

FRENCH LANDING DOCK RENOVATION

Van Buren Township, Michigan

SPECIFICATIONS

PEA Group

Job No.
23-0010

August 8, 2023

Charter Township of Van Buren
French Landing Dock Renovation
Project Number 23-0010

INFORMATION SHEET

OWNER: Charter Township Of Van Buren
46425 Tyler Road
Van Buren Township, Michigan 48111

SITE LOCATION: 12090 Haggerty Road
Van Buren Township, Michigan

SCOPE OF WORK: Selective Demolition, Dock Construction including, but not limited to footings, support structure, decking, railing, lighting, shore stabilization and restoration

WORK BY OTHERS: None

SCHEDULE: Commence: On or Before September 25, 2023
Completed by: December 29, 2023

NON MANDATORY
PRE-BID MEETING August 22, 2023 @10:00am On-Site

BID DUE DATE: August 30, 2023 @ 1:00pm Eastern Time

DELIVER THREE (3)
COPIES OF BID TO: Charter Township of Van Buren (Clerk's office)
46425 Tyler Road
Van Buren Township, Michigan 48111

ENVELOPE: Sealed and Clearly Labeled:

"BID PROPOSAL FOR FRENCH LANDING DOCK RENOVATION"

SECTION 00 1113 – ADVERTISEMENT FOR BIDS

Charter Township of Van Buren

Charter Township of Van Buren French Landing Dock Renovation

1. RECEIPT OF BIDS

The Charter Township of Van Buren will receive sealed Bids for construction of the Charter Township of Van Buren French Landing Park Improvements at the Office of the Township Clerk, 46425 Tyler Road, Charter Township of Van Buren, MI 48111 until Tuesday, August 30, 2022, at 1:00 p.m., local time. No Bids will be received after that time. Bids will be publicly opened and read aloud in the Denton Room at Township Hall.

The project site is located West of Haggerty Road and South of I-94

Address: 12090 Haggerty Road, Charter Township of Van Buren, MI 48111.

2. SCOPE OF PROJECT

Selective Site Demolition

Field Engineering and Layout

Construction of Dock with Railings and Lighting

3. FINANCING

The Charter Township of Van Buren Township is an equal opportunity employer. This project will be funded by The Charter of Van Buren Township General Fund.

4. ISSUING OFFICE

Bidders should direct questions and correspondence to PEA Group 7927 Nemco Wau, Suite 120, Brighton, Michigan 48116. Attention: Marc Russell. Mobile Number : 248-231-0895. Email: mrussell@peagroup.com

5. OBTAIN BIDDING DOCUMENTS

Bid Documents will be available commencing August 8, 2023 @ 2:00pm on the Michigan Inter-governmental Trade (MITN) website:

<https://www.bidnetdirect.com>

Obtaining Bidding Documents from any source not identified herein may result in failure to receive addenda, corrections, or other revisions that may be issued.

7. BID SECURITY

Bid security in the amount, form and subject to the conditions provided in the Instructions to Bidders must be submitted with each Bid.

8. WITHDRAWAL OF BIDS

Bids may not be withdrawn for a period of 60 days after the actual date of opening thereof. This time period may be extended by mutual agreement of the Owner and any Bidder or Bidders.

9. RIGHT TO REJECT BIDS

The Charter Township of Van Buren reserves the right to waive any irregularities, reject any and all bids and reserves the right not to award a contract.

10. PREBID CONFERENCE

A **NON-MANDATORY** pre-bid conference be held on-site August 22, 2023 at 10:00am local time. The bidding contractors shall visit the project site and assess construction access and construction means and methods necessary to remove the existing dock structure, decking, railing and footings and install a new dock complete with foundations, support structure, decking, railing, lighting and shore stabilization.

11. ON-SITE LABOR

This is not a prevailing wage job.

END OF SECTION 00 1113

SECTION 00 2113 – INSTRUCTIONS TO BIDDERS

ARTICLE 1 – DEFINED TERMS

1.01 Terms used in these Instructions to Bidders will have the meanings indicated in the General Conditions (Standard General Conditions of the Construction Contract, EJCDC, No. C-200, 2007 edition) and the Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below which are applicable to both the singular and plural thereof:

- A. Issuing office – the office identified in the Advertisement for Bids, 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 Bidding Documents may be obtained as indicated in the Advertisement for Bids.

2.02 Complete sets of Bidding Documents must be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretation 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 on the Work and do not authorize or confer a license or grant for any other use.

ARTICLE 3 – QUALIFICATIONS OF BIDDERS

3.01 Each Bid shall contain evidence of Bidder's qualification to do business in the state where the Project is located, or Bidder must covenant to obtain such qualification prior to award of the Contract.

3.02 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

3.03 To demonstrate Bidder's qualifications to perform the Work, within 5 days of Owner's request Bidder shall submit written evidence of:

- A. Financial data, previous experience, present commitments, workers' compensation experience modification rating (EMR) and other such data as may be requested by Owner.
- B. Previous experience in constructing at least 3 projects of a similar type, comparable size and comparable complexity within the past 5 years.

3.04 When so requested, Bidder shall meet with Owner's representatives and give further information in order to determine Bidder's qualifications, responsibility, and ability to perform and complete the Work in accordance with the Contract Documents.

3.05 Owner reserves the right to reject any Bid if the evidence submitted by, or investigation of, a Bidder fails to satisfy Owner that the Bidder is properly qualified to carry out the obligations of the Contract and to complete the work contemplated therein.

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 known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site.
2. Those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).

B. Copies of reports and drawings referenced in Paragraph 4.01.A will be made available by Owner to any Bidder on request at the cost of preparation, reproduction, and shipping. 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 indicated in the Bidding Documents with respect to existing Underground Facilities at or contiguous to the Site are 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 any reports and drawings known to Owner relating to a Hazardous Environmental Condition identified at the Site.

B. Copies of reports and drawings referenced in Paragraph 4.03. A will be made available by Owner to any Bidder on request at the cost of preparation, reproduction and shipping. 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, if any, furnished to prospective Bidders with respect to subsurface conditions, other physical conditions and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated subsurface or physical conditions appear in Paragraphs 4.02, 4.03, and 4.04 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work appear in Paragraph 4.06 of the General Conditions.

4.05 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, 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 the Supplementary Conditions and Division 01 Section "Summary of Work," 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, if any, (other than portions thereof related to price) for such other work.

4.07 Paragraph 6.13.C of the General Conditions indicates that if an Owner safety program exists, it will be noted in the Supplementary Conditions.

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

A. examine and carefully study the Bidding Documents, and the other related data identified in the Bidding Documents.

B. visit the Site and become familiar with and satisfy Bidder as to the general, local and Site conditions that may affect cost, progress, and performance of the Work;

C. become familiar with and satisfy Bidder as to all federal, state and local Laws and Regulations that may affect cost, progress, 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 relating to existing surface or subsurface structures at the Site (except Underground Facilities) that have been identified in Paragraph 4.02 of the Supplementary Conditions as containing reliable "technical data," and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in Paragraph 4.06 of the Supplementary Conditions as containing reliable "technical data;"

E. consider the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Bidder's safety precautions and programs;

F. agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price(s) bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;

G. become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;

H. 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

I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work.

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

ARTICLE 5 – PREBID CONFERENCE

A NON-MANDATORY meeting will be held on August 22, 2023 @ 10:00am local time at French Landing Park located at 12090 Haggerty Road, Charter Township of Van Buren, MI 48111

ARTICLE 6 – SITE AND OTHER AREAS

6.01 The Site is identified in the Bidding Documents. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by Owner unless otherwise provided in the Bidding Documents. 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 directed to Engineer in writing. Interpretations or clarification 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 3 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 with affixed seal made payable to Owner in an amount of 5% of Bidder's maximum Bid price and in the form of a certified check, bank money order, or a Bid bond issued by a surety meeting the requirements of paragraphs 5.01 and 5.02 of the General Conditions. Facsimile, telegraphic, or other electronically transmitted Bid Security or Bid bonds submitted with the Bid will be considered provided that, within 48 hours after the time for receipt of Bids, the original Bid bond form with the original signature and original required attachments are received by Engineer. Attorneys-in-fact who execute the Bid Security or Bid bond on behalf of the Surety shall affix to the bond a certified and current copy of the power of attorney.

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 10 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults. The Bid security of other Bidders whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of 7 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 15 days after the Bid opening.

ARTICLE 9 – CONTRACT TIMES

9.01 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, if any, are set forth in the Agreement.

ARTICLE 11 – SUBSTITUTE AND "OR EQUAL" ITEMS

11.01 The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration of possible substitute or "or equal" items.

11.02 Whenever materials or equipment are specified or described in the Bidding Documents by using the name of one or more Suppliers, the Bid shall be based on providing the materials or equipment of one of the Suppliers named.

11.03 Whenever it is specified or described in the Bidding Documents that a substitute or "or equal" item of material or equipment may be furnished or used by Contractor if acceptable to Engineer, application for such acceptance will not be considered by Engineer until after the Effective Date of the Agreement. The procedure for submission of any such application by Contractor and consideration by Engineer is set forth in paragraph 6.05 of the General Conditions and may be supplemented in Division 01 - General Requirements.

ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS AND OTHERS

12.01 If the Supplementary Conditions require, or if Owner requests, 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 2 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 qualifications 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 an acceptable substitute, in which case the apparent Successful Bidder shall submit an acceptable substitute, Bidder's Bid price will be increased (or decreased) by the difference in

cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.

12.02 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, individuals, or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to revocation of such acceptance after the Effective Date of the Agreement as provided in paragraph 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.

ARTICLE 13 – PREPARATION OF BID

13.01 The Bid form (Proposal 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 listed therein. In the case of optional alternatives, the words “No Bid”, “No Change”, or “Not Applicable” may be entered.

13.03 A Bid by a corporation shall be executed in the corporate name by the president, vice president, or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed, if required by state law, and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be indicated below the signature.

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

13.05 A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be indicated below the signature.

13.06 A Bid by an individual shall indicate the Bidder's name and official address.

13.07 A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid form. The official address of the joint venture shall be indicated below the signature.

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

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

13.10 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be indicated.

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 Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder's state contractor license number, if any, for the state in which the Project is located shall also be indicated on the Bid form.

ARTICLE 14 – BASIS OF BID; COMPARISON OF BIDS

14.01 Basis of Bid

- A. Bidders shall submit a Bid on a unit price basis for each item of Work listed in the Bid schedule.

B. The total of all estimated prices will be determined as the sum of the products of the estimated quantity of each item and the unit price Bid for the item. The final quantities and Contract Price will be determined in accordance with Paragraph 11.03 of the General Conditions.

14.03 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. A separate unbound copy of the Bid form and, if required, the Bid bond form are furnished with each set of Bidding Documents. The Bid form is to be completed and submitted with the Bid security.

15.02 A Bid shall be submitted no later than the date and time prescribed and at the place indicated in the Advertisement for Bids and shall be enclosed in an opaque, sealed package, plainly marked with the Project title and name and address of the Bidder and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation "**BID PROPOSAL FOR FRENCH LANDING DOCK RENOVATION**".

15.03 Bid forms with facsimile or other electronically transmitted signatures will not be considered.

ARTICLE 16 – MODIFICATION AND WITHDRAWAL OF BIDS

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, that Bidder will be disqualified from further bidding on the Work.

16.03 No withdrawal of a Bid shall be permitted on account of mistake or any other reason after the expiration of this 24 hour period.

ARTICLE 17 – OPENING OF BIDS

17.01 Bids will be opened at the time and place indicated in the Advertisement for Bids and, unless obviously nonresponsive, 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, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

ARTICLE 19 – AWARD OF CONTRACT

19.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced or conditional Bids. Owner further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to not be responsible. Owner may also reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project to make an award to that Bidder. Owner also reserves the right to waive all informalities not involving price, time or changes in the Work and to negotiate contract terms with the Successful Bidder.

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

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

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

19.05 Owner also may consider the operating costs, maintenance considerations, performance data and guarantees of materials and equipment proposed for incorporation in the Work when such data is required to be submitted prior to the Notice of Award.

19.06 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals or entities proposed for those portions of the Work in accordance with the Contract Documents.

19.07 If the Contract is to be awarded, Owner will award the Contract to the Bidder whose Bid is in the best interests of the Project.

19.08 If the Contract is to be awarded, Owner will give Successful Bidder a Notice of Award within **5** days after the day of the Bid opening.

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 insurance. When the Successful Bidder delivers the executed Agreement to Owner, it shall be accompanied by the required certificates of insurance (and other evidence of insurance requested by Owner).

20.02 Article 5 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner's requirements as to bonds. When Successful Bidder delivers the executed Agreement to Owner, it shall be accompanied by the required bonds.

ARTICLE 21 – SIGNING OF AGREEMENT

21.01 When Owner issues a Notice of Award to the Successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Agreement bound into the Project Manual with the other Contract Documents which are identified in the Agreement as attached thereto. Within **5** days thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to Owner. Within **5** days thereafter, Owner will deliver one fully signed counterpart to Successful Bidder.

ARTICLE 22 – RETAINAGE AND PROGRESS PAYMENTS

22.01 Provisions concerning retainage and progress payments are set forth in the Agreement.

22.02 Retainages and progress payments will be in accordance with State of Michigan Act 524 of the Public Acts of 1980.

ARTICLE 23 – OWNER FURNISHED MATERIAL

NONE

END OF SECTION 00 2113

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SECTION 00 4143 - PROPOSAL FORM

Name of Bidding Contractor _____

hereinafter referred to as Contractor, declares familiarity with location of proposed work and conditions under which it must be performed, that Drawing(s) and Documents under "Bid Package Table of Contents" have been carefully examined, are understood and accepted as adequate for the purpose, and agrees to Contract with the **Charter Township of Van Buren**, hereinafter referred to as Owner, to perform everything required to be performed and to furnish all labor, materials, tools, equipment, utility, transportation services and supervision necessary to perform and complete, in a satisfactory manner, all work required in conjunction with above named project, and to accept as full payment thereof, subject to additions and/or deletions required by Contract, the sum of Dollars.

TOTAL BASE BID \$ _____.

ANALYSIS OF BID:

Unit Costs submitted for Contract additions/deletions, inclusive of any maintenance and guarantee period not separately listed. Total must equal Base Bid above. Contractor responsible to verify estimated quantity material. All work to be installed complete, as detailed on Drawing(s), within quote Base Bid.

Quantity	Description and Size	Unit Cost	Total Cost
Lump Sum	Mobilization		\$ _____
Lump Sum	General Conditions (Building permit fees and inspection fees will be paid for by the Township)		\$ _____
Lump Sum	Selective Site Demolition, Complete		\$ _____
Lump Sum	Dock Construction Complete (incl. footings, support structure, decking, railing)		\$ _____
Lump Sum	Shore Stabilization and Restoration		\$ _____
Lump Sum	Electrical Complete (incl. dedicated connection to panel and pulling wires, installing and energizing lights and necessary coordination with dock contractor)		\$ _____

TOTAL BASE BID \$ _____

UNIT COSTS

Contractor shall submit **installed** unit prices for items of stated below. Prices shall include all material, equipment, labor, profit and overhead required for the complete installation of the work item. The owner

reserves the right to increase or decrease the Total Base Bid on the basis of the unit prices stated. The owner reserves the right, prior to the bid award to negotiate with the bidder on any or all unit prices listed in this proposal. Contractor 'mark-up' will not be paid in addition to the provided unit prices.

NONE

REQUIRED ALTERNATES

Contractor shall submit **installed** prices for items of stated below. Prices shall include all material, equipment, labor, profit and overhead required for the complete installation of the work item. The owner reserves the right to increase or decrease the Total Base Bid on the basis of the alternate prices stated. The owner reserves the right, prior to the bid award to negotiate with the bidder on any or all alternate prices listed in this proposal. Contractor 'mark-up' will not be paid in addition to the provided prices.

NONE

VOLUNTARY ALTERNATES

Contractor shall submit **installed** prices for items of stated below. Prices shall include all material, equipment, labor, profit and overhead required for the complete installation of the work item. The owner reserves the right to increase or decrease the Total Base Bid on the basis of the alternate prices stated. The owner reserves the right, prior to the bid award to negotiate with the bidder on any or all alternate prices listed in this proposal. Contractor 'mark-up' will not be paid in addition to the provided prices.

1. _____ ADD / DEDUCT: \$ _____
2. _____ ADD / DEDUCT: \$ _____

Contractor acknowledges following addenda covering revisions to Drawing(s) or Specifications;
Cost of such revisions has been included in quoted base bid.

Addendum No. _____ Dated _____

Addendum No. _____ Dated _____

Our subcontractors will be:

Name:	Address:	Specialty:
_____	_____	_____
_____	_____	_____

Bidding Contractor: _____

Complete Address: _____

County: _____ Telephone: (_____) _____

By: _____ Title: _____

Email: _____

Dated this _____ day of _____ 2023

Circle One: Corporation, Partnership, Individual

END OF SECTION 00 4143

SECTION 00 4313 – BID SECURITY FORM

Owner:

Charter Township of Van Buren
46425 Tyler Road
Charter Township of Van Buren, MI 48111

Bid:

Bid Due Date: August 30, 2023 @ 1:00 PM (local time)
Project: Charter Township of Van Buren
French Landing Dock Renovation

Location: 12090 Haggerty Road
Charter Township of Van Buren, MI.

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

Surety (Principal Place of Business):

Bidder:

Surety's Name of and Corporate Seal*

Bidder's Name and Corporate Seal*

Business Street Address*

Business Street Address*

City, State, Zip *

City, State, Zip *

By:_____
Signature
(Attach Power of Attorney)

By:_____
Signature

By:_____
(Print Name*)

By:_____
(Print Name*)

Attest:_____
Signature

Attest:_____
Signature

Title*

Title*

* Typed or printed in ink.

Bond:

Bond Number:_____

Date (Not later than Bid due date):_____

Penal Sum:_____ \$ _____
(Words) (Figures)

Note: (1) Above addresses are to be used for giving required notice.
(2) Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this bond. Payment of the penal

sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this bond shall be Owner's sole and exclusive remedy upon default of Bidder.

2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.

3. This obligation shall be null and void if:

3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or

3.2. All Bids are rejected by Owner, or

3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by paragraph 5 hereof).

4. Payment under this bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this bond and the Project and including a statement of the amount due.

5. Surety waives notice of and 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 indicated on the face of this bond. Such notices may be sent by personal delivery, commercial courier or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.

9. Surety shall cause to be attached to this bond a current and effective Power of Attorney evidencing the authority of the officer, agent or representative who executed this bond on behalf of Surety to execute, seal and deliver such bond and bind the Surety thereby.

10. This bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this bond shall be deemed to be included herein as if set forth at length. If any provision of this bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this bond that is not in conflict therewith shall continue in full force and effect.

11. The term "Bid" as used herein includes a Bid, offer or proposal as applicable.

END OF SECTION 00 4313

SECTION 00 5100 – NOTICE OF AWARD

Dated _____, 2023

TO: _____
(Bidder)

ADDRESS: _____

CONTRACT: Charter Township of Van Buren
French Landing Dock Renovation
12090 Haggerty Road
Charter Township of Van Buren, MI.

You are notified that your Bid dated _____, 2023 for the above Contract has been considered. You are the Successful Bidder and are awarded a Contract for the Charter Township of Van Buren French Landing Park Improvements.

The Contract Price of your Contract is _____ Dollars

(\$_____). Two copies of the proposed Contract Documents as identified in the Agreement accompany this Notice of Award.

You must comply with the following conditions precedent within **2** days of the date of this Notice of Award that is by _____, 2023.

1. Deliver to the Owner two fully executed counterparts of the Contract Documents which accompany this Notice of Award, each of which must bear your signature at the designated location.
2. Deliver with the Executed Contract Documents the Contract security bonds as specified in the General Conditions (Paragraph 5.01), and the Supplementary Conditions (Paragraph SC-5.01).
3. Deliver with the Executed Contract Documents the insurance documents as specified in the General Conditions (Article 5) and the Supplementary Conditions (Article SC-5).

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

Within **2** days after you comply with the above conditions, Owner will return to you one fully executed counterpart of the Contract Documents.

Charter Township of Van Buren

By: _____
(Authorized Signature)

(Name and Title)

Charter Township of Van Buren
French Landing Dock Renovation
Project Number 23-0010

Notice of Award
Section 00 5100

*Typed or printed in ink
Copy to Landscape Architect

END OF SECTION 00 5100

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SECTION 00 5200 – AGREEMENT FORM

THIS AGREEMENT is by and between the Charter Township of Van Buren ("Owner") and _____.

Owner and Contractor hereby agree as follows:

ARTICLE 1 – WORK

1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows: Charter Township of Van Buren French Landing Park Improvements

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: Charter Township of Van Buren French Dock Renovations consisting of: the soil erosion control, demolition, field engineering, earthwork, dock foundation, decking, railing and lighting, and miscellaneous coordination.

ARTICLE 3 – ENGINEER

3.01 The Project has been designed by Hoppe Design, Belleville, Michigan ("Architect") which is to act as Owner's representative, assume all duties and responsibilities, and have the rights and authority referenced in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

ARTICLE 4 – CONTRACT TIME

4.01 TIME OF THE ESSENCE

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

4.02 DATES FOR SUBSTANTIAL COMPLETION AND FINAL PAYMENT

A. The Work will be substantially completed on or before December 15, 2023 and completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions on or before December 29, 2023.

4.03 LIQUIDATED DAMAGES

A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial 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 Eight Hundred Dollars (\$800.00) for each day that expires after the time specified in Paragraph 4.02 above for Substantial Completion until the Work is substantially complete.

B. 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 Eight Hundred Dollars (\$800.00) for each day that expires after the time specified in Paragraph 4.02 above for completion and readiness for final payment until the Work is completed and ready for final payment.

C. Liquidated damages for failure to meet the specified Substantial Completion date and for failure to meet the specified Final Completion date will not be assessed simultaneously.

ARTICLE 5 – CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents, in current funds, at the unit prices stated in Contractor's Bid.

ARTICLE 6 – PAYMENT PROCEDURES

6.01 SUBMITTAL AND PROCESSING OF PAYMENTS

A. A. Payments and retainage of payments shall be in accordance with State of Michigan Act No. 524 of the Public Acts of 1980. Contractor shall submit applications for payment in accordance with Article 14 of the General Conditions. The person representing Contractor who shall submit Application for Payment will be _____. The person to whom Application for Payment are to be submitted is PEA Group, Inc. Attention: Marc R. Russell.

Applications for Payment will be processed by Architect/Landscape Architect 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 during performance of the Work as provided in Paragraphs 6.02. A.1 and 6.02.A.2 below. All such payments will be based on unit prices and number of units completed.

1. Prior to Substantial Completion, progress payments will be in an amount equal to: 90% of the Work completed and 90% of materials and equipment not incorporated in the Work but delivered, suitably stored and accompanied by documentation satisfactory to Owner as provided in Paragraph 14.02 of the General Conditions less the aggregate of payments previously made and less such amounts as Landscape Architect/Engineer may determine, or Owner may withhold, including but not limited to liquidated damages, in accordance with Paragraph 14.02 of the General Conditions, except that Owner will retain a portion of each progress payment limited to:

a. Not more than 10% of the dollar value of the Work completed until 90% of the Work has been completed as determined by Engineer.

b. After the Work has been 90% completed as determined by Landscape Architect/Engineer, additional retainage will not be withheld unless Owner determines that Contractor is not making satisfactory progress, or for other specific cause relating to Contractor's performance under the Contract. If Owner so determines, Owner may retain not more than 10% of the dollar value of the Work more than 90% completed.

2. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 95% of the Contract Price, less such amounts as Landscape Architect/Engineer shall determine, or Owner may withhold, in accordance with Paragraph 14.02.B.5 of the General Conditions.

3. Owner may deduct from progress payments amounts which are due to Owner from Contractor in accordance with the Contract Documents.

4. After Substantial Completion, Owner may, at Owner's sole discretion, pay an amount sufficient to increase total payments to Contractor to more than 95% of the Contract Price if Owner has received consent of surety in a form acceptable to Owner.

5. Progress payments shall not be due until 15 days after Owner has received the funds with which to make the progress payment from a department or agency of the federal or state government, if any funds are to come from either of these sources.

B. The retained funds will not be commingled with other funds of Owner and will be deposited in an interest bearing account in a regulated financial institution in this state wherein all such retained funds are kept by Owner which will account for both retainage and interest on each construction contract separately.

C. Owner is not required to deposit retained funds in an interest bearing account if the retained funds are to be provided under a state or federal grant and the retained funds have not been paid to Owner.

D. Owner, at any time after 95% of work under the contract has been completed as determined by Landscape Architect/Engineer and at the request of Contractor, will release the retainage to Contractor only if Contractor provides to Owner an irrevocable letter of credit in the amount of the retainage plus interest, issued by a bank authorized to do business in this state, containing terms mutually acceptable to Contractor and Owner.

E. Unresolved disputes between Owner and Contractor regarding retained funds and interest on retained funds shall be submitted to an agent in accordance with the dispute resolution process described in Section 4 of State of Michigan Act 524 of P.A. of 1980.

6.03 FINAL PAYMENT

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

ARTICLE 7 – INTEREST

7.01 All moneys not paid when due as provided in Article 14 of the General Conditions shall bear interest at the rate of 1% per month.

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 relating to existing surface or subsurface structures at the Site (except Underground Facilities), if any, that have been identified Paragraph 4.02 of the Supplementary Conditions as provided in Paragraph 4.02 of the General Conditions as containing reliable "technical data," and

(2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in Paragraph 4.06 of the Supplementary Conditions as provided in paragraph 4.06 of the General Conditions as containing reliable "technical data."

E. Contractor has considered the information known to Contractor; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on

(1) the cost, progress, and performance of the Work;

(2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, including any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Contract Documents; and

(3) Contractor's safety precautions and programs.

F. based on the information and observations referred to in Paragraph 8.01.E above, 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 given Architect/Landscape Architect written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

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

ARTICLE 9 – CONTRACT DOCUMENTS

9.01 CONTENTS

- A. The Contract Documents consist of the following:
1. Contractor's Bid dated August 30, 2023
 2. Addenda _____
 3. Notice of Award.
 4. This Agreement.
 5. Notice to Proceed
 6. Performance Bond.
 7. Payment Bond.
 8. General Conditions.
 9. Supplementary Conditions.
 10. Drawings, consisting of sheets as listed on the cover sheet with each sheet bearing the following general title: Charter Township of Van Buren French Landing Dock Renovations and dated August 4, 2023.
 11. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
 1. Work Change Directives.
 2. Change Orders.
- B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 9.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in Paragraph 3.04 of the General Conditions.

ARTICLE 10 – MISCELLANEOUS

10.01 TERMS

- A. Terms used in this Agreement will have the meanings indicated 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 CONTRACTOR'S CERTIFICATIONS

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:
- a. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;
 - (1) "fraudulent practice" means an intentional misrepresentation of facts made:
 - (a) to influence the bidding process or the execution of the Contract to the detriment of Owner,
 - (b) to establish Bid or Contract prices at artificial non-competitive levels, or
 - (c) to deprive Owner of the benefits of free and open competition;
 - (2) "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which to establish Bid prices at artificial non-competitive levels; and
 - (4) "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

10.06 OTHER PROVISIONS

- A. Not applicable

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

Contractor:

PART 1 - _____
Name of Contractor*

By: _____
Signature

(Name and Title of Signatory*)

Attest: _____

(Name and Title of Signatory*)

Signed on: _____, 20____
(Date*)

Address for giving notices:

(Street*)

(City, State and Zip*)

License No. _____ (Where applicable)

Agent for service of process: _____

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

Owner:

Charter Township of Van Buren

By: _____
Signature

(Name and Title of Signatory*)

Attest: _____

(Name and Title of Signatory*)

Signed on: _____, 20____
(Effective Date of Agreement*)

Address for giving notices:

(Street*)

(City, State and Zip*)

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

Designated Representative:

(Name*)

(Title*)

(Street*)

(City, State and Zip*)

(Telephone Number*)

(Facsimile*)

Corporate Seal - if required by State Law

Designated Representative:

(Name*)

(Title*)

(Street*)

(City, State and Zip*)

(Telephone Number*)

(Facsimile*)

Corporate Seal - if required by State Law

*Typed or printed in ink.

END OF SECTION 00 5200

SECTION 00 6114 – PERFORMANCE BOND FORM

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: Charter Township of Van Buren
46425 Tyler Road
Charter Township of Van Buren, MI 48111

CONTRACT

Date (Date of Notice of Award): _____
Amount: _____

Description: Charter Township of Van Buren
French Landing Dock Renovation
12090 Haggerty Road
Charter Township of Van Buren, MI.

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 set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

Contractor AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal (Seal)

Surety's Name and Corporate Seal (Seal)

By: _____
Signature

By: _____
Signature (Attach Power of Attorney)

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

IMPORTANT: Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in Michigan. Attach Power of Attorney for those signatures executing for Surety, certifying authority to bind the Surety as of the date of the Bond:

1. Contractor and the 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, the 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, the 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:
 - 3.3.1. Surety in accordance with the terms of the Contract; or
 - 3.3.2. 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:
 - 4.4.1. After investigation, determine the amount for which it may be liable to Owner and, as soon as practicable after the amount is determined, tender payment therefore to Owner; or
 - 4.4.2. Deny liability in whole or in part and notify Owner citing reasons, therefore.
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 Subparagraph 4.4, and Owner refuses the payment tendered or Surety has denied liability, in whole or in part, without further notice Owner shall be entitled to enforce any remedy available to Owner.

6. After Owner has terminated Contractor's right to complete the Contract, and if Surety elects to act under paragraph 4.1, 4.2, or 4.3 above, then the responsibilities of Surety to Owner shall not be greater than those of Contractor under the Contract, and the responsibilities of Owner to Surety shall not be greater than those of Owner under the Contract. To the limit of the amount of this Bond, but subject to commitment by Owner of the Balance of the Contract Price to mitigation of costs and damages on the Contract, the Surety is obligated without duplication for:

6.1. The responsibilities of Contractor for correction of defective Work and completion of the Contract;

6.2. Additional legal, design professional and delay costs resulting from Contractor's Default, and resulting from the actions of or failure to act of Surety under Paragraph 4; and

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

7. Surety shall not be liable to Owner or others for obligations of Contractor that are unrelated to the Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than Owner or its heirs, executors, administrators or successors.

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

9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located and shall be instituted within 2 years after Contractor Default or within 2 years after Contractor ceased working or within 2 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 indicated on the signature page.

11. When this Bond has been furnished to comply with a statutory requirement in the location where the Contract was to be performed, any provision in this Bond conflicting with said statutory requirement shall be deemed deleted herefrom and provisions conforming to such statutory requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.

12. Definitions:

12.1. Balance of the Contract Price: The total amount payable by Owner to Contractor under the Contract after all proper adjustments have been made, including allowance to Contractor of any amounts received or to be received by Owner in settlement of insurance or other Claims for damages to which Contractor is entitled, reduced by all valid and proper payments made to or on behalf of Contractor under the Contract.

12.2. Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.

12.3. Contractor Default: Failure of Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.

12.4. Owner Default: Failure of Owner, which has neither been remedied nor waived, to pay Contractor as required by the Contract or to perform and complete or comply with the other terms thereof.

END OF SECTION 00 6114

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SECTION 00 6115 – PAYMENT BOND FORM

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: Charter Township of Van Buren
46425 Tyler Road
Charter Township of Van Buren, MI 48111

CONTRACT

Date (Date of Notice of Award): _____
Amount: _____

Description: Charter Township of Van Buren
French Landing Dock Renovation
12090 Haggerty Road
Charter Township of Van Buren, MI.

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 following terms set forth below, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

Contractor AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal (Seal)

Surety's Name and Corporate Seal (Seal)

By: _____
Signature

By: _____
Signature (Attach Power of Attorney)

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

IMPORTANT: Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in Michigan. Attach Power of Attorney for those signatures executing for Surety, certifying authority to bind Surety as of the date of the Bond.

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:
 - 4.2.1. 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 were furnished or supplied or for whom the labor was done or performed; and
 - 4.2.2. 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
 - 4.2.3. Not having been paid within the above 30 days, have sent a written notice to Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to Contractor.
5. If a notice required by Paragraph 4 is given by Owner to Contractor or to Surety,, that is sufficient compliance.
6. Reserved.
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 the 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 obligation 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 give the notice required by paragraph 4.1 or paragraph 4.2.3, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the

Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

12. Notice to Surety, Owner or Contractor shall be mailed or delivered to the addresses indicated 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 indicated 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.

END OF SECTION 00 6115

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

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

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CONSTRUCTION SPECIFICATIONS INSTITUTE

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

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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

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

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

27. *Notice of Award*—The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.
28. *Notice to Proceed*—A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.
29. *Owner*—The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.
30. *PCBs*—Polychlorinated biphenyls.
31. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.
32. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
33. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
34. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
35. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
36. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.
37. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
38. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.
39. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

40. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
41. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.
42. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
43. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.
44. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
45. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.
46. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.
47. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or Subcontractor.
48. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
49. *Unit Price Work*—Work to be paid for on the basis of unit prices.
50. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.
51. *Work Change Directive*—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an

addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 *Terminology*

A. The words and terms discussed in Paragraph 1.02.B through F are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives:*

1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. *Day:*

1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective:*

1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - c. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. *Furnish, Install, Perform, Provide:*

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

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

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

2.02 *Copies of Documents*

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

2.03 *Commencement of Contract Times; Notice to Proceed*

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

2.04 *Starting the Work*

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

2.05 *Before Starting Construction*

- A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:
 - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;
 - 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; Designation of Authorized Representatives*

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

2.07 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
 - 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 reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.
- C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

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

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies:*

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

B. *Resolving Discrepancies:*

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

3.04 *Amending and Supplementing Contract Documents*

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

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 its consultants, including electronic media editions; or
 2. reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

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

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

4.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the

Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 *Subsurface and Physical Conditions*

A. *Reports and Drawings:* The Supplementary Conditions identify:

- 1. those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and
- 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).

B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:

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

4.03 *Differing Subsurface or Physical Conditions*

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

- 1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or
- 2. is of such a nature as to require a change in the Contract Documents; or
- 3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

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

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

C. *Possible Price and Times Adjustments:*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and
 - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:
 - a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or
 - b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or
 - c. Contractor failed to give the written notice as required by Paragraph 4.03.A.
3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

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

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

B. *Not Shown or Indicated:*

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

4.05 *Reference Points*

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

4.06 *Hazardous Environmental Condition at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
 - 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 - 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 - 3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.
- D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to

permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 4.06.E.

- E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.
- F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.
- G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 – BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

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

5.02 *Licensed Sureties and Insurers*

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

5.03 *Certificates of Insurance*

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

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

5.04 *Contractor's Insurance*

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

employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;

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

5.05 *Owner's Liability Insurance*

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

5.06 *Property Insurance*

- A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
 1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of

them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;

2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.
 3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
 4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
 5. allow for partial utilization of the Work by Owner;
 6. include testing and startup; and
 7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.
- B. Owner shall purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.
- C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.
- D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

- E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under this Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

- A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or loss payees thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for:
1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

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

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

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

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

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

ARTICLE 6 – CONTRACTOR’S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

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

6.02 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner’s written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *Services, Materials, and Equipment*

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

6.04 *Progress Schedule*

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

6.05 *Substitutes and “Or-Equals”*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or “or-equal” item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.
1. “*Or-Equal*” *Items*: If in Engineer’s sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an “or-equal” item, in which case review and approval of the proposed item may, in Engineer’s sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole; and
 - 3) it has a proven record of performance and availability of responsive service.
 - b. Contractor certifies that, if approved and incorporated into the Work:
 - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
 - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. *Substitute Items:*

- a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.
- b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.
- c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Engineer may decide is appropriate under the circumstances.
- d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - 1) shall certify that the proposed substitute item will:
 - a) perform adequately the functions and achieve the results called for by the general design,
 - b) be similar in substance to that specified, and
 - c) be suited to the same use as that specified;
 - 2) will state:
 - a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,
 - b) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and
 - c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;
 - 3) will identify:
 - a) all variations of the proposed substitute item from that specified, and
 - b) available engineering, sales, maintenance, repair, and replacement services; and
 - 4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.

- B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.
- C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.
- D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- E. *Engineer's Cost Reimbursement:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
- F. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 *Concerning Subcontractors, Suppliers, and Others*

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

entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

- C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:
 - 1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity; nor
 - 2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.
- D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.
- E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.
- F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its

use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

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

6.08 *Permits*

- A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *Laws and Regulations*

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

and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *Taxes*

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

6.11 *Use of Site and Other Areas*

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

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.
2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

- C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

- D. *Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 *Record Documents*

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

6.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
 - 1. all persons on the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.
- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
- D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts

any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

- F. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

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

6.15 *Hazard Communication Programs*

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

6.16 *Emergencies*

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

6.17 *Shop Drawings and Samples*

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

1. *Shop Drawings:*

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

2. *Samples:*

- a. Submit number of Samples specified in the Specifications.

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

C. *Submittal Procedures:*

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

D. *Engineer's Review:*

- 1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
- 2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the

Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

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

E. *Resubmittal Procedures:*

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

6.18 *Continuing the Work*

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

6.19 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on representation of Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 1. observations by Engineer;
 2. recommendation by Engineer or payment by Owner of any progress or final payment;

3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
4. use or occupancy of the Work or any part thereof by Owner;
5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;
6. any inspection, test, or approval by others; or
7. any correction of defective Work by Owner.

6.20 *Indemnification*

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

6.21 *Delegation of Professional Design Services*

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

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 *Related Work at Site*

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

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

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

7.02 *Coordination*

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

7.03 *Legal Relationships*

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

ARTICLE 8 – OWNER’S RESPONSIBILITIES

8.01 *Communications to Contractor*

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

8.02 *Replacement of Engineer*

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

8.03 *Furnish Data*

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

8.04 *Pay When Due*

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

8.05 *Lands and Easements; Reports and Tests*

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

8.06 *Insurance*

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

8.07 *Change Orders*

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

8.08 *Inspections, Tests, and Approvals*

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

8.09 *Limitations on Owner’s Responsibilities*

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor’s means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws

and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

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

8.11 *Evidence of Financial Arrangements*

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

8.12 *Compliance with Safety Program*

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

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

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

9.02 *Visits to Site*

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

9.03 *Project Representative*

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

9.04 *Authorized Variations in Work*

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

9.05 *Rejecting Defective Work*

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

9.06 *Shop Drawings, Change Orders and Payments*

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

9.07 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations

on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

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

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.
- B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.
- C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.
- D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

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

and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.

- E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 *Compliance with Safety Program*

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

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

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

10.02 *Unauthorized Changes in the Work*

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

10.03 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:
 - 1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;
 - 2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and
 - 3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of

executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

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

10.05 *Claims*

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

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

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

11.01 *Cost of the Work*

- A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 11.01.B, and shall include only the following items:
 - 1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.
 - 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
 - 3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
 - c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
 - d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
 - e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
 - f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.
 - g. The cost of utilities, fuel, and sanitary facilities at the Site.
 - h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, express and courier services, and similar petty cash items in connection with the Work.
 - i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

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

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.
 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A.
- C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.
- 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 quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
 2. there is no corresponding adjustment with respect to any other item of Work; and
 3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

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

12.01 *Change of Contract Price*

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

- B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:
1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or
 2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or
 3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).
- C. *Contractor's Fee*: The Contractor's fee for overhead and profit shall be determined as follows:
1. a mutually acceptable fixed fee; or
 2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;
 - d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
 - e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
 - f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to 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.C.
- D. Owner, Engineer, and their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.
- E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

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

13.01 *Notice of Defects*

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

13.02 *Access to Work*

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

13.03 *Tests and Inspections*

- A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
 - 1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
 - 2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and
 - 3. as otherwise specifically provided in the Contract Documents.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

- E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation.
- F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

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

13.05 *Owner May Stop the Work*

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

13.06 *Correction or Removal of Defective Work*

- A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers,

architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).

- B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

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

13.08 *Acceptance of Defective Work*

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

review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

- a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
- a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
- a. to supervise, direct, or control the Work, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:

- a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
- b. the Contract Price has been reduced by Change Orders;
- c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
- d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due:

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

D. Reduction in Payment:

- 1. Owner may refuse to make payment of the full amount recommended by Engineer because:
 - a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
 - b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - c. there are other items entitling Owner to a set-off against the amount recommended; or
 - d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.
- 2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor remedies the reasons for such action.
- 3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

14.03 Contractor's Warranty of Title

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

14.04 *Substantial Completion*

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

14.05 *Partial Utilization*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

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

14.06 *Final Inspection*

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

14.07 *Final Payment*

A. *Application for Payment:*

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

- d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. Engineer's Review of Application and Acceptance:

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due:

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

14.08 Final Completion Delayed

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

14.09 *Waiver of Claims*

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

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

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 *Owner May Suspend Work*

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

15.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);
2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;
3. Contractor's repeated disregard of the authority of Engineer; or
4. Contractor's violation in any substantial way of any provisions of the Contract Documents.

B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:

1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);

2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere; and
 3. complete the Work as Owner may deem expedient.
- C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, 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. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.

B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:

1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions; or

2. agrees with the other party to submit the Claim to another dispute resolution process; or
3. gives written notice to the other party of the intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 – MISCELLANEOUS

17.01 *Giving Notice*

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
 1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or
 2. delivered at or sent by 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.

END OF SECTION 00 72 00

SECTION 00 7300 – SUPPLEMENTARY CONDITIONS

These Supplementary Conditions amend or supplement the General Conditions (Standard General Conditions of the Construction Contract). All provisions which are not so amended or supplemented remain in full force and effect.

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

The address system used in these Supplementary Conditions is the same as the address system in the General conditions, with the Prefix “SC” added thereto.

ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

SC-1.01 Defined Terms

Add the following language to the first sentence of Paragraph 1.01.A:

; except where the terms “Architect,” “Landscape Architect,” “Engineer,” and “Contractor” are preceded by an adjective, the term shall then be understood to refer to the entity described by the combination of the two words.

SC-1.01.A.19 Engineer

Delete Paragraph 1.01.A.19 in its entirety and insert the following in its place:

19. Engineer – The individual or entity named as Engineer, Architect or Landscape Architect in the Agreement.

SC-1.01.A.44 Substantial Completion

Add the following paragraph immediately after Paragraph 1.01.A.44:

Substantial Completion shall specifically include the following items:

- a. Dock Renovation:
 - (1) Connection to existing concrete walk thickened edge
 - (2) Installation of foundation, decking, lighting, and railing
 - (3) Shore stabilization
 - (4) Restoration

Add the following paragraphs immediately after Paragraph 1.01.A.51:

- 52. Landscape Architect/Architect – The individual or entity named as Architect or Engineer in the Agreement.
- 53. General Contractor – The Contractor as defined in Paragraph 1.01. A.15.
- 54. Manufacturer – An individual or entity that manufactures or fabricates Products.
- 55. Products – Systems, materials, manufactured units, equipment, components, and accessories used in the Work.

ARTICLE 2 – PRELIMINARY MATTERS

SC-2.01 Delivery of Bonds and Evidence of Insurance

Delete Paragraph 2.01.A in its entirety and insert the following in its place:

- A. When Contractor delivers the executed Agreements to Owner, Contractor shall also deliver to Owner, with copies to each additional insured identified herein, certificates of insurance (and other evidence of insurance which Owner or any additional insured may reasonably request) which Contractor is required to purchase and maintain in accordance with Article 5.

SC-2.01.B Evidence of Insurance

Delete Paragraph 2.01.B in its entirety.

Add the following new paragraph after Paragraph 2.01 A.:

B. When Contractor delivers the executed Agreements to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish in accordance with Article 5. Facsimile, telegraphic, oral, or other electronically transmitted bonds will not be considered. Attorneys-in-fact who execute the bonds on behalf of the Surety shall affix to each bond a certified and current copy of the power of attorney.

C. Before commencement of Contract Time, Owner shall deliver to Contractor, with copies to each additional insured identified herein, certificates of insurance (and other evidence of insurance which Contractor or any additional insured may reasonably request) which Owner is required to purchase and maintain in accordance with Article 5. Contractor shall not start any work at the Site prior to Owner delivering the required certificates and other evidence of insurance.

SC-2.02 Copies of Documents

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

A. Owner shall furnish to Contractor up to 2 printed or hard copies of the Drawings and Project Manual and one set in electronic format. Additional copies will be furnished upon request at the cost of preparation, reproduction, and shipping.

ARTICLE 3 – CONTRACT DOCUMENTS : INTENT, AMENDING, REUSE

SC-3.04 Amending and Supplementing Contract Documents

Add the following new paragraph immediately after Paragraph 3.04.B.

B. Owner shall be entitled to deduct from the Contract Price amounts paid to Engineer for Engineer to evaluate and respond to Contractor's requests for information, where such information was available to Contractor from a careful study and comparison of the Contract Documents, field conditions, other Owner-provided information, Contractor-prepared coordination drawings, or prior Project correspondence or documentation.

SC-3.06 Electronic Data

Delete paragraph A. and insert the following in its place:

A. Contractor and Engineer shall establish the necessary protocols governing the transmission of electronic data, if any. Hard copies of data or documents in Engineer's files used to create electronic versions shall govern over any electronic copies. When hard copies do not exist, the electronic version residing on Landscape Architect's/Engineer's computer network or files shall govern.

ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS.

SC-4.02 Subsurface and Physical Conditions

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

B. The following reports of explorations and tests of subsurface conditions at or contiguous to the Site are known to Owner:

1. Report dated June 22, 2020, prepared by G2 Consulting Group entitled: Report on Geotechnical Investigation French Landing Park Improvements, consisting of 23 pages. The "technical data" contained in such report upon which Contractor may rely is the soil boring logs at the locations and for the conditions at the time the soil borings were taken. This report has been included in Appendix A, Report on Geotechnical Investigation.

C. The following drawings of physical conditions relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) are known to Owner:

1. Drawings dated August 4, 2023, prepared by Hoppe Design, LLC. (Architect) entitled: French Landing Dock Renovation consisting of the "technical data" contained in such drawings upon which Contractor may rely is the general concept for site improvements, and information indicated in such drawings, but not the exact locations, sizes, and materials. These drawings have been attached to the Bidding Documents.

ARTICLE 5 – BONDS AND INSURANCE

SC-5.02 Licensed Sureties and Insurers

Add the following new paragraph immediately after Paragraph 5.02.A:

- D. All bonds and insurance required by the Contract Documents to be purchased and maintained by Contractor shall be obtained from surety or insurance companies that are authorized to transact business in Michigan and are classified at not lower than the following:
 1. Best's Key Rating Guide, current edition:
 2. Financial Size Category: Class V.

SC-5.03 Certificates of Insurance

Delete Paragraph 5.03 in its entirety.

SC-5.04 Contractor's Insurance

Amend the end of Paragraph 5.04.A.5 to delete the last word, and add the following language in its place:

Including claims for damages resulting from pollution; and

Add the following to the end of Paragraph 5.04.B.1:

Additional insureds under this Paragraph shall include the following:

- a. Charter Township of Van Buren, its elected officials, employees, officers, agents, servants, members of boards and commissions, and
- b. PEA Group., employees, officers
- c. G2 Consulting Group, LLC, employees, officers

Delete Paragraph 5.04.B.5 in its entirety and insert the following in its place:

5. remain in effect at least until the end of the correction period and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and

Add the following new paragraphs immediately after Paragraph 5.04.B.6:

7. Not be written on a claims-made basis;
8. Be issued by insurers who endorse the policies to reflect that, in the event of payment of any loss or damages, subrogation rights under these Contract Documents will be waived by the insurer with respect to claims against Owner or Engineer.

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

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

F.

1. Workers' Compensation, and related coverage under Paragraphs 5.04.A.1 and A.2 of the General Conditions:
 - a. State: Statutory
 - b. Applicable Federal (e.g., Longshoreman's): Statutory
 - c. Employer's Liability: \$500,000
1. Contractor's General Liability under Paragraphs 5.04.A.3 through A.6 of the General Conditions, which shall include completed operations and product liability coverages and eliminate the exclusion with respect to property under the care, custody, and control of Contractor:
 - a. General Aggregate \$3,000,000
 - b. Products-Completed Operations Aggregate \$2,000,000
 - c. Personal and Advertising Injury \$1,000,000
 - d. Each Occurrence (Bodily Injury and Property Damage) \$1,000,000
 - e. Fire Damage (any one fire) \$300,000
 - f. Medical Expense (any one Person) \$10,000
 - g. Property Damage liability insurance shall provide Explosion, Collapse and Underground coverages where applicable. Certificates shall show that X, C, and U coverage is included.
 - h. Excess or Umbrella Liability
General Aggregate \$3,000,000
Each Occurrence \$1,000,000
2. Automobile Liability under Paragraph 5.04.A.6 of the General Conditions:
 - a. Bodily Injury:
Each Person \$500,000
Each Accident \$3,000,000
 - b. Property Damage:
Each Accident \$3,000,000
or
Combined Single Limit: \$3,000,000
 - c. MCS 90 Endorsement on Vehicle Insurance: Statutory
3. The Contractual Liability coverage required by Paragraph 5.04.B.3 of the General Conditions shall provide coverage for not less than the following amounts:
 - a. Bodily Injury:
Each Person \$500,000
Each Accident \$3,000,000
 - b. Property Damage:
Each Accident \$500,000
Annual Aggregate \$3,000,000
5. Builder's Risk-Installation Floater Cost to Replace at Time of Loss

SC-5.05 Owner's Liability Insurance

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

- A. Contractor shall purchase and maintain Owner's and Contractor's Protective Liability Insurance which shall:
 1. Policy to be written with Charter Township of Van Buren as the insured;
 2. Be written by the same insurance carrier as Contractor's Liability Insurance;

3. be a separate policy to protect Owner, Landscape Architect/Engineer, their consultants, agents, employees and such public corporations in whose jurisdiction the Work is located for their liability for work performed by Contractor or Subcontractors under this Contract;
4. Charter Township of Van Buren, its elected officials, employees, officers, agents, servants, members of boards and commissions, and ;
5. name the following as additional insured:
 - a. PEA Group, Inc.
 - b. G2 Consulting Group, LLC
6. be issued by an insurer who endorses the policy to reflect that, in the event of payment of any loss or damages, subrogation rights under these Contract Documents will be waived by the insurer with respect to claims against Owner or Landscape Architect/Engineer.
7. provide coverage for not less than the following amounts:
 - a. Separate:

(1) Bodily Injury:	
Each Person	\$500,000
Each Accident	\$1,000,000
(2) Property Damage:	
Each Accident	\$1,000,000
Annual Aggregate	\$2,000,000
or	
 - b. Combined Single Limit: \$2,000,000

SC-5.06 Property Insurance

Add the following at the end of Paragraph 5.06.A.1:

Additional insureds under this Paragraph shall include the following:

- a. PEA Group
- b. G2 Consulting Group, LLC

Add the following language immediately after Paragraph 5.06.A.2:

and shall also include flood, start-up and testing and offsite storage, and equipment breakdown insurance.

Add the following new paragraph immediately after Paragraph 5.06.A.7

8. be issued by an insurer who endorses the policy to reflect that, in the event of payment of any loss or damages, subrogation rights under these Contract Documents will be waived by the insurer with respect to claims against Owner or Engineer.

SC-5.09 Acceptance of Bonds and Insurance; Option to Replace

Amend the first sentence of Paragraph 5.09.A to read as follows after the words "in writing:"

within 10 days after receipt of the bonds and certificates (or other evidence requested) required by Paragraph 2.01.

SC-5.10 Partial Utilization, Acknowledgment of Property Insurer

Add the following new paragraph immediately after Paragraph 5.10.A:

None.

ARTICLE 6 – CONTRACTOR'S RESPONSIBILITIES

SC-6.03 Services, Materials and Equipment

Add the following language at the end of Paragraph 6.03.A:

Owner requires that the rates of wages and fringe benefits to be paid to each class of mechanics by Contractor and all Subcontractors shall be not less than the wage and fringe benefit rates prevailing in the locality in which the Work is to be performed.

SC-6.06 Concerning Subcontractors, Suppliers and Others

Add the following language after Paragraph 6.06.B:

Contractor shall submit, within 2 days after the opening of Bids, a list of the following Subcontractors and Suppliers for acceptance by Engineer and Owner:

Owner Provided Suppliers and Installers:

a. None

Add a new paragraph immediately after Paragraph 6.06.G:

H. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by a particular Subcontractor or Supplier.

SC-6.08 Permits

Add the following language at the end of Paragraph 6.08.A:

Additional provisions regarding permits and licenses are included in the General Requirements.

SC-6.09 Laws and Regulations

Add the following paragraph immediately after Paragraph 6.09.C:

D. Funding for the Project is provided by the Municipality.

E. Attention is called to the fact that not less than the minimum salaries and wages must be paid on this Project, and that the Contractor shall ensure that employees and applicants for employment are not discriminated against because of their race, color, religion, sex, or national origin. The Contractor shall abide by the Federal Wage Rate Determination which is referred to or contained in these Specifications.

F. The Contractor shall complete and submit to the Owner weekly payroll forms as required by HUD. A sample copy of these payroll forms is included in these Specifications.

G. The Federal Wage Determination which is included in these documents is the determination which was in effect at the time this project went out to bid. However, if another Federal Wage Determination is in effect at the time of Bid opening, that Wage Determination shall apply to this Project.

SC-6.17 Shop Drawings and Samples

Add the following new paragraphs immediately after Paragraph 617.E:

G. Contractor shall furnish required submittals with sufficient information and accuracy in order to obtain required approval of an item with no more than two submittals. Landscape Architect/Engineer will record Engineer's time for reviewing subsequent submittals of Shop Drawings, samples, or other items requiring approval and Owner will deduct amount paid for Engineer's charges for such time from payment to Contractor.

G. In the event that Contractor requests a change of a previously approved item, Contractor shall reimburse Owner for Engineer's charges for its review time unless the need for such change is beyond the control of Contractor.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

SC-8.11 Evidence of Financial Arrangements

Add the following new paragraph immediately after Paragraph 8.11.A:

B. On request of Contractor prior to the execution of any Change Order involving a significant increase in the Contract Price, Owner shall furnish to Contractor reasonable evidence that adequate financial arrangements have been made by Owner to enable Owner to fulfill the increased financial obligations to be undertaken by Owner as a result of such Change Order.

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

SC-11.03 Unit Price Work

Delete Paragraph 11.03.D in its entirety and insert the following in its place:

- D. The unit price of an item of Unit Price Work shall be subject to reevaluation and adjustment under the following conditions:
1. if the Bid price of a particular item of Unit Price Work amounts to 10% or more of the Contract Price and the variation in the quantity of that particular item of Unit Price Work performed by Contractor differs by more than 25% from the estimated quantity of such item indicated in the Agreement; and
 2. if there is no corresponding adjustment with respect to any other item of Work; and
 3. if Contractor believes that Contractor has incurred additional expense as a result thereof or if Owner believes that the quantity variation entitles Owner to an adjustment in the unit price, either Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Article 10 if the parties are unable to agree as to the effect of any such variations in the quantity of Unit Price Work performed.

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

SC-12.01 Change of Contract Price

Amend Paragraphs 12.01.B.2 and 12.01.B.3 by adding the following words after the term "lump sum": "or unit price".

SC-12.01.C Contractor's Fee

Delete the semicolon at the end of GC 12.01.C.2.c, and add the following language:

, provided, however, that on any subcontracted work the total maximum fee to be paid by Owner under this subparagraph shall be no greater than 27 percent of the costs incurred by the Subcontractor who actually performs the work;

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

SC-14.02.A Applications for Payment

Add the following new paragraph immediately after Paragraph 14.02.A.3:

4. Contractor shall indicate on the Application for Payment the amounts which are due to Owner from Contractor in accordance with the Contract Documents and which amounts Owner may deduct from the progress payment.

SC-14.02.B Review of Applications

Add the following new paragraphs immediately after Paragraph 14.02.B.5.d:

- d. Contractor has incurred liability for other costs in accordance with Contract Documents.
- e. liability for liquidated damages has been incurred by Contractor.
- f. of Contractor's failure to maintain record documents in accordance with Paragraph 6.12.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

SC-15.02 Owner May Terminate for Cause

Add the following new paragraph immediately after Paragraph 15.02.A.4:

5. Contractor has filed a bankruptcy petition and neither Contractor nor trustee has either assumed or rejected this Contract within 30 days after the filing of the bankruptcy petition.

END OF SECTION 00 7300

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SECTION 01 11 00 – SUMMARY OF WORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work covered by the Contract Documents for the Charter Township of Van Buren, Owner. The project is located at 12090 Haggerty Road, Charter Township of Van Buren Township, MI.
- A. The Work includes the following major items (dimensions are approximate):
 - 1. Tree Protection Measures
 - 2. Soil Erosion and Sedimentation Control (including permit)
 - 3. Demolition and Removal
 - 4. Field Engineering and Layout
 - 5. Earthwork
 - 6. Dock Foundation and Support Structure
 - 7. Shore Stabilization
 - 8. Dock Decking
 - 9. Dock Railing
 - 10. Lighting
 - 11. Fine Grading and Sodded Lawn
 - 12. Landscape Restoration
 - 13. Clean up

1.3 TYPE OF CONTRACT

- A. Construct the Work of this Contract under a single Unit Price Contract.

1.4 GENERAL

- A. Imperative Language: These Specifications (Divisions 01 through 49) are written in the imperative and abbreviated form. This imperative language of the technical specifications is directed at Contractor unless specifically noted otherwise. Incomplete sentences shall be completed by inserting "shall", "shall be" and similar mandatory phrases by inference in the same manner as they are applied to notes on Drawings. The words "shall", "shall be" and similar mandatory phrases shall be supplied by inference where a colon (:) is used within sentences or phrases. Except as worded to the contrary, fulfill (perform) all indicated requirements whether stated in the imperative or otherwise.
- B. Related Sections: Some Sections of these Specifications (Divisions 01 through 49) may include a paragraph titled "Related Sections". This paragraph is an aid to the Project Manual user and is not intended to include all Sections which may be related. It is Contractor's obligation to coordinate all Sections whether indicated under "Related Sections" or not.
- C. Reference to the General Conditions: In Divisions 01 through 49, a reference to the General Conditions includes by inference all amendments or supplements in the Supplementary Conditions.

1.5 OWNER FURNISHED MATERIAL

- A. NONE
- B. Contractor's Responsibilities:
 - 1. Coordinate delivery schedule of material to site with Owner and Supplier.
 - 2. Receive and unload Products at Site (Site furniture only); inspect for completeness and damage jointly with Owner.

3. Handle, store, install (per manufacturer specifications) and protect installed components
4. Repair or replace items damaged by the Work of this Contract.

WORK BY OWNER

- C. NONE
- D. Coordinate as necessary with Owner contracted vendors.

1.6 WORK UNDER OTHER CONTRACTS

1. NONE

1.7 PROCUREMENT CONTRACTS

- A. The Owner has executed a Procurement Contract for the following Equipment:

1. NONE

1.8 CONTRACTOR USE OF PREMISES

- A. Limit use of premises to allow for public access, only upon substantial completion
- B. Limit construction traffic access to Project site from access points as approved by Owner
- C. Coordinate use of premises under direction of the Owner.
- D. Where the Contract Documents identify certain site elements within the construction limits, such as sidewalks, drives, and streets, that must be kept open for public or the Owner's use during construction, the Contractor shall be responsible for protection and maintenance of such elements as well.
- E. Except in connection with the safety or protection of persons or the Work or property at the Site or adjacent thereto, all Work at the site shall be restricted to the following hours:
 1. Monday through Friday (Except Legal Holidays): 8:00 a.m. to 5:00 p.m.
 2. Saturday, Sundays or legal holidays with written approval of the Owner.
- F. Work Within Rights-of-Way: In accordance with Division 01 Section "Regulatory Requirements."
- G. Private Easements:
 1. The Owner will arrange for the necessary easements required for construction across privately-owned land. The Contractor shall carry on the construction in such a manner as to cause a minimum of inconvenience to the occupants of the properties.
 2. Any agreement made by the Contractor with any property owner that extends the rights as granted under an easement obtained by the Owner or that provides for an additional easement shall be obtained by the Contractor at the Contractor's expense and shall in no way be binding upon the Owner. The Contractor shall defend and hold the Owner and the Engineer harmless against any action that may arise from activities conducted pursuant to such additional agreements or easements. Unless relieved of responsibility for surface restoration in writing by property owner, the Contractor shall restore areas covered by separate agreements substantially the same as similar areas within the Project.

1.9 OCCUPANCY REQUIREMENTS

- A. Owner Occupancy During Construction:
 1. The Owner will occupy or utilize premises during entire period of construction. Cooperate with the Owner to minimize conflict and to facilitate the Owner's operations.
 2. Access to Abutting Properties: Provide at all times.
 3. Access for Emergency Vehicles:
 - a. Provide at all times.
 - b. Provide at least one clear lane during non-work periods.
 4. Fire Hydrants: Provide access to at all times.

5. Do not block fire access routes from buildings.
6. Detours and Street Closure:
 - a. When provided for in the Contract Documents or approved by the Engineer.
 - b. Routes and barricades as indicated or as approved by road authority.
7. Construct Work so as to not interfere with VBT Park Operations in accordance with this Section.
8. Limit parking for construction vehicles to an area designated as indicated on the Drawings.

1.10 WORK SEQUENCE

- A. Coordinate construction schedule and operations with Owner and Engineer.
- B. Sequence Submittal:
 1. The sequence indicated below is offered as a suggestion to the Contractor.
 2. Submit a proposed sequence with appropriate times of starting and completion of tasks to Engineer for review.
- C. The following sequence and intermediate dates are suggested to accommodate Owner's completion date.
The Contractor shall submit its own schedule indicating how it will achieve the required results.
- D. Owner Milestone Dates:
 1. August 22, 2023: Non-Mandatory Pre-Bid Meeting on Site
 2. September 8, 2023 : Recommendation of Contractor and Bid Tabulation to Township.
 3. September 19, 2023: Agreement brought before the Township Board for Approval
 4. September 25, 2023: Construction Begins
 5. December 15, 2023: Substantial Completion
 6. December 30, 2023: Project Completion
- E. The above schedule milestones must be included in the overall construction schedule and shall also include coordination and installation of vendor supplied/installed materials.
 1. None

PART 2 - PRODUCTS

2.1 OTHER MATERIALS

- A. General: All other materials which are not specified herein and are not indicated on the Drawings but are required for proper and complete performance of the Work.
- B. Procedure:
 1. Select new, first quality material.
 2. Obtain Architect's review and approval.
 3. Provide and install.

PART 3 - EXECUTION

Not used.

END OF SECTION 01 1100

SECTION 01 1813 – PROTECTION, RESTORATION AND NOTIFICATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes responsibilities for the protection, restoration and notification requirements for surface and subsurface structures, Underground Facilities, and surface improvements.

1.3 NOTIFICATION AND INTERRUPTIONS

- A. Prior to Start of Construction:
 - 1. Notify MISS DIG at least 72 hours in advance at 1.800.482.7171.
 - 2. Arrange for the identification of the locations of existing Underground Facilities at or contiguous to the Site.
 - 3. Coordinate utility connection with each utility provider.
- B. Utility Interruptions:
 - 1. Provide standby utility service for an interruption exceeding 2 hours or as approved by the Owner.
 - 2. Provide 48 hours' notice to the affected occupants of the time and duration of the anticipated shut off.
 - 3. Notify Fire Department 48 hours in advance if water main or fire supply line shut off is required.
 - 4. Pay all costs relating to utility interruptions.

1.4 PROTECTION AND RELOCATION

- A. Be Responsible For:
 - 1. Protection of structures and utilities at or contiguous to the Site in accordance with the General Conditions.
 - 2. Cost of cleaning, repair, relocation, raising, lowering, or replacement of structures and utilities which are damaged as a result of Contractor's operations.
 - 3. Cost of cleaning, repair, relocation, raising, lowering, or replacement of structures and utilities which are identified on the Drawings for relocation.
 - 4. Temporary sheeting, bracing, poles, cables, sand fill or other means used to support a structure or utility exposed or endangered by Contractor's operations.
 - 5. Relocating, raising, or lowering of a structure or utility for Contractor's convenience.
- B. Relocation of Poles and Structures:
 - 1. Be responsible for temporary and permanent relocation of power, light, telephone and other service poles and appurtenant structures that are identified on the Drawings for relocation.
 - 2. Make necessary arrangements with the owner of the pole or structure and pay all costs involved for items identified on the Drawings for temporary or permanent relocation.

1.5 RESTORATION

- A. Acceptable Standards for Restoration:
 - 1. Restore to the better of:
 - a. Original condition.
 - b. Requirements of the Contract Documents.
 - c. Current MDOT Standard Specifications for Construction.
 - d. MDOT Standard Plans.
- B. Property Corners, Government Survey Corners, and Plat Monuments:
 - 1. Protect from damage or disturbance.
 - 2. Protect discovered points until Engineer or Owner has witnessed or otherwise referenced their locations.
 - 3. Replace if disturbed or removed as a result of construction:

- a. Arrange for replacement by a Licensed Land Surveyor.
 - b. Pay all costs.
- C. Driving Surfaces and Similar Improvements:
 - 1. Repair or replace damaged or removed surfaces as indicated on the Drawings and as specified herein.
 - 2. Adjust to temporary or final grade all new and existing castings (water valve boxes, manholes, catch basins and similar structures) for all gravel, bituminous or concrete surfacing or resurfacing.
- D. Landscaping and Miscellaneous Improvements:
 - 1. Includes, but is not limited to, topsoil, seeded areas, and other similar items to all areas disturbed by construction. This work shall be incidental to the work specified and shall be included in the base bid total.
 - 2. Protect from damage by construction operations. In event of damage, replace damaged item with one of equivalent type and size.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

3.1 SURFACE RESTORATION

- A. Unless otherwise specified or indicated on the Drawings, perform the following surface restoration as an incidental expense and included in the base bid total:
 - 1. System Descriptions:
 - a. Turf Establishment - Seeding:
 - 1) Topsoil Thickness: 4 inches.
 - 2) Perform final grading, watering, backfilling of washouts, and related work.
 - 3) Seeded areas shall be weed free and established prior to acceptance.
 - 4) Watering is Contractor's responsibility and an incidental expense.
 - 2. Construction Standards for Surface Restoration: Comply with requirements specified or indicated on the Drawings.

3.2 PAYMENT FOR UTILITIES AND ASSOCIATED STRUCTURES

- A. Payment for Work on Utilities and Associated Structures:
 - 1. If Work is by Utility Company: Pay costs.
 - 2. If Work is by Contractor: Perform work in accordance with the requirements of utility company or authority having jurisdiction.

END OF SECTION 01 1813

SECTION 01 2513 – PRODUCT SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the administration of substitutions and Product options.

1.3 SUBMITTALS

- A. List of all products proposed for installation:
 - 1. Submit (3) hard copies or (1) electronic (.pdf) submittal within 30 days after the Effective Date of Agreement unless otherwise indicated elsewhere in the Contract Documents.
 - 2. Tabulate the list by each Specification Section.

1.4 CONTRACTOR'S OPTIONS

- A. Products specified only by reference standards or by description:
 - 1. Select any Product meeting the standards or description by any Supplier unless otherwise required elsewhere in the Contract Documents.
 - 2. Submit for Landscape Architect's/Engineer's review:
 - a. Name and address of Supplier.
 - b. Trade name.
 - c. Model or catalog designation.
 - d. Manufacturer's data including:
 - 1) Performance and test data.
 - 2) Compliance with reference standards.
- B. Products specified by naming one or more suppliers without an "or approved substitute" clause:
 - 1. Use specified Product of one of the Suppliers named.
 - 2. No substitutions.
- C. Products specified by naming one or more suppliers with an "or equal/approved substitute" clause:
 - 1. Indicates the option of selecting equivalent Products by stating or "equal/approved substitute" after the specified Suppliers.
 - 2. Engineer may waive some or all of the requirements specified for substitutions if, at Engineer's sole discretion, the proposed equivalent Product is considered an "or equal/approved substitute".
 - 3. If, at Engineer's sole discretion, the proposed equivalent Product does not qualify as an "or equal/approved substitute", it will be considered as a proposed substitute and a substitution request submittal will be required.

1.5 SUBSTITUTIONS

- A. Substitutions after the effective date of agreement:
 - 1. Within 30 days after the Effective Date of Agreement.
 - 2. Engineer will consider formal requests for substitution of Products in place of those specified unless otherwise prohibited elsewhere in the Contract Documents.
- B. Substitution Request Submittals: Submit (3) hard copies or (1) electronic (.pdf) submittal of the request for substitution including the following:
 - 1. Complete data substantiating compliance of the proposed substitution with the Contract Documents.
 - 2. For Products:
 - a. Names and addresses of Manufacturer and Supplier.
 - b. Product identification.

- c. Manufacturer's literature, including:
 - 1) Product description.
 - 2) Performance and test data.
 - 3) Reference standards.
 - d. Samples.
 - e. Name and address of similar projects on which the Product was used and date of installation.
 - 3. For Construction Methods:
 - a. Detailed description of the proposed method.
 - b. Drawings illustrating methods.
 - 4. Itemized comparison of proposed substitution with Product or method specified.
 - 5. Data relating to changes in the construction schedule.
 - 6. Accurate cost data on the substitution and comparison with the Product or method specified.
 - 7. Changes to the Work which would be caused by the substitution.
- C. Contractor's Responsibilities: In making a request for a substitution, Contractor represents:
- 1. Contractor has personally investigated the proposed Product or method and determined that it is equal or superior in all respects to that which is specified.
 - 2. Contractor will provide the same guarantee for the substitution as for the Product or method specified.
 - 3. Contractor will coordinate installation of the accepted substitution into the Work making such changes as may be required for the Work to be completed in all respects.
 - 4. Contractor waives all claims for additional cost related to the substitution which consequently become apparent.
 - 5. Cost data is complete and includes all related costs under Contractor's contract but excludes costs under separate contracts and Engineer's redesign costs.
- D. Substitutions Not Considered: Substitutions will not be considered if:
- 1. They are indicated or implied on Shop Drawings or Product data submittals without formal request submitted in accordance with this Section.
 - 2. Acceptance will require substantial revision of the Contract Documents.

Not used.

PART 2 - EXECUTION

Not used.

END OF SECTION 01 2513

SECTION 01 2916 – PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes submittal to the Owner's designee of Applications for Payment and supporting documentation as specified herein.

1.3 SUBMITTALS

- A. Application for Payment: Submit 3 copies on attached form.
- B. An incomplete or incorrect Application for Payment will constitute reason for refusing to recommend payment as indicated in Article 14 of the General Conditions.

1.4 FORMS

- A. Copies of the forms to be used for the above requirements are attached and include the following:
 - 1. Application for Payment.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

APPLICATION AND RECOMMENDATION FOR PAYMENT
PAGE 1 OF 3

TO: **Charter Township of Van Buren** FROM (Contractor): _____

In Care of: PEA Group
7927 Nemco Way, Suite 115
Brighton, Mi 48116

Application No: _____ Project: _____
Period From: _____ Project Number: _____
To: _____

APPLICATION FOR PAYMENT:

Application for Payment is made, as indicated below, in connection with the Contract. Schedule of Values sheet is attached as page 3 of 3.

- | | | |
|----|---|----------|
| 1. | Original Contract Price | \$ _____ |
| 2. | Net change by Change Orders | \$ _____ |
| 3. | Current Contract Price (1 plus 2) | \$ _____ |
| 4. | Gross Amount Due (From Unit Price Schedule | \$ _____ |
| 5. | Retainage (Per Agreement) _____% of Work Completed: | \$ _____ |
| | _____% of Stored Material: | \$ _____ |
| | Total Retainage | \$ _____ |
| 6. | Amount Eligible to Date (4 minus 5) | \$ _____ |
| 7. | Less Previous Payments | \$ _____ |
| 8. | Amount Due This Application (6 minus 7) | \$ _____ |
| 9. | Balance to Finish, Plus Retainage (3 – 7 – 8) | \$ _____ |

CHANGE ORDER SUMMARY:

Change Orders Approved by Owner	ADDITIONS	DEDUCTIONS
Change Order No. 1 Change Order No. 2 Change Order No. 3 Change Order No. 4 Change Order No. 5		
Net Change by Change Orders		

APPLICATION AND RECOMMENDATION FOR PAYMENT
PAGE 2 OF 3

CONTRACTOR'S CERTIFICATION:

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

Dated _____, 20____

Contractor

By _____
(Signature)

Name and Title of Signatory

LANDSCAPE ARCHITECT'S/ENGINEER'S RECOMMENDATION:

To: **Charter Township of Van Buren**

In accordance with the Contract, the undersigned recommends payment to Contractor.

AMOUNT RECOMMENDED:\$ _____

(Attach explanation if amount recommended differs from the amount applied for.)

LANDSCAPE ARCHITECT: PEA Group

Dated _____, 20____

By _____
(Signature)

Name and Title of Signatory

This Recommendation is not negotiable. The AMOUNT RECOMMENDED is payable only to Contractor named herein. Issuance, payment and acceptance of payment are without prejudice to any rights of Owner or Contractor under this Contract.

This recommendation for payment is based on a review of the Work performed as compared to the amount of the application. This recommendation does not imply that Engineer is reviewing construction lien documents nor does it imply that Engineer is acting as a guarantor of the property. Any review of construction lien documents by Engineer is for information purposes only.

Unit Price Schedule

[illegible]

01 29 16-4

END OF SECTION 01 2916

SECTION 01 3300 – SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes procedures for the submittal of Shop Drawings, Product Data, Samples, Operation and Maintenance Manuals, and other information.
- B. Related Sections include pertinent Sections of these Specifications for the individual Submittals required.

1.3 DEFINITIONS

- A. Submittal: Information sent by Contractor to convey information about systems, equipment, materials, products, and administrative matters for the Work.
- B. Resubmittal: Submittal sent for review a second or further time.
- C. Product Data: Illustrations, standard schedules, diagrams, performance charts, instructions, brochures, or manufacturer's literature that describe the physical size, appearance, and other characteristics of materials or equipment for a portion of the Work.
- D. Shop Drawings: 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.
- E. 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.
- F. Action Submittals: Submittals that require Landscape Architect's/Engineer's response.
- G. Informational Submittals: Submittals that do not require Landscape Architect's/Engineer's response.
- H. Delegated-Design: In certain individual Specification Sections, design services or certifications by a design professional that are specifically delegated to the Contractor. Performance and design criteria are defined in the individual Specification Sections or on the Drawings. Contractor is solely responsible for design of those items or systems, coordination of the design with the balance of the Project and achieving specified performance.
- I. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.4 SUBMITTAL PROCEDURES

- A. Submittal Schedule:
 - 1. Prepare and submit a Submittal schedule that identifies the following for each Submittal:
 - a. Submittal number.
 - b. Submittal description.
 - c. Projected date Submittal will be submitted.

2. Submittal Numbers:
 - a. Use the applicable Specification Section number followed by a decimal point and then a sequential number (e.g., 06 10 00.1).
 - b. Resubmittals shall include a letter suffix after another decimal point (e.g., 06 10 00.1.A).
 - c. Submittals that are not numbered correctly may be rejected.
- B. Delivery Method:
 1. Submittals may be delivered as paper copies or electronic files at Contractor's option.
 2. Advise Landscape Architect's/Engineer of delivery method to be used at the preconstruction meeting.
 3. Where Submittals include information that is intended to be printed on sheets larger than 11 inches x 17 inches, or where scale or drawing size are critical for proper review, submit 2 paper copies for review.
 4. Paper Copies:
 - a. Unless indicated otherwise, submit 2 copies of each Submittal.
 - b. One copy of each Action Submittal will be returned to Contractor.
 - c. Extra copies submitted by Contractor will be discarded.
 5. Electronic Files:
 - a. Unless indicated otherwise, submit 1 copy of each Submittal in PDF format.
 - b. Scanned Submittals shall be produced in such a way as to not compromise the graphic quality or accuracy of scale, where applicable; and text shall be searchable.
 - c. One copy of each Action Submittal will be returned to Contractor.
 - d. Submittals may be transmitted via electronic mail (e-mail) or on a CD or DVD. Submittals that are transmitted electronically may be returned electronically at the Engineer's discretion.
 6. Transmit Submittals to party and address identified by Engineer at preconstruction meeting.
- C. Coordination and Timing: Coordinate preparation and processing of Submittals with performance of construction activities. Contractor is responsible for cost of delays caused by lack of coordination or tardiness of Submittals. Incomplete Submittals will be rejected.
 1. Coordinate each Submittal with fabrication, purchasing, testing, delivery, other Submittals, and related activities that require sequential activity.
 2. Coordinate transmittal of different types of Submittals for related parts of the Work so processing will not be delayed because of need to review Submittals concurrently for coordination.
 - a. Engineer reserves the right to withhold action on a Submittal requiring coordination with other Submittals until related Submittals are received.
- D. Processing Time: Allow 7 full working days for Engineer to review each Submittal, including Resubmittals. Time for review shall commence on Engineer's receipt of Submittal. No extension of the Contract Time will be authorized because of failure to transmit Submittals enough in advance of the Work to permit processing, including Resubmittals. Engineer will advise Contractor when a Submittal being processed must be delayed for coordination.
- E. Identification: Place a permanent label on each Submittal or generate a separate cover sheet.
 1. Indicate name of firm or entity that prepared Submittal.
 2. Provide space to record Contractor's review and approval markings and action taken by Engineer.
 3. Include the following information:
 - a. Project name.
 - b. Date.
 - c. Name and address of Landscape Architect/Engineer.
 - d. Name and address of Contractor.
 - e. Name and address of Subcontractor(s).
 - f. Name and address of Supplier(s).
 - g. Name of Manufacturer.
 - h. Submittal number, including revision identifier.
 - i. Drawing number and detail references, as applicable.
 - j. Location(s) where product is to be installed, as applicable.
 - k. Other necessary identification.
- F. Deviations: Encircle or otherwise specifically identify deviations from the Contract Documents on Submittals. Submittals that include deviations that are not identified may be rejected. Engineer may or may not consider deviations. Deviations are not substitutions. Refer to Division 01 Section "Product Substitution Procedures" for procedures regarding requests for substitutions.

- G. Transmittal: Package each Submittal individually and appropriately for transmittal and handling. Transmit each Submittal using a transmittal form. Engineer will reject Submittal(s) received from sources other than Contractor.
- H. Resubmittals: Make Resubmittals in same form and number of copies as initial Submittal.
 - 1. Note date and content of previous Submittal.
 - 2. Clearly identify additions and revisions.
 - 3. Resubmit Submittals until they are marked, "Reviewed," or "Reviewed with Comments."
- I. Distribution: Furnish copies of Submittals with mark indicating, "Reviewed," or "Reviewed with Comments," to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities.
- J. Use for Construction: Unless otherwise indicated by Landscape Architect/Engineer, use only Submittals with mark indicating, "Reviewed," or "Reviewed with Comments."

PART 2 - PRODUCTS

2.1 ACTION SUBMITTALS

- A. General: Prepare and submit project specific Action Submittals required by individual Specification Sections. Do not use highlighting that would not be reproducible.
- B. Product Data: Collect information into a single Submittal for each element of construction and type of product or equipment.
 - 1. If information must be specially prepared for Submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
 - 2. Mark each copy of each Submittal to indicate which products and options are applicable.
 - 3. Include the following information, as applicable:
 - a. Manufacturer's written recommendations.
 - b. Manufacturer's product specifications.
 - c. Manufacturer's installation instructions.
 - d. Color charts as required by individual Specification Sections.
 - e. Manufacturer's catalog cuts.
 - f. Wiring diagrams showing factory-installed wiring.
 - g. Printed performance curves.
 - h. Operational range diagrams.
 - i. Mill reports.
 - j. Standard product operation and maintenance manuals.
 - k. Compliance with specified referenced standards.
 - l. Testing by recognized testing agency.
 - m. Application of testing agency labels and seals.
 - n. Notation of coordination requirements.
 - 4. Submit Product Data before or concurrent with Samples.
 - 5. Maintain copy of returned Submittal for Project records.
- C. Shop Drawings: Prepare Project-specific information, drawn accurately to scale where appropriate. Scale shall be sufficiently large to indicate pertinent features of the item and its method of connection to the Work.
 - 1. Preparation: Fully illustrate requirements of the Contract Documents. Include the following information, as applicable:
 - a. Dimensions.
 - b. Identification of products.
 - c. Fabrication and installation drawings.
 - d. Colors and materials as applicable.
 - e. Roughing-in and setting diagrams.
 - f. Wiring diagrams showing field-installed wiring, including power, signal, control, and communication wiring. Differentiate between Manufacturer-installed and field-installed wiring.
 - g. Manufacturing instructions.
 - h. Templates and patterns.
 - i. Schedules.
 - j. Calculations.
 - k. Compliance with specified standards.

- l. Notation of coordination requirements.
 - m. Notation of dimensions established by field measurement.
 - n. Relationship to adjoining construction clearly indicated.
 2. Sheet Size: Submit Shop Drawings on sheets at least 8-1/2 inches x 11 inches but no larger than 24 inches x 36 inches.
 3. Maintain copy of returned Submittal for Project records.
 - D. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other elements, and for a comparison of these characteristics between Submittal and actual component as delivered and installed.
 1. Transmit Samples that contain multiple, related components, such as accessories, together in one Submittal package.
 2. Identification: On unexposed side of Samples, attach label that includes the following:
 - a. Generic description of Sample.
 - b. Product name and name of Manufacturer.
 - c. Sample source.
 - d. Number and title of appropriate Specification Section.
 3. Samples for Initial Selection: Submit Manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available. Where Contract Documents indicate custom color or material, coordinate production of custom Samples with the Engineer and Manufacturer prior to submittal.
 - a. Number of Samples: Unless indicated otherwise, submit 2 full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from Manufacturer's product line. Engineer will return 1 Sample with options selected.
 4. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured, and finished in manner specified, physically identical with material or product proposed for use, and that show full range of color and texture variations expected.
 5. Samples include, but are not limited to, the following: Partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 6. Number of Samples: Unless indicated otherwise, submit 2 sets of Samples. Engineer will retain 1 Sample set; remainder will be returned.
 - a. Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
 - b. If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
 7. Disposition: Maintain sets of approved Samples at Site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used by Engineer to determine final acceptance of construction associated with each set.
 - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples shall be in an undamaged condition at time of Substantial Completion.
 - b. Samples not incorporated into the Work, or otherwise designated to become Owner's property, are the property of Contractor.
 - E. Operation and Maintenance Manuals:
 1. General:
 - a. Where manuals are required to be submitted covering items included in the Work, prepare such manuals in durable plastic binders approximately 8-1/2 inches x 11 inches in size and with at least the following:
 - 1) Identification on, or readable through, the front cover stating general nature of the manual.
 - 2) Neatly typewritten index near the front of the manual.
 - 3) Complete instructions regarding operation and maintenance of equipment involved, including:
 - a) Equipment function, normal operating characteristics, and limiting conditions.
 - b) Assembly, installation, alignment, adjustment, and checking instructions.
 - c) Operating instructions for start-up, routine and normal operating, regulation and control, shutdown, and emergency conditions.
 - d) Maintenance instructions, including lubrication requirements where applicable.
 - e) Guide to "troubleshooting".
 - f) Parts lists and predicted life of parts subject to wear.

- g) Project specific outline and cross sections, assembly drawings, engineering data, and wiring diagrams. Wiring diagrams shall reflect final, as-installed conditions and include wire numbers.
 - h) Test data and performance curves.
 - 4) Complete nomenclature of all replaceable parts, their part numbers, current costs, and name and address of nearest vendor of parts.
 - 5) Copies of guarantees and warranties issued.
 - 6) Copies of the reviewed Submittals.
 - 7) Copies of data concerning changes made during construction.
- 2. Extraneous Data: Where contents of the manuals include Manufacturer's catalog pages, clearly indicate the precise items included in this installation and delete all Manufacturers' data with which this installation is not concerned. Do not use highlighting that would not be reproducible.
- 3. Number of Copies Required: Unless otherwise specifically directed by Engineer, or stipulated in the pertinent Section of these Specifications:
 - a. For review, submit 1 paper or 1 electronic copy.
 - b. For record, deliver 3 paper copies or 1 electronic copy to Engineer.
- 4. Schedule delivery of record copies of operation and maintenance manuals at least 60 days prior to startup of respective equipment, unless otherwise specified.

2.2 INFORMATIONAL SUBMITTALS

- A. General: Prepare and submit Informational Submittals required by individual Specification Sections. Do not use highlighting that would not be reproducible.
- B. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
- C. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of architects/engineers and owners, and other information specified.
- D. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification (WPS) and Procedure Qualification Record (PQR) on AWS forms. Include names of firms and personnel certified.
- E. Installer Certificates: Prepare written statements on Manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by Manufacturer for this Project.
- F. Manufacturer Certificates: Prepare written statements on Manufacturer's letterhead certifying that Manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
- G. Product Certificates: Prepare written statements on Manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.
- H. Material Certificates: Prepare written statements on Manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
- I. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
- J. Product Test Reports: Prepare written reports indicating current product produced by Manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by Manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.

- K. Research/Evaluation Reports: Prepare written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
 - 1. Name of evaluation organization.
 - 2. Date of evaluation.
 - 3. Time period when report is in effect.
 - 4. Product and manufacturers' names.
 - 5. Description of product.
 - 6. Test procedures and results.
 - 7. Limitations of use.
- L. Preconstruction Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
- M. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
- N. Field Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
- O. Manufacturer's Instructions: Prepare written or published information that documents Manufacturer's recommendations, guidelines, and procedures for installing or operating a product or equipment. Include name of product and name, address, and telephone number of Manufacturer. Include the following, as applicable:
 - 1. Preparation of substrates.
 - 2. Required substrate tolerances.
 - 3. Sequence of installation or erection.
 - 4. Required installation tolerances.
 - 5. Required adjustments.
 - 6. Recommendations for cleaning and protection.
- P. Manufacturer's Field Reports: Prepare written information documenting tests and inspections of factory-authorized service representative. Include the following, as applicable:
 - 1. Name, address, and telephone number of factory-authorized service representative making report.
 - 2. Statement of substrate condition and acceptability of substrate for installation or application of product.
 - 3. Statement that products at Site comply with requirements.
 - 4. Summary of installation procedures being followed, whether they comply with requirements and, if not, what corrective action was taken.
 - 5. Results of operational and other tests and a statement of whether observed performance complies with requirements.
 - 6. Statement whether conditions, products, and installation will affect warranty.
 - 7. Document settings in writing.
 - 8. Other required items indicated in individual Specification Sections.
- Q. Safety Data Sheets (SDSs): Submit information directly to Owner; do not submit to Engineer.
 - 1. Engineer will not review Submittals that include SDSs and will return the entire Submittal for Resubmittal.

2.3 DELEGATED-DESIGN SUBMITTALS

- A. Where design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated, which Contractor has coordinated with the balance of the Project.
- B. Performance type design documents and calculations shall be prepared by a design professional as required by the individual Specification Section, licensed in the State of Michigan where the Project is being constructed. Design documents shall be signed and sealed by the responsible design professional. Prepare and submit written and graphic information, including, but not limited to, performance and design criteria, list of applicable codes and regulations, and calculations. Include list of assumptions and other performance and

design criteria and a summary of loads. Include load diagrams if applicable. Identify name and version of software, if any, used for calculations.

- C. In addition to Shop Drawings, Product Data, and other required Submittals, submit two copies of a statement, signed, and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

PART 3 - EXECUTION

3.1 CONTRACTOR'S REVIEW

- A. Review each Submittal and check for coordination with other work of the Contract and for compliance with the Contract Documents. Verify field dimensions and conditions; note corrections as necessary. Mark with approval stamp before submitting to Landscape Architect/Engineer.
 - 1. Approval Stamp: Stamp each Submittal with an approval stamp. Use the same stamp format for each Submittal. Include Project name and location, Submittal number, Specification Section title and number, name of reviewer, date of Contractor's approval, and statement certifying that Submittal has been reviewed, checked, and approved for compliance with the Contract Documents.
- B. Submittals that are not approved and stamped by Contractor will be rejected.

3.2 LANDSCAPE ARCHITECT'S/ENGINEER'S REVIEW

- A. Action Submittals: Engineer will review Action Submittals, make marks to indicate corrections or modifications required, and return Submittal. Engineer will stamp each Submittal with an action stamp and will mark stamp appropriately to indicate action taken, as follows:
 - 1. Reviewed, No Exceptions Noted: Submittal appears to 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. Reviewed with Comments: Upon incorporation of review comments, it appears that Submittal will 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.
 - 3. Revise and Resubmit: Submittal has one or more specific segments that are incomplete, do not appear to conform to the information given in the Contract Documents, or are incompatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Contractor shall resubmit information for review to demonstrate understanding of comments and portions of Work to be provided. Except as noted, Contractor shall not proceed with work related to Submittal.
 - 4. Rejected, Resubmit: Submittal as a whole is incomplete, does not appear to conform to the information given in the Contract Documents, or is incompatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Contractor shall resubmit information for review to demonstrate understanding of comments and portions of Work to be provided. Contractor shall not proceed with work related to Submittal.
- B. Informational Submittals: Other Submittals required by the Contract Documents are for information only. Engineer will acknowledge receipt of Informational Submittals. Such Submittals include, but are not limited to:
 - 1. Qualifications Data.
 - 2. Certificates.
 - 3. Test Reports.
 - 4. Manufacturer's Instructions.
 - 5. Maintenance Data.
 - 6. Field Reports.
- C. Delegated-Design Submittals: Review of Delegated-Design Submittals by Engineer shall not relieve Contractor of Contractor's sole responsibility for design and achieving specified performance.
- D. Submittals not required by the Contract Documents will be returned without being reviewed.
- E. Partial Submittals are not acceptable, will be considered non-responsive, and will be rejected.

3.3 RE-REVIEW COSTS

A. Compensation:

1. Should Engineer be required to review a Submittal more than twice because of failure of the Submittal to meet the requirements of the Contract Documents, Engineer will record Engineer's expenses for performing additional reviews.
2. Owner will compensate Engineer for these additional services and deduct the amount paid from payments to Contractor.

END OF SECTION 01 3300

SECTION 01 4100 – REGULATORY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes provisions for requirements and fees of regulatory agencies.
- B. Related Sections include permits and licenses indicated in other Sections.
- C. The General Conditions requires that Contractor obtain all construction permits. The Township will pay all applicable permit and inspection fees.

- 1.3 D. The Township has obtained an EGLE permit for the described and specified work. The permit will be given to the selected contractor and shall be posted on site throughout the construction and until EGLE has granted approval.

- E. This Section includes provisions for specific permits but does not include all permits.

PERMITS

- A. Building, Electrical and Soil Erosion Control Permit
 - 1. Contractor:
 - a. Obtain building permit from the Charter Township of Van Buren.
 - b. Obtain electrical permit from the Charter Township of Van Buren
 - c. Obtain a Soil Erosion and Sedimentation Permit from the Charter Township of Van Buren
 - d. Permit and inspection fees and charges will be paid by the Charter Township of Van Buren
 - e. Comply with requirements and conditions of the permit.
- B. Comply with requirements and conditions of the permit, as required Permit Compliances:
 - 1. Ensure that permit has been issued prior to beginning the Work.
 - 2. Comply with requirements of permits.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION 01 4100

SECTION 01 7123 - FIELD ENGINEERING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

- A. Attention is directed to Bidding and Contract Requirements, and to General and Supplemental Conditions, hereby made a part of this Section.

1.02 DESCRIPTION:

- A. Provide and pay for field engineering services required including all survey work.

1.03 QUALIFICATIONS:

- A. Registered civil engineer or land surveyor, acceptable to Contractor and Owner.

1.04 SURVEY REFERENCE POINTS:

- A. Locate and protect control points prior to starting site work, and preserve all permanent reference points during construction.
 - 1. Make no changes or relocation's without prior written notice to Architect.
 - 2. Report to Architect when any reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations.
 - 3. Require surveyor to replace project control points which may be lost or destroyed.
 - a. Establish replacement based on original survey control.

1.05 PROJECT SURVEY REQUIREMENTS:

- A. Establish a minimum of two permanent bench marks on the site, re-referenced to data established by survey control points.
 - 1. Record locations, with horizontal and vertical data, on Project Record Documents.
- B. Establish lines and levels, locate and layout, by instrumentation and similar appropriate means:
- C. From time to time, verify layouts by the same methods.

1.06 RECORDS:

- A. Maintain a complete, accurate log of all control and survey work as it progresses.

1.07 SUBMITTALS:

- A. Submit name and address of Surveyor or Professional Engineer to Architect.
- B. On request of Architect, submit documentation to verify accuracy of field engineering work.
- C. Submit certificate signed by registered engineer or surveyor certifying that elevations and locations of improvements are in conformance, or non-conformance, with Contract Documents.

PARTS 2 AND 3 - PRODUCTS AND EXECUTION

Not Applicable

END OF SECTION 01 7123

SECTION 01 7700 – CLOSEOUT PROCEDURES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the instructions for and the responsibilities of each party in contract closeout.
- B. Related Section includes Certificate of Substantial Completion.

1.3 SUBSTANTIAL COMPLETION

- A. Contractor: When Contractor considers that the Work or any portion of the Work is ready for its intended use, Contractor shall submit:
 - 1. Written certification to Engineer and Owner that the Work, or designated portion of the Work, is substantially complete.
 - 2. A list of major items to be completed or corrected.
 - 3. Request that Engineer issue a certificate of Substantial Completion.
- B. Engineer's Inspection: Engineer will make an inspection:
 - 1. Within 10 days after receipt of certification.
 - 2. Together with Owner and Contractor.
- C. Engineer's Determination of Substantial Completion:
 - 1. Should Engineer consider the Work or designated portion of the Work substantially complete, the following steps shall be taken:
 - a. Contractor shall prepare and submit to Engineer, a list of items to be completed or corrected as determined by the inspection.
 - b. Engineer will prepare and deliver to Owner:
 - 1) A tentative certificate of Substantial Completion.
 - 2) A tentative list of items to be completed or corrected before final payment.
 - c. Owner shall have 7 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.
 - d. Engineer will, within 14 days after delivery of tentative certificate to Owner, decide:
 - 1) Not Substantially Complete: Engineer will issue written notice to Contractor stating reasons.
 - 2) Substantially Complete: Engineer will issue definitive certificate of Substantial Completion and a revised list of items to be corrected or completed.
 - 2. Should Engineer consider that the Work or designated portion of the Work is not substantially complete, the following steps shall be taken:
 - a. Engineer shall notify Contractor in writing stating Engineer's reasons.
 - b. Contractor shall complete the Work and send a second written notice to Engineer certifying that the Project, or designated portion of the Project, is substantially complete.
 - c. Engineer and Owner will reinspect the Work.
- D. Division of Responsibilities:
 - 1. Engineer:
 - a. At the time of delivery of tentative certificate of Substantial Completion.
 - b. Deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment with respect to:
 - 1) Security.
 - 2) Operation.
 - 3) Safety.
 - 4) Protection of the Work.
 - 5) Maintenance.

- 6) Heat.
 - 7) Utilities.
 - 8) Insurance.
 - 9) Warranties.
2. Engineer's written recommendation on division of responsibilities shall be binding on Owner and Contractor until final payment unless Owner and Contractor agree otherwise in writing and so notify Engineer prior to Engineer's issuance of a definitive certificate of Substantial Completion.

1.4 FINAL INSPECTION

- A. Contractor Certification: Prior to final inspection, Contractor shall submit written certification that:
 1. The Contract Documents have been reviewed.
 2. The Project has been inspected in compliance with the Contract Documents.
 3. Work has been completed in accordance with the Contract Documents.
 4. Equipment and systems have been tested in the presence of the Owner's representative and are operational.
 5. The Project is complete and ready for final inspection.
- B. Engineer's Inspection: The Engineer will make final inspection:
 1. Within 10 days after receipt of certification.
 2. Together with Owner and Contractor.
- C. Engineer's Determination of Final Completion:
 1. Should Engineer consider the Work complete and ready for final payment in accordance with the requirements of the Contract Documents, Engineer shall request Contractor to make Project closeout submittals.
 2. Should Engineer consider the Work not complete and ready for final payment:
 - a. Engineer shall notify Contractor in writing stating the reasons.
 - b. Contractor:
 - 1) Take immediate steps to remedy the stated deficiencies.
 - 2) Send a second written notice to Engineer certifying that the Work is complete.
 - c. Engineer and Owner will reinspect the Work.

1.5 REINSPECTION COSTS

- A. Should Engineer be required to perform second inspections because of failure of the Work to comply with the original certifications of Contractor, Owner will compensate Engineer for additional services and deduct the amount paid from payment or payments to Contractor.

1.6 ADDITIONAL INSPECTION COSTS

- A. Substantial Completion: Owner will compensate Engineer for inspection services rendered between the scheduled date of Substantial Completion and the actual date of Substantial Completion and deduct the amounts paid from payment or payments to Contractor.
- B. Final Completion: Owner will compensate Engineer for inspection services rendered between the scheduled date of final completion and the actual date of final completion and deduct the amounts paid from payment or payments to Contractor.

1.7 CLOSEOUT SUBMITTALS

- A. Contractor:
 1. Provide closeout submittals as required in the Contract Documents.
 2. These submittals shall include, but not necessarily be limited to:
 - a. Project record documents.
 - b. Operation and maintenance manuals.
 - c. Manufacturer's Warranties and Guarantees.
 - d. Spare parts and maintenance materials.
 - e. Instruction in operation of all systems.

1.8 EVIDENCE OF PAYMENTS AND RELEASE OF LIENS

- A. Affidavits:
 - 1. Submit with final Application for Payment an affidavit of payment of debts and release of claims.
 - 2. Affidavit shall include:
 - a. Contractor's release or waiver of lien.
 - b. Sub-Contractor's final waiver of lien
 - c. Consent of surety of final payment.
- B. Execution: All submittals shall be duly executed before delivery to Engineer.

1.9 FINAL ADJUSTMENT OF ACCOUNTS

- A. Final Statement: Submit a final statement of accounting, which reflects all adjustments, to Engineer. This statement shall contain the following:
 - 1. Original Contract Price.
 - 2. Additions and deductions.
 - 3. Total Contract Price as adjusted.
 - 4. Previous payments.
 - 5. Sum remaining due.
- B. Final Change Order: Engineer will prepare a final Change Order reflecting approved adjustments to the Contract Price not previously made by Change Orders.

1.10 FINAL APPLICATION FOR PAYMENT

- A. Contractor shall submit a final Application for Payment in accordance with the requirements of the Contract Documents.
- B. Disposition of Final Application for Payment:
 - 1. If the final Application for Payment and the Work are acceptable in accordance with the Contract Documents:
 - a. Engineer will, within 10 days after receipt of the Application for Payment:
 - 1) Submit to Owner a written recommendation for payment.
 - 2) Submit to Owner and Contractor a written notice that the Work is acceptable subject to the provisions of the General Conditions.
 - b. Owner will, within 30 days after receipt of the Application for Payment and Engineer's recommendation in accordance with the Contract Documents, pay to Contractor the amount recommended.
 - 2. If the Application for Payment, the Work or both are unacceptable:
 - a. Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment.
 - b. Contractor shall make the necessary corrections and resubmit the Application for Payment.
 - 3. Final Completion Delayed:
 - a. Upon receipt of Contractor's final Application for Payment and recommendation by Engineer, Owner shall make payment of the balance due for that portion of the Work fully completed and accepted if Engineer confirms that final completion of the Work is significantly delayed through no fault of Contractor.
 - b. Payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of claims.
 - c. Contractor shall submit with the Application for Payment written consent of surety 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.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION 01 7700

SECTION 02 4113 – SELECTIVE SITE DEMOLITION

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

- A. Attention is directed to Bidding and Contract Requirements, General and Supplemental Requirements, which are hereby made a part of this Section.

1.02 WORK INCLUDED:

- A. Provide all labor, materials, necessary equipment and services to complete the site demolition work, as indicated on the drawings, as specified herein or both, except as for items specifically indicated as "NIC ITEMS".

1.03 QUALITY ASSURANCE:

- A. Contractor Qualifications: Minimum of five years experience in demolition of comparable nature.
- B. Requirements of All Applicable Regulatory Agencies:
 - 1. All applicable Building Codes and other Public Agencies having jurisdiction upon the work.

1.04 SUBMITTALS:

- A. Permits and notices authorizing demolition if applicable.
- B. Certificates of severance of utility services.
- C. Permit of transport and disposal of debris.
- D. Demolition procedures and operational sequence for review and acceptance by Landscape Architect.

1.05 JOB CONDITIONS:

- A. Protection:
 - 1. Erect barriers, fences, guard rails, enclosures and shoring to protect personnel, structures and utilities remaining intact.
 - 2. Protect designated trees and plants from damages.
 - 3. Use all means necessary to protect existing objects and vegetation designated to remain, and, in the event of damage, immediately make all repairs, replacements and dressing to damaged plants necessary to the approval of the Architect at no additional cost to the Owner.
- B. Maintaining Traffic:
 - 1. Ensure minimum interference with roads, streets, driveways, sidewalks and adjacent facilities.

2. Do not close or obstruct streets and sidewalks, and keep in operation throughout construction.
 3. If required by governing authorities, provide alternate routes around closed or obstructed traffic ways.
- C. Dust Control:
1. Use all means necessary for preventing dust from demolition operations from being nuisance to adjacent property owners. Methods used for dust control are subject to approval by the Architect prior to use.
- D. Burning:
1. On-site burning will not be permitted.

PART 2 - PRODUCTS "NOT APPLICABLE"

PART 3 - EXECUTION

3.01 INSPECTION:

- A. Before beginning work of this section, inspect areas in which work will be performed.
- B. Photograph or video existing conditions, including surrounding property if necessary, which could be misconstrued as damage resulting from selective demolition. File copies of photographic documentation with the Architect before beginning work of this Section.
- C. Do not commence work until all conditions and requirements of all applicable public agencies are complied with.

3.02 PREPARATION:

- A. Arrange for and verify termination of utility services to include removing meters and capping lines as required to perform work described in the specification sections.
- B. Notification:
 1. Notify the Owner at least three full working days prior to commencing the work of this Section.

3.03 CLARIFICATION:

- A. The drawings do not purport to show all objects existing on the site.
- B. Before commencing the work of the Section, verify with the Owner all objects to be removed and all objects to be preserved.

3.04 SCHEDULING:

- A. Schedule all work in a careful manner with all necessary consideration for the public and the Owner.

- B. Avoid interference with the use of, and passage to and from, adjacent facilities.

3.05 DISCONNECTION OF UTILITIES:

- A. Before starting site operations, disconnect or arrange for the disconnection of all utility services designated to be removed, performing all such work in accordance with the requirements of the utility company or agency involved.

3.06 PROTECTION OF UTILITIES:

- A. Preserve in operating condition all active utilities adjacent to or traversing the site and/or designated to remain.

3.08 OTHER DEMOLITION (IF APPLICABLE):

- A. Pull out any existing utility lines designated for abandonment, irrigation, electrical lines, pull boxes and splice boxes, man holes and catch basins to be removed and all other objects designated to be removed or interfering with the work. Contact the utility company or agency involved for their requirements for performing this work. All removed equipment and materials shall be removed from the work area the same day as removed.
- B. Removal of Debris: Remove all debris from the site and leave the site in a neat, orderly condition to the full acceptance of the Landscape Architect, or the Owner. No debris shall be left on the site overnight.

END OF SECTION 02 4113

APPENDIX A
Report on Geotechnical Investigation

French Landing Park Improvements
12090 Haggerty Road
Van Buren Charter Township, Michigan 48111

G2 Project 203164
June 22, 2020



Report on Geotechnical Investigation

French Landing Park Improvements Haggerty Road, S. I-94 Service Drive Van Buren Charter Township, Michigan 48111

Latitude 42.215493 ° N
Longitude -83.439965 ° W

Prepared for:

Russell Design, Inc.
114 Rayson Street, Suite 2A
Northville, Michigan 48167

G2 Project No. 203164
June 22, 2020



June 22, 2020

Mr. Mark R. Russell
Principal
Russell Design, Inc.
114 Rayson Street, Suite 2A
Northville, Michigan 48167

Re: Report on Geotechnical Investigation
French Landing Park Improvements
Haggerty Road, South of I-94 Service Drive
Van Buren Charter Township, Michigan 48111
G2 Project No. 203164

Dear Mr. Russell:

We have completed the geotechnical investigation within the French Landing Park located at the aforementioned address in Van Buren Charter Township, Michigan. This report presents the results of our observations and analyses and our recommendations for earthwork operations, foundation and pavement design, and construction considerations as they relate to the geotechnical conditions on site.

We appreciate the opportunity to be of service to Russell Design, Inc., and look forward to discussing the recommendations presented. In the meantime, if you have any questions regarding the report or any other matter pertaining to the project, please call us.

Sincerely,

G2 Consulting Group, LLC

Tyler S. Hesse, E.I.T.
Staff Engineer

TSH/JBS/jbs

Jason B. Stoops, P.E.
Associate / Office Manager



EXECUTIVE SUMMARY

We understand that the project consists of performing various improvements within the French Landing Park located in Van Buren Charter Township, Michigan. Moreover, we understand that a new kayak launch station, boardwalk, and canopy structure, as well as bituminous walkways and parking areas will be constructed.

Approximately 3 to 10 inches of sandy topsoil are present at the ground surface within B-03 through B-05. Medium compact sand and hard silty clay fill soils underlie the topsoil within B-04 and B-05 and extend approximately 2-1/2 feet below grade. Native very loose to loose granular soils consisting of sand and clayey sand are present at the ground surface within B-01 and B-02, underlie the topsoil within B-03, and underlie the fill soils within B-04 and B-05 extending to approximate depths ranging from 2 to 6-1/2 feet. Native very stiff to hard silty clay underlies the native granular soils and extends to the explored depths ranging from 15 to 35 feet. Groundwater measurements were performed during and upon completion of drilling operations. During drilling operations, groundwater was encountered at approximate depths ranging from 2 to 4 feet below existing grades. Upon completion, groundwater was measured at approximate depths ranging from 3 to 6 feet below existing grades. No groundwater was encountered during or upon completion of drilling operations within borings B-01 and B-03.

As previously stated, sand and silty clay fill soils were encountered at the ground surface within B-04 and B-05, respectively. These soils appear to have been placed in an engineered manner, have relatively low moisture contents, and may be left in place, provided they pass a proof roll evaluation.

Based on the information provided by Russell Design, Inc., the proposed boardwalk and kayak launch station will be supported on a deep driven timber pile foundation system. At the time of this report, information related to the diameter or design loads of the aforementioned timber piles were not available. However, for evaluation purposes, it will be assumed that the timber piles will be 12-inches in diameter with a 15 kip design load. Similarly, information related to tip elevations and stickup length of the timber piles were unavailable at the time of this investigation.

Based on our preliminary analyses, it appears that 12-inch nominal diameter timber piles embedded approximately 13 feet into the very stiff to hard native clays will provide an allowable compressive capacity of greater than 15 kips. A Factor of Safety of 3 was used in estimating the allowable capacities. The allowable estimated capacities of timber piling at alternative depths can be evaluated once loading conditions for the piles have been determined.

We anticipate caving and sloughing of the upper native granular and/or granular fill soils will occur during foundation and utility excavation operations. The contractor should, therefore, be prepared to over-excavate and form foundations, as necessary to prevent caving or sloughing and to provide smooth and vertical foundation sides to reduce the risk of frozen soil adhering to the concrete and raising foundations.

We anticipate that perched groundwater will be encountered within foundation and utility excavations extending below a depth of 2 to 4 feet. In consideration of the predominately cohesive soils, it is expected that any surface precipitation run-off water flowing onto the exposed subgrade and any groundwater can be reasonably controlled with temporary pumping from properly constructed sumps.

Do not consider this summary separate from the entire text of this report, with all the conclusions and qualifications mentioned herein. Details of our analysis and recommendations are discussed in the following sections and in the Appendix of this report.



PROJECT DESCRIPTION

We understand that the project consists of performing various improvements within the French Landing Park located in Van Buren Charter Township, Michigan. Moreover, we understand that a new kayak launch station, boardwalk, and canopy structure, as well as bituminous walkways and parking areas will be constructed.

At the time of this investigation, design loads for the boardwalk, kayak launch station, and canopy structure were not available; however, for evaluation purposes, it will be assumed that timber pile design loads will be approximately 15 kips, and the canopy structure single column loads will range from approximately ½ to 1 kips. It was reported to us that a supplemental geotechnical investigation will be required to provide timber pile design recommendations and construction considerations of the aforementioned boardwalk and kayak launch station; however, general preliminary recommendations are presented herein. Similarly, no information related to anticipated traffic frequencies was available at the time of this report; however, it will be assumed that traffic volumes are similar with other public park developments in the area.

Information related to existing and final site grades were not available at the time of this report. The recommendations presented within this report assume that future structures will be constructed within one foot of existing grades.

Once loading conditions, traffic conditions, and pavement grades have been determined, G2 should be notified so we can evaluate our recommendations presented herein. The purpose of our exploration is to determine and evaluate the general subsurface conditions within the French Landing Park and to develop recommendations for the subgrade preparation, foundation design, pavement design, and construction considerations as they relate to the geotechnical conditions on site.

SCOPE OF SERVICES

The field operations, laboratory testing, and engineering report preparation were performed under direction and supervision of a licensed professional engineer. Our services were performed according to generally accepted standards and procedures in the practice of geotechnical engineering in this area. Our scope of services for this project is as follows:

1. We drilled a total of five (5) soil borings throughout the French Landing Park. Soil borings B-01 and B-03 were performed within the vicinity of the proposed kayak launch station and boardwalk, respectively, extending to a depth of 35 feet each. Soil boring B-02 was performed within the vicinity of the proposed canopy structure extending to a depth of 15 feet. Soil borings B-04 and B-05 were performed within the vicinity of the proposed bituminous walkways and parking areas, respectively, extending to a depth of 15 feet each.
2. We performed laboratory testing on representative samples obtained from the soil borings. Laboratory testing included visual engineering classification, natural moisture content, and determination of Atterberg limits and unconfined compressive strength.
3. We prepared this engineering report. The report includes recommendations regarding subgrade preparation, soil bearing capacity, estimate settlement, pavement cross-sections, and construction considerations as they related to foundation and pavement construction.

FIELD OPERATIONS

Russell Design, Inc., in conjunction with G2, selected the depth and location of the soil borings. The boring locations were located in the field by G2 using conventional taping methods from known surface features prior to our drilling operations. The approximate soil boring locations are shown on the Soil Boring Location Plan, Plate No. 1. At the time of this investigation, topographic information at the soil boring locations was not provided.



The soil borings were drilled using a truck-mounted rotary drilling rig. Continuous flight 2-1/4 inch inside diameter hollow-stem augers were used to advance the borehole to the explored depths. Soil samples were obtained at intervals of 2-1/2 feet within the upper 10 feet and at intervals of 5 feet thereafter. The samples were obtained by the Standard Penetration Test method (ASTM D 1586), which involves driving a 2-inch diameter split-spoon sampler into the soil with a 140-pound weight falling 30 inches. The sampler is generally driven three successive 6-inch increments with the number of blows for each increment recorded. The number of blows required to advance the sampler the last 12 inches is termed the Standard Penetration Resistance (N). The blow counts for each 6-inch increment and the resulting N-value are presented on the soil boring logs.

The soil samples were placed in sealed containers and brought to our laboratory for testing and classification. During field operations, the driller maintained logs of the subsurface conditions, including changes in stratigraphy and observed groundwater levels. The final boring logs are based on the field boring logs supplemented by laboratory soil classification and test results. The boreholes were backfilled with auger cuttings upon completion of drilling operations.

LABORATORY TESTING

Representative soil samples were subjected to laboratory testing to determine soil parameters pertinent to foundation design and site preparation. An experienced geotechnical engineer classified the samples in general accordance with the G2 General Notes Terminology and applications of the Visual-Manual Unified Soil Classification System.

Laboratory testing included determination of natural moisture content, Atterberg limits, and unconfined compressive strength, which were determined in accordance with the following test methods:

- "Standard Practice for Description and Identification of Soils (Visual-Manual Procedures)" (ASTM D4288);
- "Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass" (ASTM D2216);
- "Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils" (ASTM D4318);
- "Standard Test Methods for Unconfined Compressive Strength of Cohesive Soil" (ASTM D2166).

The unconfined compressive strengths were determined by ASTM Test Method D 2166, and using a spring-loaded hand penetrometer. Per ASTM Test Method D 2166, the unconfined compressive strength of cohesive soils is determined by axially loading a small cylindrical soil sample under a slow rate of strain. The unconfined compressive strength is defined as the maximum stress applied to the soil sample before shear failure. If shear failure does not occur prior to a total strain of fifteen percent, the unconfined compressive strength is defined as the stress at a strain of fifteen percent. The hand penetrometer estimates the unconfined compressive strength to a maximum of 4-1/2 tons per square foot (tsf) by measuring the resistance of the soil sample to the penetration of a calibrated spring-loaded cylinder.

The results of the moisture contents, as well as Atterberg limits and unconfined compressive strength determinations are presented on the individual soil boring logs, Figure Nos. 1 through 5, at the applicable depths. In addition, the results of the Unconfined Compressive Strengths determined in accordance with ASTM D 2166 and Atterberg limits determined in accordance with ASTM D 4318 are presented graphically in the Appendix as Figure Nos. 6 and 7, respectively. We will hold the soil samples for 60 days from the date of this report, after which time they will be discarded. If you would like the samples, please let us know.

SITE DESCRIPTION

The French Landing Park is located northwest of the Haggerty Road and Haggerty Highway intersection



in Van Buren Township, Michigan. The site currently consists of two (2) small maintenance buildings, a boardwalk and associated observation deck, and associated bituminous pavements. The remainder of the site is grass covered with select wooded areas. In addition, the site is bordered by Belleville Lake to the west and the surrounding properties are residential in nature. At the time of this report, information related to existing site grades was not available; however, based on visual observations, the site is generally flat with approximate grade changes of 3 to 5 feet.

SOIL CONDITIONS

Approximately 3 to 10 inches of sandy topsoil are present at the ground surface within B-03 through B-05. Fill soils consisting of sand and silty clay underlie the topsoil within B-04 and B-05 and extend approximately 2-1/2 feet below grade. Native granular soils consisting of sand and clayey sand are present at the ground surface within borings B-01 and B-02, underlie the topsoil within boring B-03, and underlie the fill soils within borings B-04 and B-05 extending to approximate depths ranging from 2 to 6-1/2 feet. Native silty clay underlies the native granular soils and extends to the explored depths ranging from 15 to 35 feet.

The sand fill soils are medium compact in relative density, with a Standard Penetration Test (SPT) N-value of 15 blows per foot (bpf). The silty clay fill soils are hard in consistency, with a natural moisture content of 11 percent, and an unconfined compressive strength of 9,000 pounds per square foot (psf). The native granular soils are very loose to loose in relative density, with SPT N-values ranging from 2 to 8 bpf. The native silty clay soils are very stiff to hard in consistency, with natural moisture contents ranging from 13 to 22 percent, dry densities ranging from 124 to 134 pounds per cubic foot (pcf), and unconfined compressive strengths ranging from 6,000 to in excess of 9,000 psf.

The stratification depths shown on the soil boring logs represent the soil conditions at the boring locations. Variations may occur between and away from the boring locations. Additionally, the stratigraphic lines represent the approximate boundaries between soil types. The transition may be more gradual than indicated. We have prepared the boring logs on the basis of the field logs of the soil conditions encountered supplemented by laboratory classification and testing.

The Soil Boring Location Plan, Plate No. 1, and Soil Boring Logs, Figure Nos. 1 through 5, are presented in the Appendix. The soil profiles described above are generalized descriptions of the conditions encountered at the boring locations. General Notes Terminology defining the nomenclature used on the soil boring logs and elsewhere in this report are presented on Figure No. 8.

GROUNDWATER CONDITIONS

Groundwater measurements were performed during and upon completion of drilling operations. During drilling operations, groundwater was encountered at approximate depths ranging from 2 to 4 feet below existing grades. Upon completion, groundwater was measured at approximate depths ranging from 3 to 6 feet below existing grades. No groundwater was encountered during or upon completion of drilling operations within B-01 and B-03. An estimate in the historical groundwater levels may be made based on the soil color change from browns (aerobic conditions where free oxygen is available) to grays (anaerobic condition where free oxygen is not available). This color change occurs at approximate depths ranging from 6-1/2 to 12 feet below the ground surface.

Fluctuations in perched and long term groundwater levels should be anticipated due to seasonal variations and following periods of prolonged precipitation. It should also be noted that groundwater observations made during drilling operations in predominantly cohesive soils are not necessarily indicative of the static groundwater level. This is due to the low permeability of such soils and the tendency of drilling operations to seal off the natural paths of groundwater flow.

SITE PREPARATION

We anticipate that earthwork operations will consist of complete removal of existing topsoil, trees,



vegetation, and root masses within the influence of the proposed structures and pavements, proof rolling / proof compacting the exposed subgrade, excavating for utilities and foundations, and preparing the site for pavement support. We recommend that all earthwork operations be performed in accordance with comprehensive specifications and be properly monitored in the field by qualified personnel under the direction of a licensed professional engineer.

At the start of earthwork operations, any existing topsoil, trees, or vegetation should be removed in their entirety from the proposed development areas. Any existing utilities within the footprint of proposed structures should be completely removed and backfilled with engineered fill. Existing utilities outside the proposed structural footings can be removed or abandoned in place and completely filled with grout.

At the time of this report, information related to final site grades was not available; however, it will be assumed that pavement grades will be within 1 foot of existing grades. Once pavement grades have been determined, G2 must be notified to evaluate their effect on our recommendations. The conclusions and recommendations presented in this report are not valid unless G2 reviews the changes. G2 will then confirm the recommendations presented herein or make changes in the writing.

After the existing topsoil has been completely removed within the proposed pavement areas, the exposed subgrade should be thoroughly proof rolled / proof compacted. Where granular soils are encountered, soils should be proof-compacted with a heavy smooth-drum vibratory roller and should be visually evaluated for instability and/or unsuitable soil conditions by a qualified geotechnical engineer or technician. We recommend 10 passes in two perpendicular directions during the proof-compaction operations. Where cohesive soils are encountered, soils should be proof-rolled with a fully loaded tandem-axle dump truck and evaluated for stability. We advise against the use of belly-pan scrapers for proof-rolling operations. Unsuitable soils or soils exhibiting excessive instability, such as severe rutting, should be improved with additional compaction or undercut to expose stable soils. Resulting excavations should be backfilled with engineered fill.

As previously stated, sand and silty clay fill soils were encountered at the ground surface within B-04 and B-05, respectively. These soils appear to have been placed in an engineered manner, have relatively low moisture contents, and may be left in place, provided they pass a proof roll / proof compaction evaluation.

Engineered fill should be free of organic matter, frozen soil, clods, or harmful material. The fill should be placed in uniform horizontal layers not more than 9 inches in loose thickness. The engineered fill should be compacted to achieve a dry density corresponding with 95 percent of the maximum dry density as determined by the Modified Proctor Compaction test (ASTM D1557). We recommend the use of granular fill soils within confined areas such as utility trenches and adjacent to foundation walls. Granular engineered fill is generally more easily compacted than cohesive soils within these confined areas. Additionally, the proper placement and compaction of backfill within these areas is imperative to provide adequate support for overlying floor slabs and pavements.

FOUNDATION RECOMMENDATIONS

Canopy Foundations

At the time of this report, information related to final site grades was unavailable. However, for evaluation purposes, it will be assumed that the canopy structure foundations will extend approximately 3-1/2 feet below existing grades. As previously mentioned, information related to type or structural loading conditions of the canopy structure foundations were not provided; however, it will be assumed that the canopy structure will be supported on conventional spread footings with column loads on the order of ½ to 1 kips. Once information related to anticipated loading conditions becomes available, G2 should be informed to reevaluate the recommendations presented herein.

We recommend that proposed canopy structure be constructed with conventional shallow spread



footings designed to bear within the native loose clayey sand soils. Foundations bearing within the native loose clayey sand soils can be designed with a net allowable soil bearing pressure of 2,000 psf. If a higher net allowable bearing capacity is desired, foundations can extend through the upper granular soils and bear within the underlying very stiff to hard silty clay. A net allowable soil bearing pressure of 6,000 psf can be used for foundation bearing within the very stiff to hard silty clay.

Exterior foundations must bear at a minimum depth of 3-1/2 feet below finished grade for protection against frost heave. We recommend G2 be on site during construction to observe the foundations excavations and verify the adequacy of the bearing soils.

If the recommendations outlined in this report are adhered to, total and differential settlements for the completed structure should be within 1 inch and 1/2 inch, respectively. We expect settlements of these magnitudes are within tolerable limits for the type of structures proposed. We recommend all foundations be suitably reinforced to minimize the effects of differential settlements associated with local variations in subsoil conditions.

Vertical Capacity of Driven Timber Pile Foundations

Based on the information provided by Russell Design, Inc., the proposed boardwalk and kayak launch station will be supported on a deep driven timber pile foundation system. At the time of this report, information related to the diameter or design loads of the aforementioned timber piles were not available. However, for evaluation purposes, it will be assumed that the timber piles will be 12-inches in nominal diameter with a 15 kip design load. Similarly, information related to tip elevations and stickup length of the timber piles were unavailable at the time of this investigation. In order to determine tip elevations and stickup length, a supplemental investigation will be required to determine the bottom elevation of Belleville Lake.

Based on our preliminary analyses, it appears that 12-inch diameter nominal timber piles embedded approximately 13 feet into the very stiff to hard silty clay will provide an allowable compressive capacity of greater than 15 kips. A Factor of Safety of 3 was used in estimating the allowable capacity. The allowable estimated capacities of timber piling at alternative depths can be evaluated if desired once the required loading conditions have been determined. If the boardwalk is supported on driven timber piling that extends at least beyond the minimum recommended pile tip elevations, total and differential settlement should be limited primarily to the elastic compression of the piling.

Lateral Capacity of Driven Timber Pile Foundations

Lateral loads may be resisted by the bending resistance of the timber piling and by the passive resistance of the adjacent soils. It may be assumed that the soils adjacent to a 12-inch nominal diameter timber pile can safely resist lateral loads imposed at the ground surface up to 4.5 kips. The lateral resistance of other pile sizes may be assumed to be proportional to the pile diameter.

In calculating the maximum bending moment in a pile, the lateral load imposed at the ground surface may be multiplied by an assumed moment arm of 3 feet. For design purposes, it may be assumed that the maximum bending moment will occur at the ground surface and that the bending moment will decrease to zero at a depth of 16 feet below the ground surface. Our estimates are based upon an allowable lateral deflection of 1/4 inch.

Alternatively, lateral loads can be resisted by installing the piling at a maximum batter of 1:3 (horizontal:vertical). The lateral capacity for 15-kip compression piles, based upon the lateral vector component, is 3.8 kips and 5 kips per pile for 1:4 and 1:3 (horizontal:vertical) batters, respectively.

Driven Pile Installation

Center-to-center pile spacing should not be less than 3 pile diameters to avoid any reduction in downward pile capacity due to group action. Variations in the depths and relative strength and

consistency of the soils from location to location may result in driving resistance differences; therefore, pile-driving refusal may be experienced at shallower elevations than estimated.

PAVEMENT RECOMMENDATIONS

We understand that bituminous pavements will be constructed for both parking areas and pedestrian pathways. Information related to final pavements grades or anticipated traffic frequencies were not available at the time of this report. Once this information becomes available, G2 should be notified to re-evaluate the recommendations presented herein.

We anticipate that standard duty flexible pavements will be utilized within the parking areas and associated access drives, with traffic consisting of regular passenger vehicles, and will be subjected to traffic loads on the order of 75,000 Equivalent 18-kip Single Axle Loads (ESALs) over a 20-year design life. Similarly, we anticipate that a standard duty flexible pavements will be utilized within the pedestrian pathway areas, with traffic consisting of primarily pedestrians and occasional maintenance vehicles, and will be subjected to loads on the order to 50,000 ESALs over a 20-year design life.

Provided the recommendations presented in the *SITE PREPARATION* section of this report are adhered to, we anticipate subgrade resilient moduli of 7,000 pounds per square inch (psi) can be used for the native granular and/or sand and silty clay fill soils. For evaluation purposes, we assumed a serviceability loss of 2.0, a standard deviation of 0.49, and a reliability of 90 percent.

Flexible Pavement Design – Standard-Duty – Parking Areas and Access Drives			
Material Type	Minimum Thickness (in)	Structural Coefficient	Structural Number (SN)
MDOT 5E1 Bituminous Wearing Course	1-1/2	0.42	0.63
MDOT 3C Bituminous Base Course	2	0.42	0.84
MDOT 21AA Aggregate Base Course (dense-graded)	8	0.14	1.12
Total SN →			2.59
Flexible Pavement Design – Standard Duty – Pedestrian Pathways			
Material Type	Minimum Thickness (in)	Structural Coefficient	Structural Number (SN)
MDOT 5E1 Bituminous Wearing Course	1-1/2	0.42	0.63
MDOT 3C Bituminous Base Course	1-1/2	0.42	0.63
MDOT 21AA Aggregate Base Course (dense-graded)	8	0.14	1.12
Total SN →			2.38

We recommend “stub” or “finger” drains be provided around catch basins to minimize the accumulation of water above and within any frost susceptible subgrade soils. The pavement and subgrade should be properly sloped to promote effective surface and subsurface drainage and prevent water from ponding. We also recommend pavement subbase materials consist of non-frost susceptible aggregates where possible. Any undercut areas within predominantly clayey soils should be connected with finger drains to the closest catch basins to drain water from within the granular undercut backfill material.

Regular timely maintenance should be performed on the bituminous pavement to reduce the potential deterioration associated with moisture infiltration through surface cracks. The owner should be prepared to seal the cracks with hot-applied elastic crack filler as soon as possible after cracking develops and as often as necessary to block the passage of water to the subgrade soils.



CONSTRUCTION CONSIDERATIONS

At the time of this report, information related to utility type, alignment, or depth were not available. Similarly, information related to the canopy foundation bearing depths were not available at the time of this report. However, for evaluation purposes, it will be assumed that utilities extend approximately 5 to 8 feet below existing grades and foundation excavations will extend 3-1/2 feet below existing grades. If this information becomes available; G2 should be notified to re-evaluate the recommendations presented herein.

We anticipate caving and sloughing of the upper native granular and/or granular fill soils will occur during foundation and utility excavation operations. The contractor should, therefore, be prepared to over-excavate and form foundations, as necessary to prevent caving or sloughing and to provide smooth and vertical foundation sides to reduce the risk of frozen soil adhering to the concrete and raising foundations. We anticipate that perched groundwater will be encountered within foundation and utility excavations extending below a depth of 2 to 4 feet. In consideration of the predominately cohesive soils, it is expected that any surface precipitation run-off water flowing onto the exposed subgrade and any groundwater can be reasonably controlled with temporary pumping from properly constructed sumps.

It should generally be expected that vertical or near-vertical excavations would be unstable. Where sufficient space is available, temporary unsurcharged trench and excavation sides should be sloped back. Temporary unsurcharged slopes may be cut at 2 horizontal units to 1 vertical unit (2H:1V) within the native very loose to loose granular soils and sand fill soils, and (3/4H:1V) within the native very stiff to hard cohesive soils for temporary excavations extending below a depth of 5 feet. Where seepage from excavation cuts is observed, the slopes will need to be flattened sufficiently to achieve stability, but in no case left steeper than 3H:1V at and below the seepage level. All excavations should be safely sheeted, shored, sloped, or braced in accordance with MI-OSHA requirements. If material is stored or equipment is operated near an excavation, lower angle slopes or stronger shoring must be used to resist the extra pressure due to the superimposed loads.

GENERAL COMMENTS

We have formulated the evaluations and recommendations presented in this report relative to site preparation and foundations on the basis of data provided to us relating to the project location, anticipate type of structure, and anticipated surface grades for the proposed site. Any significant change in this data should be brought to our attention for review and evaluation with respect to prevailing subsurface conditions. Furthermore, if changes occur in the design, location, or concept of the project, conclusions and recommendations contained in this report are not valid unless G2 Consulting Group, LLC reviews the changes. G2 Consulting Group, LLC will then confirm the recommendations presented herein or make changes in writing.

The scope of the present investigation was limited to evaluation of subsurface conditions for the support of anticipated structures and other related aspects of the development. No chemical, environmental, or hydrogeological testing or analyses were included in the scope of this investigation.

We base the analyses and recommendations submitted in this report upon the data from the soil borings performed at the approximate locations shown on the Soil Boring Location Plan, Plate No. 1. A supplemental investigation with additional soil borings will be required to provide final design recommendations of the timber pile foundation systems. This report does not reflect variations that may occur between the actual boring locations and the actual structure locations. The nature and extent of any such variations may not become clear until the time of construction. If significant variations then become evident, it may be necessary for us to re-evaluate our report recommendations.

We recommend G2 Consulting Group, LLC observe all geotechnical related work, including foundation construction, subgrade preparation, and engineered fill placement. G2 Consulting Group, LLC will perform the appropriate testing to confirm the geotechnical conditions given in the report are found



during construction.

APPENDIX

Soil Boring Location Plan	Plate No. 1
Soil Boring Logs	Figure Nos. 1 through 5
Unconfined Compressive Strength Test Results	Figure No. 6
Atterberg Limit Results	Figure No. 7
General Notes Terminology	Figure No. 8



Legend



Soil Borings drilled by Triple R Drilling, LLC on May 23, 2020

Notes

1. Soil Borings B-01 and B-03 drilled to a depth of 35 feet.
2. Soil Borings B-02, B-04, and B-05 drilled to a depth of 15 feet.

Soil Boring Location Plan

French Landing Park
Haggerty Road, South of I-94 Service Drive
Van Buren Charter Township Michigan 48111



CONSULTING GROUP

Project No. 203164

Drawn by: TSH

Date: 05/29/20

Scale: NTS

Plate
No. 1

Project Name: French Landing Park Improvements

Project Location: NW of Haggerty Road and Haggerty Highway
Intersection
Van Buren Charter Township, Michigan

G2 Project No. 203164

Latitude: 42.216138° Longitude: -83.440223°



Soil Boring No. B-01

CONSULTING GROUP

SUBSURFACE PROFILE

SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Very Loose Brown Sand with trace silt and gravel							
			2.0		1				
				S-01	1	2			
5					5				
			5	S-02	6	13	18.8	124	6560
		Very Stiff to Hard Brown Silty Clay with trace sand and gravel			7				
				S-03	12	24	16.1		9000*
			9.0		7				
10			10	S-04	10	22	17.1		9000*
		Hard Mottled Brown and Gray Silty Clay with trace sand and gravel			12				
			11.5						
15					4				
			15	S-05	7	17	15.6		8000*
					10				
		Very Stiff to Hard Silty Clay with trace sand and gravel							
20			20	S-06	4	18	16.0		8000*
					7				
					11				

Total Depth: 35 ft
Drilling Date: May 23, 2020
Inspector:
Contractor: Triple R Drilling, LLC
Driller: R. Rau

Water Level Observation:
Dry during and upon completion of drilling operations

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Drilling Method:
2-1/4 inch inside diameter hollow-stem auger

Figure No. 1a

Project Name: French Landing Park Improvements

Project Location: NW of Haggerty Road and Haggerty Highway
Intersection
Van Buren Charter Township, Michigan

G2 Project No. 203164

Latitude: 42.216138° Longitude: -83.440223°



Soil Boring No. B-01

CONSULTING GROUP

SUBSURFACE PROFILE

SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
25		Very Stiff to Hard Silty Clay with trace sand and gravel <i>(continued)</i>	25	S-07	4 6 10	16	16.3		9000*
30			30	S-08	4 6 7	13	18.0		8000*
35			35.0	S-09	4 6 7	13	17.1		6000*
		End of Boring @ 35 ft							
40			40						

Total Depth: 35 ft
Drilling Date: May 23, 2020
Inspector:
Contractor: Triple R Drilling, LLC
Driller: R. Rau

Water Level Observation:
Dry during and upon completion of drilling operations

Notes:
* Calibrated Hand Penetrometer

Drilling Method:
2-1/4 inch inside diameter hollow-stem auger

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 1b

Project Name: French Landing Park Improvements

Project Location: NW of Haggerty Road and Haggerty Highway
Intersection
Van Buren Charter Township, Michigan

G2 Project No. 203164

Latitude: 42.215753° Longitude: -83.439973°



Soil Boring No. B-02

CONSULTING GROUP

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Loose Brown Sand with trace clay and gravel							
			2.0		2				
				S-01	3	8			
					5				
		Loose Brown Clayey Sand with trace gravel							
5			5	S-02	1	7			
					2				
					5				
			6.5						
				S-03	3				
					7	15	13.7	134	12560
					8				
10			10	S-04	4	15	13.7		9000*
					7				
					8				
		Hard Gray Silty Clay with trace sand and gravel							
15			15.0	S-05	4	18	14.5		8000*
					7				
					11				
		End of Boring @ 15 ft							
20			20						

Total Depth: 15 ft
Drilling Date: May 23, 2020
Inspector:
Contractor: Triple R Drilling, LLC
Driller: R. Rau

Water Level Observation:
2 feet during drilling operations; 3 feet upon completion

Notes:
Borehole collapsed at 4 ft after auger removal
* Calibrated Hand Penetrometer

Drilling Method:
2-1/4 inch inside diameter hollow-stem auger

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 2

Project Name: French Landing Park Improvements

Project Location: NW of Haggerty Road and Haggerty Highway
Intersection
Van Buren Charter Township, Michigan

G2 Project No. 203164

Latitude: 42.215253° Longitude: -83.440292°



Soil Boring No. B-03

CONSULTING GROUP

SUBSURFACE PROFILE

SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Brown Sand (8 inches)	0.7						
		Loose Light Brown Clayey Sand with trace gravel	3.0	S-01	2 3 3	6			
5			5	S-02	7 12 12	24	15.2		9000*
		Hard Mottled Brown and Gray Silty Clay with trace sand and gravel		S-03	8 13 18	31	14.6		9000*
10			10	S-04	12 17 23	40	13.8		9000*
15			15	S-05	5 8 11	19	14.8		9000*
		Very Stiff to Hard Gray Silty Clay with trace sand and gravel							
20			20	S-06	4 7 10	17	14.6		9000*

Total Depth: 35 ft
Drilling Date: May 23, 2020
Inspector:
Contractor: Triple R Drilling, LLC
Driller: R. Rau

Water Level Observation:
Dry during and upon completion of drilling operations

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Drilling Method:
2-1/4 inch inside diameter hollow-stem auger

Figure No. 3a

Project Name: French Landing Park Improvements

Project Location: NW of Haggerty Road and Haggerty Highway
Intersection
Van Buren Charter Township, Michigan

G2 Project No. 203164

Latitude: 42.215253° Longitude: -83.440292°



Soil Boring No. B-03

CONSULTING GROUP

SUBSURFACE PROFILE

SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
25		Very Stiff to Hard Gray Silty Clay with trace sand and gravel <i>(continued)</i>	25	S-07	4 6 8	14	16.2		9000*
30			30	S-08	4 7 8	15	14.6		7000*
35			35.0	S-09	4 6 8	14	15.3		7000*
		End of Boring @ 35 ft							
40			40						

Total Depth: 35 ft
Drilling Date: May 23, 2020
Inspector:
Contractor: Triple R Drilling, LLC
Driller: R. Rau

Water Level Observation:
Dry during and upon completion of drilling operations

Notes:
* Calibrated Hand Penetrometer

Drilling Method:
2-1/4 inch inside diameter hollow-stem auger

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 3b

Project Name: French Landing Park Improvements

Project Location: NW of Haggerty Road and Haggerty Highway
Intersection
Van Buren Charter Township, Michigan

G2 Project No. 203164

Latitude: 42.215493° Longitude: -83.439965°



Soil Boring No. B-04

CONSULTING GROUP

SUBSURFACE PROFILE

SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Brown Sand (10 inches)	0.8						
		Fill: Medium Compact Brown Sand with trace cobbles	2.5	S-01	5 7 8	15			
		Loose Light Brown Sand with trace silt and gravel	4.0						
5		Hard Brown Silty Clay with trace sand and gravel	5	S-02	3 3 4	7			
			7.0	S-03	5 9 9	18	20.3		9000*
10		Hard Gray Silty Clay with trace sand and gravel	10	S-04	6 9 10	19	14.9		9000*
15			15.0	S-05	3 5 6	11	15.7		9000*
		End of Boring @ 15 ft							
20			20						

Total Depth: 15 ft
Drilling Date: May 23, 2020
Inspector:
Contractor: Triple R Drilling, LLC
Driller: R. Rau

Water Level Observation:
4 feet during drilling operations; 3 feet upon completion

Notes:
Borehole collapsed at 3 ft after auger removal
* Calibrated Hand Penetrometer

Drilling Method:
2-1/4 inch inside diameter hollow-stem auger

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 4

Project Name: French Landing Park Improvements

Project Location: NW of Haggerty Road and Haggerty Highway
Intersection
Van Buren Charter Township, Michigan

G2 Project No. 203164

Latitude: 42.215572° Longitude: -83.439490°



Soil Boring No. B-05

CONSULTING GROUP

SUBSURFACE PROFILE

SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		Topsoil: Brown Sand (3 inches)	0.3						
		Fill: Hard Gray Silty Clay with trace sand, gravel, and pulverized asphalt (LL=49. PL=17)	2.5	S-01	4 5 6	11	10.6		9000*
		Loose Light Brown Clayey Sand with trace gravel	4.0						
5		Very Stiff Light Brown Silty Clay with trace sand and gravel, occasional cobbles	5	S-02	2 3 3	6			
			7.0	S-03	4 7 7	14	21.4		7000*
10		Hard Gray Silty Clay with trace sand and gravel	10	S-04	6 7 7	14	15.1		9000*
15			15.0	S-05	3 5 7	12	15.9		9000*
		End of Boring @ 15 ft							
20			20						

Total Depth: 15 ft
Drilling Date: May 23, 2020
Inspector:
Contractor: Triple R Drilling, LLC
Driller: R. Rau

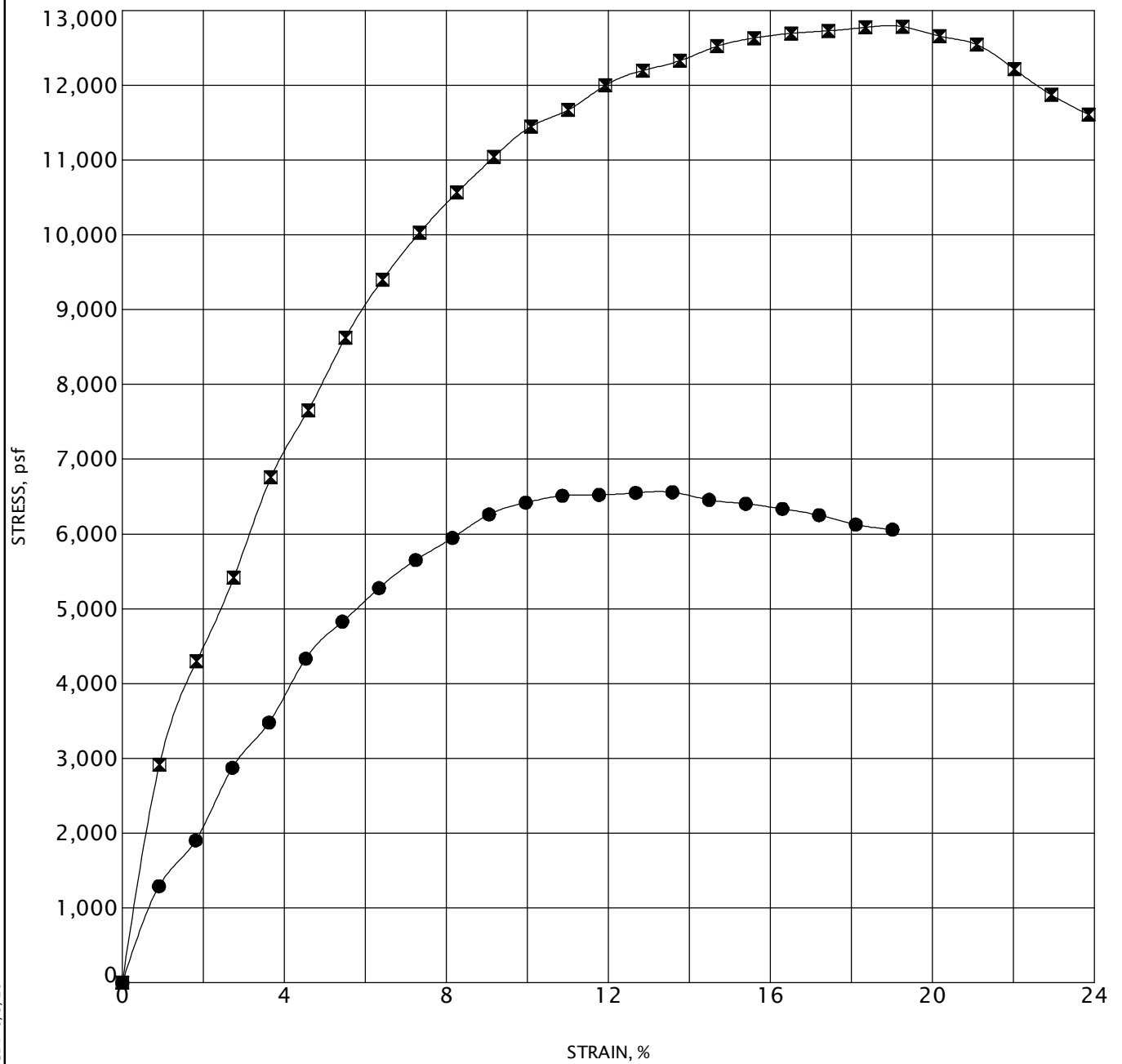
Water Level Observation:
4 feet during drilling operations; 6 feet upon completion

Notes:
Borehole collapsed at 6-1/2 ft after auger removal
* Calibrated Hand Penetrometer

Drilling Method:
2-1/4 inch inside diameter hollow-stem auger

Excavation Backfilling Procedure:
Borehole backfilled with auger cuttings

Figure No. 5



Specimen	Classification	MC%	γ_d	UC
● B-01 S-02	Very Stiff Brown Silty Clay	19	124	6560
✕ B-02 S-03	Hard Gray Silty Clay	14	134	12560



UNCONFINED COMPRESSIVE STRENGTH TEST

Project Name: French Landing Park Improvements
 Project Location: NW of Haggerty Road and Haggerty Highway Intersection
 Van Buren Charter Township, Michigan
 G2 Project No.: 203164 Figure No. 6

GENERAL NOTES TERMINOLOGY

Unless otherwise noted, all terms herein refer to the Standard Definitions presented in ASTM 653.

PARTICLE SIZE

Boulders	- greater than 12 inches
Cobbles	- 3 inches to 12 inches
Gravel - Coarse	- 3/4 inches to 3 inches
- Fine	- No. 4 to 3/4 inches
Sand - Coarse	- No. 10 to No. 4
- Medium	- No. 40 to No. 10
- Fine	- No. 200 to No. 40
Silt	- 0.005mm to 0.074mm
Clay	- Less than 0.005mm

CLASSIFICATION

The major soil constituent is the principal noun, i.e. clay, silt, sand, gravel. The second major soil constituent and other minor constituents are reported as follows:

Second Major Constituent (percent by weight)	Minor Constituent (percent by weight)
Trace - 1 to 12%	Trace - 1 to 12%
Adjective - 12 to 35%	Little - 12 to 23%
And - over 35%	Some - 23 to 33%

COHESIVE SOILS

If clay content is sufficient so that clay dominates soil properties, clay becomes the principal noun with the other major soil constituent as modifier, i.e. sandy clay. Other minor soil constituents may be included in accordance with the classification breakdown for cohesionless soils, i.e. silty clay, trace sand, little gravel.

Consistency	Unconfined Compressive Strength (psf)	Approximate Range of (N)
Very Soft	Below 500	0 - 2
Soft	500 - 1,000	3 - 4
Medium	1,000 - 2,000	5 - 8
Stiff	2,000 - 4,000	9 - 15
Very Stiff	4,000 - 8,000	16 - 30
Hard	8,000 - 16,000	31 - 50
Very Hard	Over 16,000	Over 50

Consistency of cohesive soils is based upon an evaluation of the observed resistance to deformation under load and not upon the Standard Penetration Resistance (N).

COHESIONLESS SOILS

Density Classification	Relative Density %	Approximate Range of (N)
Very Loose	0 - 15	0 - 4
Loose	16 - 35	5 - 10
Medium Compact	36 - 65	11 - 30
Compact	66 - 85	31 - 50
Very Compact	86 - 100	Over 50

Relative Density of cohesionless soils is based upon the evaluation of the Standard Penetration Resistance (N), modified as required for depth effects, sampling effects, etc.

SAMPLE DESIGNATIONS

AS -	Auger Sample - Cuttings directly from auger flight
BS -	Bottle or Bag Samples
S -	Split Spoon Sample - ASTM D 1586
LS -	Liner Sample with liner insert 3 inches in length
ST -	Shelby Tube sample - 3 inch diameter unless otherwise noted
PS -	Piston Sample - 3 inch diameter unless otherwise noted
RC -	Rock Core - NX core unless otherwise noted

STANDARD PENETRATION TEST (ASTM D 1586) - A 2.0 inch outside-diameter, 1-3/8 inch inside-diameter split barrel sampler is driven into undisturbed soil by means of a 140-pound weight falling freely through a vertical distance of 30 inches. The sampler is normally driven three successive 6-inch increments. The total number of blows required for the final 12 inches of penetration is the Standard Penetration Resistance (N).