings indicating the material to be used for the catch basins required in the design plans. The shop drawings shall include each manufactured product, and shall include appropriate literature indicating that the products meet this specification. Shop drawings shall also include a sketch of the pipe entrances, invert elevations, angle of entrance to the catch basin, and number of barrels and top section as required for each basin installation.

3420.03 Quality Assurance

- A. **Precast Catch Basin Base, Barrel and Top Section** – These components of the basin shall contain a minimum 28-day compressive strength of 5000 psi and shall comply with all requirements set forth in ASTM C478-84 except as altered in this specification. The precast manufacturer shall be responsible for providing assurance to the Engineer that the concrete being supplied meets the above criteria. Compressive strength test results of past structures with the same concrete mix design will be submitted to the Engineer as part of the submittal process. Compressive strength tests may be required for the concrete to be used should the Engineer request such a test. Should these tests be requested, the Engineer shall make concrete cylinders and have those cylinders tested at an independent laboratory. Three cylinders shall be made by the Engineer (two 7 day tests and one 28 day test). Should any of the cylinders fail the compressive strength test, the contractor shall be responsible for that test, as well as any the costs including the Engineers time to resample and laboratory costs. Should the first round of cylinders pass, the owner will be responsible for the costs.

Precast catch basins shall contain a 2 foot sump below the lowest pipe invert. The sump shall be part of the catch basin base of the structure.

- B. **Precast F-Structure Basin** – Precast concrete F-Structures shall contain a minimum 28-day compressive strength of 5000 psi and shall comply with all requirements set forth in ASTM C478-84 except as altered in this specification. The precast manufacturer shall be responsible for providing assurance to the Engineer that the concrete being supplied meets the above criteria. Compressive strength test results of past structures with the same concrete mix design will be submitted to the Engineer as part of the submittal process. Compressive strength tests may be required for the concrete to be used should the Engineer request such a test. Should these tests be requested, the Engineer shall make concrete cylinders and have those cylinders tested at an independent laboratory. Three cylinders shall be made by the Engineer (two 7 day tests and one 28 day test). Should any of the cylinders fail the compressive strength test, the contractor shall be responsible

for that test, as well as any the costs including the Engineers time to resample and laboratory costs. Should the first round of cylinders pass, the owner will be responsible for the costs.

Precast F-Structure basins shall contain a 2 foot sump below the lowest pipe invert. The sump shall be part of the structure.

- C. **Frames and Grates**– Cast iron frames and grates shall be Class 30 and shall conform to the requirements of AASHTO M105. All frames and covers shall be capable of supporting H20 loading. Frames shall be “Standard-Type” unless otherwise indicated on the plans. All grates and frames shall conform to the details indicated in the latest revision of the Maine Department of Transportation “Standard Details, Highway and Bridges”. Acceptable manufacturers shall be:
1. Etheridge Foundry Co.
 2. Neenah Foundry Co.
 3. Approved Equal
- D. **Brick and Mortar** – Brick materials used for adjustment of frame and grate height shall be hard brick and shall comply with ASTM Standard Specification for Sewer Brick. Mortar shall contain cement meeting ASTM C-150 standards. Lime shall meet ASTM C-207 standards, and sand shall meet ASTM C33 standards. Contractor may use precast concrete risers in place of brick riser materials. Precast concrete risers shall be installed with non-shrink mortar provided and recommended by precast supplier.
- E. **Storm water Pipe Connection** – All catch basins and F-structures shall have pre-cored holes for the proposed piping connections to the structure. After the piping is installed in these cored locations, the piping shall be mortared into place using non-shrink grout. The grout used shall be of sufficient structural integrity to prevent soil particles from entering the catch basin from the exterior.
- F. **Precast Joint Connections** – Acceptable manufactures of the Butyl rubber joint sealant shall be:
1. Kent Seal No. 2
 2. Approved Equal

3420.04 Materials

- A. **Precast Catch Basin Base, Barrel and Top Section** – All base and barrel sections shall be four (4) feet I.D. unless otherwise indicated on the plans. Wall thickness for the units shall be no less than 5 inches. All joints shall be Bell and Spigot to ensure watertight connections. Vertical lengths of sections will be as required on the design plans.
- B. **Precast F-Structure** – Precast concrete F-Structure basins shall be of single unit construction and shall contain inner dimensions of 24” x 24”. Wall thickness for the units shall be no less than 6 inches. No joints will be allowed in F-structure basins. Vertical lengths of sections will be as required on the design plans.
- C. **Precast Top Sections** – Precast top sections shall be concentric cone type, 24 inch I.D. at the top and 48 inch I.D. at the bottom unless otherwise indicated on the plans. Full vertical length of the top section shall be 2 feet. Wall thickness shall be no less than 5 inches at the bottom and tapering to no less than 8 inches at the top. Tops shall be Bell and Spigot joints for watertight connection to base and barrel sections.

In instances where the concentric cone top will not be sufficient in shallow depth areas, flat tops may be used in place of the cone tops. Flat tops shall be 4 feet I.D., shall support H₂O loading, and shall be no less than 6 inches thick.

- D. **Pipe Openings** – All openings in the precast manholes shall be constructed at the precast manufacturer's plant and shall be sized to allow pipe sizes as noted on the plans.
- E. **Precast Joint Connections** – All precast joint connections shall be sealed with Butyl rubber gasket sealant. In cold weather applications, the contractor shall use an adhesive recommended by the manufacturer to ensure Butyl rubber gasket seals the joint.
- F. **Frames and Covers** – Frames and grates shall be in conformance with the AASHTO standards as described in the previous section. The frames and grates shall be gray cast iron. Frames shall be constructed with 3 flanges unless otherwise indicated on the plans.
- G. **Brick and Mortar** – Brick shall be hard, regular and uniform in shape and size, and shall comply with the ASTM standards noted in the previous section. The mortar shall consist of 1 part Type II Portland Cement, ½ part Type S hydrated lime, and 4-½ parts natural sand. Contractor may use precast concrete risers supplied by precast suppliers in lieu of brick. Precast risers shall be constructed with 5,000 psi concrete mix design. Mortar shall be the same as indicated above.

3420.05 Installation

- The contractor shall excavate a hole of sufficient size to provide the means for appropriate trench box protection for catch basin installation.
- Contractor shall install a 6-inch deep layer of gravel or crushed stone as a base for the basin to rest on. The base shall be compacted and level as preparation for the precast structure.
- Contractor shall set the base of the basin and verify level and plumb installation of basin at no less than 4 locations on the precast base.
- Contractor shall install 2 rows of butyl rubber sealant per precast joint connection.
- Contractor shall install subsequent sections of barrel and top sections of the basin.
- Install piping into base and barrel sections as required on the design plans. Piping shall protrude no more than 6 inches into the interior of the basin (4 foot clear opening).
- Mortar all pipe entrances in basin with non-shrink grout.
- Backfill basin around pipe inlets with approved native material to the prescribed depth as required on the plans. Install suitable material and compact around basin.
- Leave steel plate capable of supporting vehicular traffic over the top opening until new frame and grate is installed.

3420.06 Acceptance

1. The Engineer shall make a final inspection of the catch basins and F-Structures prior to substantial completion. Any signs of leakage or breaches in the pipe entrances shall be repaired prior to final acceptance of the structure.

Section 03800

Slipform Concrete Curb

3800.01 General

This specification shall include all labor and materials necessary to install new slipform concrete curbing at the locations indicated on the design plans.

3800.02 Shop Drawing

The contractor shall provide six copies of the shop drawing submittals to the engineer which shall include the following:

1. Concrete mix design submission showing weights of Portland Cement, aggregates, admixtures and water cement ratio.
2. Certified laboratory test reports showing compliance with mix design and compressive strength
3. Product data on all admixtures

3800.03 Quality Assurance

All slipform concrete curbing shall comply with provisions of ACI 301.

3800.04 Materials

Concrete shall be composed of homogeneous mixture of Portland Cement or Portland Cement with Fly Ash, Silica Fume, fine aggregate, coarse aggregate, water and admixtures proportioned in accordance with these Specifications.

Concrete mix design for slipform concrete curbing shall have a minimum compressive strength of 4,000 psi, a maximum coarse aggregate size of $\frac{3}{4}$ " , air entrainment of 6%, a maximum slump of 4.5" , and a maximum water cement ratio by weight of 0.45.

- A. **Cement:** Portland Cement shall be Type II and shall conform to AASHTO M 85 standards.
- B. **Aggregate:** All aggregate shall conform to ASTM C33 standards. Coarse aggregate shall be hard, durable crushed stone. Fine aggregate shall be clean, hard, and durable sand. The sand shall not contain silt, loam or clay particles or other such material which will contaminate the concrete mixture.
- C. **Water:** All water added to the concrete mix shall be clean and free of oil, salt, acid, alkali, sugar, vegetation, or other deleterious substances that would negatively impact the finished concrete product.
- D. **Admixtures**
 - Water Reducing Admixtures shall conform to the requirements of AASHTO M 194, Type A.
 - Air entraining admixture shall conform to the requirements of AASHTO M 154.
 - High Range, Water Reducing, Chemical Admixture shall conform to the requirements of AASHTO M 194, Type F.
 - Set-retarding Chemical Admixtures shall conform to the requirements of AASHTO M 194, Types B or D.

- Curing materials shall conform to the requirements of AASHTO M 171. Liquid membrane-forming compounds shall conform to the requirements of AASHTO M 148.
- Fly Ash shall conform to the chemical and physical requirements of AASHTO M 295, Class F fly ash.
- Calcium Nitrite Solution, Chemical Admixture shall conform to the requirements of AASHTO M 194, Type C.
- Silica Fume shall conform to the chemical and physical requirements of AASHTO M 307.

3800.05 Construction

The concrete curbing shall be installed on a compacted gravel base and shall be installed so that front face and top face are installed according to the lines and grades indicated on the plans.

Slipform concrete curbing shall not be installed against frozen surfaces. Any frost, ice, and snow shall be removed from all material that will be in contact with fresh concrete.

Placing of concrete curbing shall be discontinued when the atmospheric temperature is below 36 deg. F in the shade, and shall not be resumed until the atmospheric temperature is at least 36 deg F in the shade and rising.

Concrete may be placed with an approved slipform machine that will produce a finished product in accordance with the design plans.

Slipform concrete curb shall be properly cured through the use of a curing compound spray that meets ASTM C309 related specifications.

Expansion joints shall be provided at ends of curve radii or wherever the curb meets rigid structures such as building foundations. Contraction joints shall be placed at 10 foot intervals using sawing methods, which between 1" – 3" into the concrete curb. Joints shall be constructed perpendicular to the subgrade and match other joints in roadways, sidewalks, or other applicable adjacent structures.

All vertical curb shall have a top surface that has deviations of less than 1/8 inch. The front face shall have deviations no greater than 1/4 inch.

Slipform concrete curbing shall be adequately protected from damage after placement. The concrete shall be allowed to cure for at least 72 hours (at temps greater than 36 deg. F). During cold weather conditions, curbing shall be protected when atmospheric temperatures drop below 36 deg. F by concrete blankets.

Areas behind the curb shall be backfilled after the 72 hour curing period with appropriate backfill material and hand tamped for compaction.

Any curbing that has had the surface discolored or otherwise disturbed from its original coloration shall be cleaned and restored to satisfactory condition.

DIVISION 15000
Mechanical

HDPE Storm Drain Pipe

15150

Section 15150 **HDPE Storm Drain**

15150.01 General

This specification includes the HDPE Storm Drain, accessories and installation procedures for providing the HDPE Storm Drain as shown on the attached plans. All materials and installation procedures shall comply with this specification unless otherwise indicated on the plans. All piping shall be complete, including fittings, connections to existing structures, and other miscellaneous items of work.

15150.02 Shop Drawings

The contractor shall provide shop drawings indicating the material to be used for the HDPE Storm Drain required in the design plans. The shop drawings shall include each manufactured product, and shall include appropriate literature that the products meet this specification.

15150.03 Materials

- A. **Pipe** - HDPE pipe, of the sizes shown on the plans shall be ADS N-12 WT IB pipe (per AASHTO) or approved equal. Pipe shall meet AASHTO M294, Type S or ASTM F2306. HDPE shall have a smooth interior and annular exterior corrugations.
- B. **Pipe Joints** - Pipe shall be joined using a bell & spigot joint meeting the requirements of AASHTO M252, AASHTO M294, or ASTM F2306. The joint shall be watertight according to the requirements of ASTM D 3212. Gaskets shall meet the requirements of ASTM F477. Gaskets shall be installed by the pipe manufacturer and covered with a removable, protective wrap to ensure the gasket is free from debris. A joint lubricant available from the manufacturer shall be used on the gasket and bell during assembly. 12- through 60-inch (300 to 1500 mm) diameters shall have an exterior bell wrap installed by the manufacturer. No glued joints will be allowed in any form. Any joint, which is not properly made, shows signs of leakage, or is any way defective, shall be replaced to the satisfaction of the Engineer.
- C. **Fittings** - Fittings shall conform to AASHTO M252, AASHTO M294, or ASTM F2306. Bell and spigot connections shall utilize a spun-on or welded bell and valley or saddle gasket meeting the watertight joint performance requirements of AASHTO M252, AASHTO M294, or ASTM F2306.
- D. **Standard Accessories** - pipe will be furnished with gaskets pre installed and lubricants for installation.

15150.04 Installation

- Contractor to inspect each pipe and fitting prior to installation to insure: the gasket is properly adhered to the bell of the pipe, the pipe is straight within 1/16" end to end, the pipe is of proper shape within 5% of round, cracks or any other damage. If a pipe is found to not pass the inspection the pipe will immediately be removed from the site.
- Pipe shall be assembled in strict accordance with the manufacturers instructions and as described below:

- a) Thoroughly clean the groove and bell socket and the gasket, make sure that gasket is correctly seated.
 - b) After cleaning dirt or foreign material from the plain end, apply lubricant in accordance with the pipe manufacturers recommendations. The lubricant is supplied in sterile cans and every effort shall be made to keep it sterile.
 - c) When pipe is cut in the field, bevel the plain end with a heavy file, grinder or pipe saw to remove all sharp edges. Push the plain end into the bell of the pipe. Keep the joint straight while pushing.
 - d) Most sizes of pipe can be pushed into the bell socket with a long bar. Large pipe may require additional power, such as a pipe jack, or lever puller. The pipe supplier may provide a pipe jack or lever puller on a rental basis. A Timber header should be used between the pipe and jack to avoid damage to the pipe.
- The contractor shall excavate a hole of sufficient size to provide the means for appropriate trench box protection for pipe installation.
 - Contractor shall excavate to a point at least 6-inches below the pipe to accommodate the ¾" crushed stone bedding material. This material is to extend from 6" below the pipe to 6" above the pipe.
 - All excavations are to be kept dry while pipe is being installed and until each joint and pipe has been observed by the Engineer, and approval given to commence backfilling operations.
 - The Contractor shall not allow the centerline of the pipe to deviate more than 1/16" horizontally from the line between the two manholes it is being installed on. The pipe shall not deviate more than .02' vertically from the designed grade in the total pipe run from manhole to manhole. Any pipe, which is not installed to grade and alignment, shall be reinstalled to the satisfaction of the Engineer.
 - Foreign material shall be prevented from entering the pipe during installation. No debris, tools, clothing or other material will be placed in the pipe at any time. Temporary pipe plugs shall be used at all times when work is in progress, the open end of the pipe shall be closed at all times by means of a water tight plug or other means acceptable to the Engineer. When practical the plug shall remain in the place until the trench is pumped completely dry. If in the Engineers opinion the Contractor has not kept debris out of the pipe the contractor will be required to clean the pipe to the Engineers satisfaction. Care must be taken to prevent pipe flotation should the trench fill with water.
 - If the contractor over excavates, the pipe will be brought to grade with crushed stone. No other material will be allowed under the pipe.
 - No pipe installation will be allowed to begin at any point other than a catch basin/manhole or other appurtenance without the expressed consent of the Engineer.
 - To assure watertightness, field performance verification may be accomplished by testing in accordance with ASTM F2487.