

**CITY OF WALLED LAKE
OAKLAND COUNTY, MICHIGAN**

**City of Walled Lake, Michigan
Mercer Beach Improvements, Ph 2**



Contract 20-048-1

Bidding Documents and Contract:

Project Manual and Drawings



Prepared by

Boss Engineering
3121 East Grand River Avenue
Howell, Michigan

MAY 2022

CONTENTS

<u>Section Number</u>	<u>Title</u>
00100	ADVERTISEMENT FOR BIDS
00150	SUMMARY
00200	INSTRUCTION TO BIDDERS
00410	BID FORM
00510	NOTICE OF AWARD
00520	AGREEMENT
00550	NOTICE TO PROCEED
00610	PERFORMANCE BOND
00615	PAYMENT BOND
00620	APPLICATION FOR PAYMENT CERTIFICATE
00623	CERTIFICATES OF INSURANCE
00625	CERTIFICATE OF SUBSTANTIAL COMPLETION
00627	CERTIFICATE OF FINAL COMPLETION
00700	GENERAL CONDITIONS
00800	SUPPLEMENTARY CONDITIONS – EJCDC
00801	SUPPLEMENTARY CONDITIONS – SEMCOG
	- Attachment 1 EPA General Terms and Conditions – Effective October 2, 2017
	- Attachment 2 Utilization of Small, Minority & Women’s Business Enterprises
	- Attachment 3 Project Sign Requirements
00934	PROPOSAL REQUEST
00940	WORK CHANGE DIRECTIVE
00941	CHANGE ORDER
00942	FIELD ORDER
	TECHNICAL PROVISIONS
01001	BONDS, PERMITS, INSURANCE AND FEES
01002	SOIL EROSION AND SEDIMENTATION CONTROL
01003	DRAINAGE STRUCTURES
01004	RESERVED
01005	STORM SEWER
01006	PAVEMENT REMOVAL
01007	EARTH EXCAVATION
01008	AGGREGATE BASE
01009	ASPHALT PAVEMENT
01010	CONCRETE WORK
01011	TOPSOIL, SEED AND MULCH
01012	TRAFFIC CONTROL
01013	MISCELLANEOUS
APPENDIX A	SOIL BORING REPORT

ADVERTISEMENT FOR BIDS
SECTION 00100

CITY OF WALLED LAKE
Mercer Beach Stormwater Improvements, Ph2
Contract 20-048-1

No later than Wednesday June 1, 2022 digital bids shall be received up to 2:45 pm, and sealed bids mailed or hand delivered will be received up to 3:00 pm, prevailing local time by The City of Walled Lake (OWNER), at the Walled Lake City Hall, 1499 E. West Maple Road. Walled Lake, MI 48390 then publicly opened and read aloud for the construction of Contract 20-048-1.

To submit bids, Contractors are encouraged to submit their bid to publicservices@walledlake.com or enter through the main entrance of the City of Walled Lake City Hall and submit their bid information at the front desk.

Work for this project shall consist of installation of a bioswale, replacement/relocation of concrete walkway, segmental retaining wall, park benches, picnic tables installation of light pole fixture assemblies and associated electrical appurtenances, stamped concrete, pedestrian access ramps, landscaping and related restoration, and other miscellaneous items in conformance with the bid documents in and adjacent to Mercer Beach in the City of Walled Lake (City).

Work shall commence on June 22, 2022 and have final completion no later than August 26, 2022. OWNER may consider an earlier start date. Contact the ENGINEER by Monday, May 23, 2022 at 5pm for consideration. If the OWNER determines an earlier start date is in their best interest, related information will be provided in an addendum.

City/Contractor coordination with a separate adjacent OWNER contracted storm sewer and paving project at Mercer Beach will be necessary during June construction work.

The Drawings and contract documents under which the Work is to be done including any addendums and attachments can be viewed at walledlake.us/index.php/forms-documents-walled-lake or may be examined at the office of the OWNER, City of Walled Lake City Hall, 1499 E. West Maple Road. Walled Lake, MI 48390 and/or at the office of the ENGINEER, Boss Engineering, 3121 E. Grand River Avenue, Howell Michigan 48843: beginning the evening of Thursday, May 12, 2022.

Bidder should view the city website or contact OWNER or ENGINEER prior to bid submittal for any addendums. Request to the ENGINEER for clarifications is encouraged, however there will be no Pre-Bid meeting scheduled for this project at this time.

Bidding Documents may be obtained for a fee of \$35.00 from the ENGINEER at 3121 E. Grand River Avenue, Howell, Michigan 48843, 517.546.4836. The bidder must supply the name, address, telephone number, e-mail address and facsimile number of the individual of firm to whom addenda, if any, can be directed.

This project is funded by the OWNER. State or federal funds are being used to assist in construction and relevant State or federal requirements will apply. The Contractor and Subcontractors on this project must comply with all applicable local, state, and federal requirements. The City of Walled Lake is an equal opportunity employer and all businesses are strongly encouraged to bid.

The right is reserved by OWNER to accept or reject any and all Bids, and to waive irregularities in bids.

No Bids may be withdrawn after the above date and time for receiving Bids for a period of sixty (60) days.

City of Walled Lake

City of Walled Lake
Mercer Beach Improvements, Ph 2

00100-1

May 2022

SUMMARY

Summary of Work

Project:

City of Walled Lake – Mercer Beach Improvements, Ph 2

WORK Consists of:

Installation of a bioswale, replacement/relocation of concrete walkway, segmental retaining wall, park benches, picnic tables installation of light pole fixture assemblies and associated electrical appurtenances, stamped concrete, pedestrian access ramps, landscaping and related restoration, and other miscellaneous items in conformance with the bid documents in and adjacent to Mercer Beach in the City of Walled Lake (City).

OWNER Furnished Items:

OWNER will remove site trees as indicated on the plan drawings and replace the existing water service line from the water shut-off to the shower pedestal, including pedestal relocation. Road signs will be removed and replaced separately or by the City.

Project Schedule:

Work shall commence on June 25, 2022 and have final completion including restoration no later than August 26, 2022. City may consider an earlier start date, particularly as it relates to adjacent work in the area. Contact the ENGINEER by Monday, May 23rd at 5pm for comments and/or earlier start date consideration. If the City determines that updates are needed and/or an earlier start date is in their best interest, related information will be provided in an addendum.

Special Considerations:

Discrimination Requirements:

This project must comply with all requirements of 1976 PA 453 (Elliott-Larsen Civil Rights Act) and 1976 PA 220 (Persons with Disabilities Civil Rights Act), as amended. In accordance with these laws: *The contractor and any subcontractors shall not discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment, because of race, color, religion, national origin, age, sex, height, weight, marital status or a disability that is unrelated to the individual's ability to perform the duties of a particular job or position.*

Grant Requirements:

See Supplementary Conditions for additional general terms and conditions including small, minority, and women's business enterprises, 'Good Faith' procurement efforts, and grant sign procurements.

Liquidated Damages:

Failure to accomplish all Work in accordance with the schedule set forth in the Contract Documents may result in assessment of liquidated damages of \$200 per calendar day, payable in accordance with the Contract Documents.

WORK Restrictions**Access to Adjoining Properties:**

Access to residences and businesses adjoining the site or construction easement areas must be maintained- including mail delivery, trash pick-up, emergency services and school bus access. Prior arrangements with Emergency Services, school bussing, affected businesses, etc. shall be made before work operations minimize or restrict access.

Streets shall not be closed for related work. Streets that require lane restrictions for construction purposes shall receive prior approval and coordination with the Owner (City of Walled Lake). Contractor shall make the roadway safe and fully open to traffic at the end of each workday, for weekends and holidays, and as required for special events. All work zone traffic control materials shall be sufficiently maintained 24-hours per day for the duration of the project. Cleanup Work areas and return to a useable condition at the end of each work period and to pre-existing or better condition prior to final completion of the project.

Vegetation not scheduled for removal shall remain and be protected for the duration of the project unless approved otherwise by the Owner or Engineer. Necessary removals shall be marked by the Engineer prior to related Work. Restoration of vegetation shall occur and be established before project closeout.

Miscellaneous Areas of Disturbance.

Miscellaneous areas of disturbance necessary for concrete work, storm system installation, paving operations, and/or related grading operations are minor and shall be incidental to the related items of work. Restoration of these areas will be paid for as part of the related items of work.

Paving Operations:

Concrete and asphalt will be removed and relocated or replaced on this project as identified on the Contract Plans demo and proposed sheets. Related work may involve coordination with an adjacent project at Mercer Beach. Any coordination efforts shall be considered incidental to the related items of work.

Any paving operations require close coordination with the Engineer to verify limits of removal, installation and replacement.

Adjoining Work:

An adjacent project at the City beach (Mercer Beach) is occurring with scheduled completion in June 2022. Related Work involve storm sewer installation and paving that will connect to the north portions of this project. The contractor shall be responsible for cross-coordination with the general contractor of the adjoining contract and the City.

Staging Area(s):

The project staging area(s) shall not be within the street right-of-way and shall not be permitted in the City beach area without special consideration and written approval by the City. An area along the north side of Walled Lake Drive may be a suitable location for staging of this project, however it is the Contractor's responsibility to locate and receive approval for staging outside the project. Related coordination shall be between the Contractor and Property Owner(s) within or outside any approved construction easement.

NOTE: The contractor of the adjoining Mercer Beach project was granted permission to utilize the north side of Walled Lake Drive as indicated above. The general contractor of this project is responsible for coordination with the adjoining project contractor and the City on sharing the staging location.

The City may assist with obtaining the necessary approvals upon request. Temporary work vehicle parking within street rights-of-way may be requested to the City for consideration.

Protection of the Public:

The CONTRACTOR is responsible for the security of the project site and the safety of themselves and the public at all times. The CONTRACTOR shall take all measures necessary to exclude members of the public from entering the work site. However, if access or partial beach use is permitted wherever or whenever safely possible and practical away from the area of work, safe vehicular and pedestrian access to the beach area shall be maintained to protected or designated beach areas. The Owner or Engineer shall verify and approve in writing any blockage of access for businesses and the City Beach. Other protective measures may become necessary as Work progresses. Costs for protective measures shall be incidental to the Work of this contract.

Coordination with Others:

Coordination with the City, other contractors or other users of the Work area shall be provided as needed to minimize disruption of their operations.

Project Coordination

Pre-Bid meeting has not been scheduled for this project at this time. Request for clarifications to the ENGINEER is encouraged. Individual site visits with the ENGINEER may be arranged for Wednesday mornings prior to bids with approval of the City.

Pre-Construction meeting will be held prior to commencing construction. The CONTRACTOR shall meet with OWNER and ENGINEER, and all affected utilities, to coordinate Work operations and resolve conflicts that may exist.

Notice to Engineer:

CONTRACTOR shall notify OWNER and ENGINEER not less than three (3) working days prior to the date of commencement of Work.

Notice to Emergency Services:

As previously described and following approval by the Owner and Engineer, CONTRACTOR shall more specifically provide notice to the City and local police and fire departments at least 24-hours in advance of restricting through traffic in any manner on any street. A description of the traffic impact and duration shall be provided.

Utility Location and Coordination:

1. The locations of utilities shown on the Contract Plans are from existing records and/or filed locations and may not be complete or accurate. CONTRACTOR shall contact MISS DIG at least 3 full business days prior to start Work.
2. Potential utility conflicts are present. CONTRACTOR shall coordinate all potential utility and utility related conflicts directly with the utility provider and shall communicate related progress of this coordination with the Engineer. CONTRACTOR shall be responsible for coordinating and holding utility poles to prevent undermining or falling during construction. CONTRACTOR shall be responsible for locating all utilities, including but not limited to sewer, water, electric, gas, telephone, cable TV, and fiber optic lines, and repairing any damage he/she shall cause to the same. CONTRACTOR shall, in writing, bring attention to the Engineer the location of any utilities that interfere with the proposed construction. Notwithstanding, CONTRACTOR shall be responsible for any damage he/she shall cause to same.
3. Interruption of Services: No sanitary or water service shall be disconnected, or CONTRACTOR shall notify the City no less than 48-hours in advance of and disruption of service so the City may notify affected property owners.
4. Utility contacts are provided on the cover sheet of the Contract Drawings.

INSTRUCTIONS TO BIDDERS
SECTION 00200

ARTICLE 1 – DEFINED TERMS

- 1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:
- A. *Issuing Office* – The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered. The issuing office is Boss Engineering, 3121 East Grand River, Howell, MI. 48843.
 - B. *Bidder*-The individual or entity who submits a bid directly to the Owner.
 - C. *Successful Bidder*- The lowest responsible bidder submitting a responsive bid to whom the Owner (on the basis of Owner’s evaluation as hereinafter provided) makes an award.

ARTICLE 2 – COPIES OF BIDDING DOCUMENTS

- 2.01 Complete sets of the Bidding Documents are available as stated in the Advertisement for Bid at the Issuing Office, Boss Engineering, 3121 East Grand River, Howell, MI. 48843.
- 2.02 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.03 Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not authorize or confer a license for any other use.

ARTICLE 3 – INTENTIONALLY OMITTED

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). (None Available)
 - B. Copies of reports and drawings referenced in Paragraph 4.01.A will be made available by Owner to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the “technical data” contained therein upon which Bidder is entitled to rely as provided in Paragraph 4.02 of the General Conditions has been identified and established in Paragraph 4.02

of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any “technical data” or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

4.02 *Underground Facilities*

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

4.03 *Hazardous Environmental Condition*

- A. The Supplementary Conditions identify 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. Those reports and drawings are not part of the Contract Documents, but the “technical data” contained therein upon which Bidder is entitled to rely as provided in Paragraph 4.06 of the General Conditions has been identified and established in Paragraph 4.06 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any “technical data” or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

4.04 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions, and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated 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 and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies. Bidder shall comply with all applicable Laws and Regulations relative to excavation and utility locates.

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

Documents. On request, Owner will provide to each Bidder for examination access to or copies of contract documents (other than portions thereof related to price) for such other work.

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

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

- A. examine and carefully study the Bidding Documents, and the other related data identified in the Bidding Documents;
- B. visit the Site and become familiar with and satisfy Bidder as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;
- C. become familiar with and satisfy Bidder as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work;
- D. carefully study all: (1) 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 may be 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 may be identified in the Paragraph 4.06 of the Supplementary Conditions as containing reliable "technical data";
- E. consider the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Bidder's safety precautions and programs;
- F. agree at the time of submitting its Bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at the price(s) bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;
- G. become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;
- H. 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.

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

ARTICLE 5 – INTENTIONALLY OMITTED

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

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

ARTICLE 8 – BID SECURITY

8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of 5 percent of Bidder's maximum Bid price and in the form of a certified check, bank money order, or a Bid bond (on the form attached) issued by a surety meeting the requirements of Paragraphs 5.01 and 5.02 of the General Conditions.

8.02 *The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract Documents, furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults. The Bid security of other Bidders whom Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of*

seven days after the Effective Date of the Agreement or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be returned.

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

ARTICLE 9 – CONTRACT TIMES

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

ARTICLE 10 – LIQUIDATED DAMAGES

- 10.01 Provisions for liquidated damages, 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. Whenever it is specified or described in the Bidding Documents that a substitute or “or-equal” item of material or equipment may be furnished or used by Contractor if acceptable to Engineer, application for such acceptance will not be considered by Engineer until after the Effective Date of the Agreement.

ARTICLE 12 – SUBCONTRACTORS, SUPPLIERS AND OTHERS

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

acceptance after the Effective Date of the Agreement as provided in Paragraph 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 is included with the Bidding Documents. Additional copies may be obtained from the Engineer or Issuing Office.
- 13.02 All blanks on the Bid Form shall be completed in ink and the Bid Form 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 [section, Bid item, alternative, adjustment unit price item, and unit price 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 or a vice-president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown.
- 13.04 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be shown.
- 13.05 A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown.
- 13.06 A Bid by an individual shall show the Bidder’s name and official address.
- 13.07 A Bid by a joint venture shall be executed by each joint venture in the manner indicated on the Bid Form. The official address of the joint venture shall be shown.
- 13.08 All names shall be printed in ink below the signatures.
- 13.09 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.
- 13.10 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.
- 13.11 The Bid shall contain evidence of Bidder’s authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder’s state contractor license number, if any, shall also be shown on the Bid Form.

ARTICLE 14 – BASIS OF BID; COMPARISON OF BIDS

14.01 *Lump Sum*

- A. Bidders shall submit a Bid on a lump sum basis for the base Bid and include a separate price for each alternate described in the Bidding Documents as provided for in the Bid Form. The price for each alternate will be the amount added to or deleted from the base Bid if Owner selects the alternate. In the comparison of Bids, alternates will be applied in the same order as listed in the Bid form.

14.02 *Unit Price*

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

14.03 *Allowances*

- A. For cash allowances the Bid price shall include such amounts as the Bidder deems proper for Contractor's overhead, costs, profit, and other expenses on account of cash allowances, if any, named in the Contract Documents, in accordance with Paragraph 11.02.B of the General Conditions.

14.04 *Completion Time Comparisons*

- A. Bid prices will be compared after adjusting for differences in the time designated by Bidders for Substantial Completion. The adjusting amount will be determined at the rate set forth in the Contract Documents for liquidated damages for failing to achieve Substantial Completion for each day before or after the desired date appearing in Article 9 above.

ARTICLE 15 – SUBMITTAL OF BID

15.01 With each copy of the Bidding Documents, a Bidder is furnished one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the following documents:

- A. Evidence of bidder's qualification to do business in the state where the project is located or covenant to obtain such qualification prior to award of Contract.

15.02 A Bid shall be submitted no later than the date and time prescribed and at the place indicated in the advertisement or invitation to bid and shall be enclosed in a plainly marked package with the

Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of Bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid shall be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid shall be addressed to Owner's Office

ARTICLE 16 – MODIFICATION AND WITHDRAWAL OF BID

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

ARTICLE 17 – OPENING OF BIDS

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

ARTICLE 18 – BIDS TO REMAIN SUBJECT TO ACCEPTANCE

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

ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT

- 19.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner further reserves the right to reject the Bid of any Bidder whom it finds, after reasonable inquiry and evaluation, to not be responsible. Owner may also reject the Bid of any Bidder if Owner believes that it would not be in the best interest of the Project to make an award to that Bidder. Owner also reserves the right to waive all informalities not involving price, time, or changes in the Work and to negotiate contract terms with the Successful Bidder.
- 19.02 More than one Bid for the same Work from an individual or entity under the same or different names will not be considered. Reasonable grounds for believing that any Bidder has an interest in more than one Bid for the Work may be cause for disqualification of that Bidder and the rejection of all Bids in which that Bidder has an interest.
- 19.03 In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices and other data, as may be requested in the Bid Form or prior to the Notice of Award.

- 19.04 In evaluating Bidders, Owner will consider the qualifications of Bidders and may consider the qualifications and experience of Subcontractors, Suppliers, and other individuals or entities proposed for those portions of the Work for which the identity of Subcontractors, Suppliers, and other individuals or entities must be submitted as provided in the Supplementary Conditions.
- 19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work in accordance with the Contract Documents.
- 19.06 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.

ARTICLE 20 – CONTRACT SECURITY AND INSURANCE

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

ARTICLE 21 – SIGNING OF AGREEMENT

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

ARTICLE 22 – SALES AND USE TAXES

- 22.01 Bidder shall pay all State Sales, Use and other Taxes that are lawfully assessed against Owner or Bidder on materials and equipment to be incorporated in the Work. Said taxes shall be included in the Contract Price. Refer to General Condition’s paragraph 6.10.

ARTICLE 23 – RETAINAGE

- 23.01 Provisions concerning Contractor’s retainage are set forth in the Agreement.

ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

City of Walled Lake, Michigan

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

ARTICLE 2 – BIDDER’S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER’S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

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

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

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

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

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) that have been identified in SC-4.02 as containing reliable "technical data," if available and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in SC-4.06 as containing reliable "technical data." if available.

E. Bidder has considered the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; 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 the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Bidder's safety precautions and programs.

- F. Based on the information and observations referred to in Paragraph 3.01.E above, Bidder does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer is acceptable to Bidder.
- 1. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

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

4. “coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 4A – SPECIAL CONSIDERATIONS

- A. Bidders will need to take into account coordination between current Phase 1 work underway and the new Phase 2 work as work areas will overlap.
- B. Bidders will need to segregate bids into ‘Participating Grant Items’ and ‘Non-Participating Grant’ Items as listed below. *Note during construction pay requests will have to follow a similar format.*

ARTICLE 5 – BASIS OF BID

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

BASE-UNIT PRICE OF WORK

	ITEM	UNIT	EST. QUANT.	UNIT PRICE	TOTAL
A. Site Earthwork & Demolition/Removals					
1	Misc Clearing and Grubbing (asphalt transition patches)	LS	1		
2	Remove Concrete Pavement (gray, stamped)	SYD	2039		
3	Storm Sewer & Ends, 18" or Less (conc & pvc), Remove	LFT	135		
4	Remove & Salvage Benches & Waste Receptacles	EACH	7		
5	Remove & Salvage Lake Information Sign (incl base)	LS	1		
6	Remove & Salvage Entrance Archway (incl footings)	LS	1		
7	Remove & Salvage Decorative Light Fixture	EACH	3		
8	Remove Conc. Light Pole Bases & Assoc. Wire/Conduit	EACH	3		
9	Remove/Reloc. Elec. Service incl Assoc Pole & OH Wire	LS	1		
10	Remove & Salvage Decorative Metal Fencing (incl ftgs)	LFT	178		
11	Bioswale Trench Excavation	CYD	175		
12	Import & Place Engineered Soil (Sand/compost/topsoil)	CYD	48		
13	Import & Place 2NS Sand (Bio-basin)	CYD	12		
14	Import & Place 2" Washed Stone (Bio-basin)	CYD	43		
15	Import & Place Pea Gravel (Bio-basin)	CYD	30		
B. Erosion Control & Restoration					
1	Inlet Protection Filters	EACH	3		
2	Silt Fence	LFT	300		
3	Seed & Mulch (Restoration)	SYD	110		
C. Storm Sewer					
1	8" PVC Perf. Pipe - incl Wrapped Inline Risers (Bio-basin)	LFT	175		
2	6" PVC Perforated Wall Drain	LFT	225		
D. Pavement, Sidewalk & Misc. Concrete					
1	10" 21AA Gravel (under conc sidewalk/integral curb)	CYD	98		
2	Misc. Aggregate	CYD	35		
3	Conc Formed Trench Spillways For Trench Grates	EACH	6		
4	Geotextile Fabric (wrapped trench)	SYD	500		
5	Curb Support Timbers	EACH	12		
6	Conc. Integral Curb (Double 8"x8" reinf. Curb)	SFT	1,443		
7	Conc. Integral C&T Curb (Single 8"x8" reinf. Curb)	SFT	530		
8	Concrete Ramp (6" sidewalk w/curb & truncated dome)	EACH	1		
9	Cast-in-Place Concrete Steps/Platform	SFT	97		
10	4-inch Concrete Sidewalk	SFT	220		
11	4-inch Colored & Textured (C&T) Sidewalk	SFT	164		
12	Modular Block Retaining Wall (engineered)	SFT	384		
E. Lighting					
1	Light Pole Base, (incl assoc conduit)	EACH	3		
2	Install Light Fixture Assembly Provided By Owner	EACH	3		
3	Control Panel	LS	1		
4	2" Conduit	LF	360		
5	#10 THWN Wire	LF	360		
6	Sidewalk Junction Box (17x30x18)	EACH	1		
7	Sidewalk Junction Box (11x18x18)	EACH	3		

F. Landscape					
1	Plugs	EACH	447		
2	Perennials	EACH	35		
3	Shrubs	EACH	10		
4	Shredded Bark Mulch	CYD	5		
5	Relocated Ex. Landscape Boulders	EACH	30		
6	Landscape Cobble Stone (at drainage curb cuts)	CYD	2		
7	Decorative Trench Grates (1'x4')	EACH	6		
G. Miscellaneous					
1	Traffic Control	LS	1		
2	Reinstall Information Sign (new glass)	LS	1		
3	Reinstall Entrance Arch (incl paint & footings)	LS	1		
4	Benches & Tables (6')	EACH	4		
5	Decorative Metal Fencing (3-ft hgt)	LFT	151		
6	Signs & Posts	EACH	1		

Total Bid _____

Unit Prices have been computed in accordance with Paragraph 11.03.B of the General Conditions.

Bidder acknowledges that estimated quantities are not guaranteed and are solely for the purpose of comparison of Bids, and final payment for all unit price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

ARTICLE 6 – TIME OF COMPLETION

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

ARTICLE 7 – ATTACHMENTS TO THIS BID

- 7.01 The following documents are submitted with and made a condition of this Bid:
 - A. Required Bid security in the form of certified check, bank check or bid bond.
 - B. List of Project References;
 - C. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such license within the time for acceptance of Bids;

ARTICLE 8 – DEFINED TERMS

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

ARTICLE 9 – BID SUBMITTAL

9.01 This Bid is submitted by:

If Bidder is:

An Individual

Name (typed or printed): _____

By: _____
(Individual’s signature)

Doing business as: _____

A Partnership

Partnership Name: _____

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

Name (typed or printed): _____

A Corporation

Corporation Name: _____ (SEAL)

State of Incorporation: _____
Type (General Business, Professional, Service, Limited Liability): _____

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

Name (typed or printed): _____

Title: _____
(CORPORATE SEAL)

Attest _____

Date of Qualification to do business in _____ *Michigan* is
____/____/____.

A Joint Venture

Name of Joint Venture: _____

First Joint Venturer Name: _____ (SEAL)

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

Name (typed or printed): _____

Title: _____

Second Joint Venturer Name: _____ (SEAL)

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

Name (typed or printed): _____

Title: _____

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

Bidder's Business Address _____

Phone No.: _____ Fax No.:

E-mail: _____.

SUBMITTED on _____, 2020.

State Contractor License No. _____. *[If applicable]*

NOTICE OF AWARD
SECTION 00510

Notice of Award

Date: _____

Project: Mercer Beach Improvements, Ph 2

Owner: City of Walled Lake, Michigan

Owner's Contract No.: NA

Contract: Mercer Beach Improvements, Ph 2

Engineer's Project No.: 20-048-1

Bidder:

Bidder's Address

You are notified that your Bid dated _____ on the above Contract has been considered. You are the Successful Bidder and are awarded a Contract for the Downtown Storm Sewer and Beautification project.

The Contract Price of your Contract is _____

3 copies of the proposed Contract Documents (except Drawings) accompany this Notice of Award.

5 sets of the Drawings will be delivered separately or otherwise made available to you immediately.

You must comply with the following conditions precedent within [15] days of the date you receive this Notice of Award.

1. Deliver to the Owner [3] fully executed counterparts of the Contract Documents.
2. Deliver with the executed Contract Documents the Contract security [Bonds] as specified in the Instructions to Bidders (Article 20), General Conditions (Paragraph 5.01), and Supplementary Conditions (Paragraph SC-5.01).
3. Other conditions precedent: Deliver with the executed Contract documents the certificate of Insurance with Boss Engineering Company named as additional insured's.

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

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

City of Walled Lake, Michigan

Owner

By: _____
Authorized Signature-

_____ Title

Copy to Engineer

AGREEMENT
SECTION 00520

THIS AGREEMENT is by and between City of Walled Lake, Michigan (“Owner”) and _____ (“Contractor”).

Owner and Contractor hereby agree as follows:

ARTICLE 1 – WORK

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

- A. Installation of a bioswale, replacement/relocation of concrete walkway, segmental retaining wall, park benches, picnic tables installation of light pole fixture assemblies and associated electrical appurtenances, stamped concrete, pedestrian access ramps, landscaping and related restoration, and other miscellaneous items in conformance with the bid documents in and adjacent to Mercer Beach in the City of Walled Lake (City).

ARTICLE 2 – 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:

Mercer Beach Improvements, Ph 2

Contract No. 20-048-1

ARTICLE 3 – ENGINEER

3.01 The Project has been designed by Boss Engineering Company, 3121 East Grand River Avenue, Howell, Michigan 48843 (Engineer), which is to act as Owner’s representative, assume all duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

ARTICLE 4 – CONTRACT TIMES

4.01 *Time of the Essence*

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

4.02 *Days to Achieve Substantial Completion and Final Payment*

- A. The Work shall commence on June 22, 2022 and shall be completed and ready for final payment in accordance with Paragraph 14.07 of the General Conditions by August 26, 2022. Work shall not occur on observed Holiday of July 4, 2022. The City may consider an earlier start date, particularly as it relates to scheduling and/or other work in the area.

Contact the ENGINEER by Monday, May 23, 2022 at 5pm for consideration. If the City determines and earlier start date is in their best interest, related information will be provided in an addendum.

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 preceding 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 \$200 for each day that expires after the time specified in Paragraph 4.02 above for Substantial Completion until the Work is substantially complete. After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by Owner, Contractor shall pay Owner \$200 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.

ARTICLE 5 – CONTRACT PRICE

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

- A. For all Work other than Unit Price Work, a lump sum of: \$ N/A

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

- B. A Multiple Bid Section indicating “Percent Reduction of Itemized Bid (Award of Both Projects)” and “Adjusted Total for All Bid Prices” shall be completed where located within the Base-Unit Price of Work section below for bidders that are bidding this project and another City of Walled Lake project, Mercer Beach Improvements, Ph 2 (Contract 20-048-1). Refer to Article 4A of the Bid Form section for related information.
- C. For all Unit Price Work, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the actual quantity of that item:

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

BASE-UNIT PRICE OF WORK

	ITEM	UNIT	EST. QUANT.	UNIT PRICE	TOTAL
A. Site Earthwork & Demolition/Removals					
1	Misc Clearing and Grubbing (asphalt transition patches)	LS	1		
2	Remove Concrete Pavement (gray, stamped)	SYD	2039		
3	Storm Sewer & Ends, 18" or Less (conc & pvc), Remove	LFT	135		
4	Remove & Salvage Benches & Waste Receptacles	EACH	7		
5	Remove & Salvage Lake Information Sign (incl base)	LS	1		
6	Remove & Salvage Entrance Archway (incl footings)	LS	1		
7	Remove & Salvage Decorative Light Fixture	EACH	3		
8	Remove Conc. Light Pole Bases & Assoc. Wire/Conduit	EACH	3		
9	Remove/Reloc. Elec. Service incl Assoc Pole & OH Wire	LS	1		
10	Remove & Salvage Decorative Metal Fencing (incl ftgs)	LFT	178		
11	Bioswale Trench Excavation	CYD	175		
12	Import & Place Engineered Soil (Sand/compost/topsoil)	CYD	48		
13	Import & Place 2NS Sand (Bio-basin)	CYD	12		
14	Import & Place 2" Washed Stone (Bio-basin)	CYD	43		
15	Import & Place Pea Gravel (Bio-basin)	CYD	30		
B. Erosion Control & Restoration					
1	Inlet Protection Filters	EACH	3		
2	Silt Fence	LFT	300		
3	Seed & Mulch (Restoration)	SYD	110		
C. Storm Sewer					
1	8" PVC Perf. Pipe - incl Wrapped Inline Risers (Bio-basin)	LFT	175		
2	6" PVC Perforated Wall Drain	LFT	225		
D. Pavement, Sidewalk & Misc. Concrete					
1	10" 21AA Gravel (under conc sidewalk/integral curb)	CYD	98		
2	Misc. Aggregate	CYD	35		
3	Conc Formed Trench Spillways For Trench Grates	EACH	6		
4	Geotextile Fabric (wrapped trench)	SYD	500		
5	Curb Support Timbers	EACH	12		
6	Conc. Integral Curb (Double 8"x8" reinf. Curb)	SFT	1,443		
7	Conc. Integral C&T Curb (Single 8"x8" reinf. Curb)	SFT	530		
8	Concrete Ramp (6" sidewalk w/curb & truncated dome)	EACH	1		
9	Cast-in-Place Concrete Steps/Platform	SFT	97		
10	4-inch Concrete Sidewalk	SFT	220		
11	4-inch Colored & Textured (C&T) Sidewalk	SFT	164		
12	Modular Block Retaining Wall (engineered)	SFT	384		
E. Lighting					
1	Light Pole Base, (incl assoc conduit)	EACH	3		
2	Install Light Fixture Assembly Provided By Owner	EACH	3		
3	Control Panel	LS	1		
4	2" Conduit	LF	360		
5	#10 THWN Wire	LF	360		
6	Sidewalk Junction Box (17x30x18)	EACH	1		
7	Sidewalk Junction Box (11x18x18)	EACH	3		

F. Landscape					
1	Plugs	EACH	447		
2	Perennials	EACH	35		
3	Shrubs	EACH	10		
4	Shredded Bark Mulch	CYD	5		
5	Relocated Ex. Landscape Boulders	EACH	30		
6	Landscape Cobble Stone (at drainage curb cuts)	CYD	2		
7	Decorative Trench Grates (1'x4')	EACH	6		
G. Miscellaneous					
1	Traffic Control	LS	1		
2	Reinstall Information Sign (new glass)	LS	1		
3	Reinstall Entrance Arch (incl paint & footings)	LS	1		
4	Benches & Tables (6')	EACH	4		
5	Decorative Metal Fencing (3-ft hgt)	LFT	151		
6	Signs & Posts	EACH	1		

Total Bid _____

The Bid prices for Unit Price Work set forth as of the Effective Date of the Agreement are based on estimated quantities. As provided in Paragraph 11.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer as provided in Paragraph 9.07 of the General Conditions.

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

ARTICLE 6 – PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

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

6.02 *Progress Payments; Retainage*

A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment as provided in Paragraph 6.02.A.1 below. All such payments will be measured by the schedule of values established as provided in Paragraph 2.07.A of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Requirements.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Engineer may determine or Owner may withhold, including but not limited to liquidated damages, in accordance with Paragraph 14.02 of the General Conditions.

a. 90 percent of Work completed (with the balance being retainage).

- B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 100 percent of the Work completed, less such amounts as Engineer shall determine in accordance with Paragraph 14.02.B.5 of the General Conditions and less 200 percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the tentative list of items to be completed or corrected attached to the certificate of Substantial Completion.

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 the prevailing passbook savings account at the place of the project.*

7.02 *Contractor's Representations*

7.03 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 in Paragraph SC-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 SC-4.06 of the Supplementary Conditions as containing reliable "technical data."
- E. Contractor has considered the information known to Contractor; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related 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 further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.
- G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
- H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
- I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.

ARTICLE 8 – CONTRACT DOCUMENTS

8.01 Contents

- A. The Contract Documents consist of the following:
 - 1. This Agreement (pages 1 to 9, inclusive).
 - 2. Performance bond (pages 1 to 4, inclusive).
 - 3. Payment bond (pages 1 to 3, inclusive).
 - 4. Other bonds
 - a. _____ (pages _____ to _____, inclusive).
 - 5. General Conditions (pages 1 to 62, inclusive).
 - 6. Supplementary Conditions – EJCDC (pages 1 to 10, inclusive).
 - 7. Supplementary Conditions & Attachments – SEMCOG (26 pages, inclusive).
 - 8. Specifications as listed in the table of contents of the Project Manual.
 - 9. Drawings consisting of 10 sheets with each sheet bearing the following general title: Mercer Beach Improvements, Ph 2 [or] Drawings listed on attached sheet index.
 - 10. Addenda Exhibits to this Agreement (enumerated as follows):
 - a. Contractor's Bid (pages 1 to 7, inclusive) as included in Section 00410 of the specification.

- b. Documentation submitted by Contractor prior to Notice of Award (pages _____ to _____, inclusive).
 - c. *[List other required attachments (if any), such as documents required by funding or lending agencies].*
11. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
- a. Notice to Proceed (pages 1 to 1, inclusive).
 - b. Work Change Directives.
 - c. Change Orders.
- B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 9.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in Paragraph 3.04 of the General Conditions.

ARTICLE 9 – MISCELLANEOUS

9.01 *Terms*

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

9.02 *Assignment of Contract*

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

9.03 *Successors and Assigns*

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

9.04 Severability

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

9.05 Contractor's Certifications

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

9.06 Other Provisions-None

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

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

OWNER:

CONTRACTOR

City of Walled Lake, Michigan _____

By: _____

By: _____

Title: _____

Title: _____

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

Attest: _____

Attest: _____

Title: _____

Title: _____

Address for giving notices:

Address for giving notices:

City of Walled Lake, Michigan

License No.: _____

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

(Where applicable)

Agent for service of process:

Notice to Proceed

Date:

Project: Mercer Beach Improvements, Ph 2

Owner: City of Walled Lake, Michigan

Owner's Contract No.: NA

Contract: Mercer Beach Improvements, Ph 2

Engineer's Project No.: 20-048-1

Contractor:

Contractor's Address:

You are notified that the Contract Times under the above Contract will commence to run on June 25, 2022. On or before that date, you are to start performing your obligations under the Contract Documents. In accordance with Article 4 of the Agreement, the date of readiness for final payment is August 26, 2022.

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

Owner: City of Walled Lake, Michigan

Given by:

Authorized Signature

Title:

Date

Copy to Engineer

PERFORMANCE BOND
SECTION 00610

PERFORMANCE BOND

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

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

OWNER (*Name and Address*):

CONTRACT

Effective Date of Agreement:

Amount:

Description (*Name and Location*):

BOND

Bond Number:

Date (*Not earlier than Effective Date of Agreement*):

Amount:

Modifications to this Bond Form:

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

CONTRACTOR AS PRINCIPAL

SURETY

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

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

Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner for the performance of the Contract, which is incorporated herein by reference.

1. If Contractor performs the Contract, Surety and Contractor have no obligation under this Bond, except to participate in conferences as provided in Paragraph 2.1.
2. If there is no Owner Default, Surety's obligation under this Bond shall arise after:
 - 2.1 Owner has notified Contractor and Surety, at the addresses described in Paragraph 9 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
 - 2.2 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 2.1; and
 - 2.3 Owner has agreed to pay the Balance of the Contract Price to:
 1. Surety in accordance with the terms of the Contract; or
 2. Another contractor selected pursuant to Paragraph 3.3 to perform the Contract.
3. When Owner has satisfied the conditions of Paragraph 2, Surety shall promptly, and at Surety's expense, take one of the following actions:
 - 3.1 Arrange for Contractor, with consent of Owner, to perform and complete the Contract; or
 - 3.2 Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or
 - 3.3 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 5 in excess of the Balance of the Contract Price incurred by Owner resulting from Contractor Default; or
 - 3.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:
 1. After investigation, determine the amount for which it may be liable to Owner and, as soon as practicable after the amount is determined, tender payment therefor to Owner; or
 2. Deny liability in whole or in part and notify Owner citing reasons therefor.
4. If Surety does not proceed as provided in Paragraph 3 with reasonable promptness, Surety shall be deemed to be in default on this Bond 15 days after receipt of an additional written notice from Owner to Surety demanding that Surety perform its obligations under this Bond, and Owner shall be entitled to enforce any remedy available to Owner. If Surety proceeds as provided in Paragraph 3.4, 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.

5. After Owner has terminated Contractor's right to complete the Contract, and if Surety elects to act under Paragraph 3.1, 3.2, or 3.3 above, then the responsibilities of Surety to Owner shall not be greater than those of Contractor under the Contract, and the responsibilities of Owner to Surety shall not be greater than those of Owner under the Contract. To the limit of the amount of this Bond, but subject to commitment by Owner of the Balance of the Contract Price to mitigation of costs and damages on the Contract, Surety is obligated without duplication for:

- 5.1 The responsibilities of Contractor for correction of defective Work and completion of the Contract;
- 5.2 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 3; and
- 5.3 Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of Contractor.

6. 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.

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

8. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located, and shall be instituted within two years after Contractor Default or within two years after Contractor ceased working or within two years after Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.

9. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the address shown on the signature page.

10. 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.

11. Definitions.

- 11.1 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.
- 11.2 Contract: The agreement between Owner and Contractor identified on the signature page, including all Contract Documents and changes thereto.
- 11.3 Contractor Default: Failure of Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.

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

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

Surety Agency or Broker:

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

PAYMENT BOND
SECTION 00615

PAYMENT BOND

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

CONTRACTOR (*Name and Address*):

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

OWNER (*Name and Address*):

CONTRACT

Effective Date of Agreement:

Amount:

Description (*Name and Location*):

BOND

Bond Number:

Date (*Not earlier than Effective Date of Agreement*):

Amount:

Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this 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

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

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

have obligations to Claimants under this Bond.

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

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

12. Notice to Surety, Owner, or Contractor shall be mailed or delivered to the addresses shown on the signature page. Actual receipt of notice by Surety, Owner, or Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.

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

14. Upon request of any person or entity appearing to be a potential beneficiary of this Bond, Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.

15. Definitions

15.1 Claimant: An individual or entity having a direct contract with Contractor, or with a first-tier subcontractor of Contractor, to furnish labor, materials, or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms “labor, materials or equipment” that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Contract, architectural and engineering services required for performance of the Work of Contractor and Contractor’s subcontractors, and all other items for which a mechanic’s lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

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

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

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

Surety Agency or Broker:

Owner’s Representative *(Engineer or other)*:

APPLICATION FOR PAYMENT CERTIFICATE
SECTION 00620

CONTRACTOR'S APPLICATION FOR PAYMENT NO. _____

CONTRACTOR: _____ TITLE: _____
OWNER: City of Walled Lake, Michigan CONTRACT NO.: 20-048-1
Substantial Completion Date: _____ Final Completion Date: _____

Application is made for payment for the Work shown below, accomplished through the date of _____

1. Original Contract Sum		\$	_____
2. Net Change by Change Order		\$	_____
3. Current Contract Amount (line 1 + line 2)		\$	_____
4. Work Complete (from summary sheet)	_____ %	\$	_____
5. Stored Materials (from summary sheet, if applicable)		\$	_____
6. Less _____ % Retainage		\$	_____
7. Less 10% Retainage - Stored Materials		\$	_____
8. Total Retainage (line 6 + 7)		\$	_____
9. Amount Due to Date (line 4 + 5 - 8)		\$	_____
10. Less Previous Payments (from summary sheet)		\$	_____
11. Amount Due This Application (line 9-10)		\$	_____

CONTRACTOR'S Certification:

The undersigned CONTRACTOR certifies that: (1) all previous progress payments received from OWNER on account of Work done under the Contract referred to above have been applied to discharge in full all obligations of CONTRACTOR incurred in connection with Work covered by prior Applications for Payment; (2) title to 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, claims, security interest and encumbrances (except such as are covered by Bond acceptable to OWNER indemnifying OWNER against any such lien, claim, security interest or encumbrance); and (3) all Work covered by this Application for Payment is in accordance with the Contract Documents and not *defective* as that term is defined in the Contract Documents.

ATTACHMENTS TO THIS CERTIFICATION:

___ Summary Sheet ___ Change Order Summary ___ Stored Material Summary
___ Other _____

CONTRACTOR:

By: _____ Date: _____

Payment to CONTRACTOR of the amount shown in line 11 above is recommended by ENGINEER, Boss Engineering.

By: _____ Date: _____

APPROVED: OWNER

By: _____ Date: _____

Certificate of Substantial Completion

Project: Mercer Beach Improvements, Ph 2

Owner: City of Walled Lake, Michigan

Owner's Contract No.: NA

Contract: Mercer Beach Improvements, Ph 2

Engineer's Project No.: 20-048-1

This Certificate of Substantial Completion applies to:

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

All work with exception of making sure acceptable grass grows through restoration. This will be part
Final Completion.

Date of Substantial Completion

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Project or portion thereof designated above is hereby declared and is also the date of commencement of applicable warranties required by the Contract Documents, except as stated below.

A tentative list of items to be completed or corrected is attached hereto. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

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

- Amended Responsibilities Not Amended

Owner's Amended Responsibilities:

Contractor's Amended Responsibilities:

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

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract Documents.

Executed by Engineer

Date

Accepted by Contractor

Date

Accepted by Owner

Date

CERTIFICATE OF FINAL COMPLETION
SECTION 00627

Contract Mercer Beach Improvements, Ph 2
Contract No. 20-048-1
Date Issued: _____
OWNER City of Walled Lake, Michigan
CONTRACTOR _____

This Certificate of Final Completion applies to all Work under the Contract Documents or to the following specified parts thereof:

The Work to which this Certificate applies has been inspected by authorized representatives of OWNER, CONTRACTOR and ENGINEER, in accordance with Paragraph 14.06 of the General Conditions, and that Work is hereby declared to be finally complete in accordance with the Contract Documents on

DATE OF FINAL COMPLETION

CONTRACTOR'S general warranty and guarantee period commences on _____
and terminates on _____.

CONTRACTOR'S special warranty and guarantee are:

_____ warranty and guarantee period commences on _____ and terminates on _____.

_____ warranty and guarantee period commences on _____ and terminates on _____.

This certificate does not constitute an acceptance of Work not in accordance with the Contract Documents nor is it a release of CONTRACTOR'S obligation to correct defective Work in accordance with the General Conditions of the Contract Documents.

Executed by ENGINEER on _____
Date

Boss Engineering
ENGINEER

By: _____
(Authorized Signature)

CONTRACTOR accepts this Certificate of Final Completion on _____
Date

CONTRACTOR

By: _____
(Authorized Signature)

OWNER accepts this Certificate of Final Completion on _____
Date

City of Walled Lake
OWNER

By: _____
(Authorized Signature)

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, material man, 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 coverage's 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 there from; 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 insured's (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 insured's, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insured's, and the insurance afforded to these additional insured's shall provide primary coverage for all claims covered thereby;
2. include at least the specific coverage's 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 insured's 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 insured's 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 therefore 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 therefore, 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 therefore 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 therefore 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 therefore 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 therefore 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 therefore 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 therefore 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 there from) 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 therefore 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 therefore 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 therefore.
- 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 therefore. 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 therefore. 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.

SUPPLEMENTARY CONDITIONS
SECTION 00800

Supplementary Conditions

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract, 2020-048-1. All provisions which are not so amended or supplemented remain in full force and effect.

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

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

- SC-2.02 Delete Paragraph 2.02.A in its entirety and insert the following in its place:
- A. Owner shall furnish to Contractor up to five 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 reproduction.
- SC-4.05 Delete Paragraphs 4.05.A in its entirety and insert the following:
- 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. Owner shall be responsible for laying out the Work one time for line and grade. Contractor shall protect and preserve the established reference points and property monuments, and construction layout stakes. Contractor shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point, property monument, or construction layout stake is lost or destroyed. The Contractor will be responsible for the cost of replacement of lost or destroyed reference points, property monuments or construction layout stakes. Owner shall be responsible for costs of additional survey staking required 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.
- SC-4.06 Delete Paragraphs 4.06.A and 4.06.B in their entirety and insert the following:
- A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.
 - B. Not Used.

SC-5.01 Delete Paragraph 5.01.A in it's entirety and insert the following:

- 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.

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

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

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

- a. State: Statutory
- b. Applicable Federal (e.g., Longshoreman's): Statutory
- c. Employer's Liability: \$1,000,000

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

- a. General Aggregate \$1,000,000
- b. Products - Completed Operations Aggregate \$1,000,000
- c. Personal and Advertising Injury \$1,000,000
- d. Each Occurrence (Bodily Injury and Property Damage) \$1,000,000
- e. Property Damage liability insurance will provide Explosion, Collapse, and Under-ground coverages where applicable.

- f. Excess or Umbrella Liability

- General Aggregate \$3,000,000
 - Each Occurrence \$3,000,000
- 3. Automobile Liability under Paragraph 5.04.A.6 of the General Conditions:
 - a. Bodily Injury:
 - Each person \$500,000
 - Each Accident \$1,000,000
 - b. Property Damage:
 - Each Accident \$500,000
- 4. The Contractual Liability coverage required by Paragraph 5.04.B.4 of the General Conditions shall provide coverage for not less than the following amounts:
 - a. Bodily Injury:
 - Each person \$500,000
 - Each Accident \$1,000,000
 - b. Property Damage:
 - Each Accident \$500,000
 - Annual Aggregate \$1,000,000
- 5. The identity of the additional insureds that are to be included on Contractor's General Liability insurance policies are:
 - a. City of Walled Lake, Michigan and all elected and appointed officials.
 - b. Boss Engineering Company

SC-5.06.A. Delete Paragraph 5.06.A in its entirety and insert the following in its place:

- A. Contractor shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof. Contractor shall be responsible for any deductible or self-insured retention. This insurance shall:
 - 1. include the interests of Owner, Contractor, Subcontractors, Engineer, and any other individuals identified in the Supplementary Conditions and the officers, directors, partners, employees, agents and other consultants and subcontractors of any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or loss payee;

2. be written on a Builder’s Risk “all-risk” policy form that shall at least include insurance for physical loss and 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 these 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;
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; and
8. comply with the requirements of Paragraph 5.06.C of the General Conditions.

SC-5.06 Delete Paragraph 5.06E. in its entirety

SC-6.02 Add the following new paragraph immediately after paragraph SC-6.02 B:

SC-6.02 C. The contractor and any subcontractors shall not discriminate against an employee or applicant for employment with respect to hire, tenure, terms, conditions, or privileges of employment, or a matter directly or indirectly related to employment, because of race, color, religion, national origin, age, sex, height, weight, marital status or a disability that is unrelated to the individual’s ability to perform the duties of a particular job or position.

SC-6.11 Add the following language at the end of the last sentence of Paragraph 6.11 A. 1.:

Contractor is responsible to ensure that all activities required to perform the Work are confined to the limits of the Owner’s property and easements

established for the Work. Permanent structures placed outside the limits of the Owner's property or defined permanent easements shall be relocated as necessary at no additional charge to the Owner.

SC-6.19 Add the following language at the end of the last sentence of Paragraph 6.19 A.:

The warranty and guarantee period shall be for a period of two years beginning on the date of final completion, or such longer period as may be prescribed by Law.

SC-7.04 Add the following new paragraph immediately after paragraph GC-7.03:

SC-7.04 *Claims Between Contractors*

- A. Should Contractor cause damage to the work or property of any other contractor at the Site, or should any claim arising out of Contractor's performance of the Work at the Site be made by any other contractor against Contractor, Owner, Engineer, or the construction coordinator, then Contractor (without involving Owner, Engineer, or construction coordinator) shall either (1) remedy the damage, (2) agree to compensate the other contractor for remedy of the damage, or (3) remedy the damage and attempt to settle with such other contractor by agreement, or otherwise resolve the dispute by arbitration or at law.
- B. Contractor shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner, Engineer, the construction coordinator and the officers, directors, partners, employees, agents and other consultants and subcontractors of each and any of them from and against all claims, costs, losses and damages (including, but not limited to, fees and charges of engineers, architects, attorneys, and other professionals and court and arbitration costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any other contractor against Owner, Engineer, consultants, or the construction coordinator to the extent said claim is based on or arises out of Contractor's performance of the Work. Should another contractor cause damage to the Work or property of Contractor or should the performance of work by any other contractor at the Site give rise to any other Claim, Contractor shall not institute any action, legal or equitable, against Owner, Engineer, or the construction coordinator or permit any action against any of them to be maintained and continued in its name or for its benefit in any court or before any arbiter which seeks to impose liability on or to recover damages from Owner, Engineer, or the construction coordinator on account of any such damage or Claim.
- C. If Contractor is delayed at any time in performing or furnishing the Work by any act or neglect of another contractor, and Owner and Contractor are unable to agree as to the extent of any adjustment in

Contract Times attributable thereto, Contractor may make a Claim for an extension of times in accordance with Article 12. An extension of the Contract Times shall be Contractor's exclusive remedy with respect to Owner, Engineer, and construction coordinator for any delay, disruption, interference, or hindrance caused by any other contractor. This paragraph does not prevent recovery from Owner, Engineer, or construction coordinator for activities that are their respective responsibilities.

SC-8.11 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.

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

- B. The Resident Project Representative (RPR) will be Engineer's employee or agent at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions. RPR's dealings in matters pertaining to the Work in general shall be with Engineer and Contractor. RPR's dealings with Subcontractors shall be through or with the full knowledge and approval of Contractor. The RPR shall:
 - 1. *Schedules*: Review the progress schedule, schedule of Shop Drawing and Sample submittals, and schedule of values prepared by Contractor and consult with Engineer concerning acceptability.
 - 2. *Conferences and Meetings*: Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences and other project-related meetings, and prepare and circulate copies of minutes thereof.
 - 3. *Liaison*:
 - a. Serve as Engineer's liaison with Contractor, working principally through Contractor's authorized representative, assist in providing information regarding the intent of the Contract Documents.
 - b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.

- c. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.
4. *Interpretation of Contract Documents:* Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.
5. *Shop Drawings and Samples:*
 - a. Record date of receipt of Samples and approved Shop Drawings.
 - b. Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.
6. *Modifications:* Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.
7. *Review of Work and Rejection of Defective Work:*
 - a. Conduct on-Site observations of Contractor's work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.
 - b. Report to Engineer whenever RPR believes that any part of Contractor's work in progress will not produce a completed Project that conforms generally to the Contract Documents or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.
8. *Inspections, Tests, and System Startups:*
 - a. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.
 - b. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.

9. *Records:*

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

10. *Reports:*

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

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

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

13. *Completion:*

- a. Participate in a Substantial Completion inspection, assist in the determination of Substantial Completion and the preparation of lists of items to be completed or corrected.

- b. Participate in a final inspection in the company of Engineer, Owner, and Contractor and prepare a final list of items to be completed and deficiencies to be remedied.
- c. Observe whether all items on the final list have been completed or corrected and make recommendations to Engineer concerning acceptance and issuance of the Notice of Acceptability of the Work.

C. The RPR shall not:

- 1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including “or-equal” items).
- 2. Exceed limitations of Engineer’s authority as set forth in the Contract Documents.
- 3. Undertake any of the responsibilities of Contractor, Subcontractors, Suppliers, or Contractor’s superintendent.
- 4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of Contractor’s work unless such advice or directions are specifically required by the Contract Documents.
- 5. Advise on, issue directions regarding, or assume control over safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
- 6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
- 7. Accept Shop Drawing or Sample submittals from anyone other than Contractor.
- 8. Authorize Owner to occupy the Project in whole or in part.

SC-11.03.C Delete Paragraph 11.03.C in its entirety and insert the following in its place:

- A. 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 identified item. Mobilization and Project Clean-up are incidental to the contract.

SC-11.03.D 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. The quantity of that particular item of Unit Price Work performed by Contractor differs by more than twenty-five (25) percent from the estimated quantity of such item indicated in the Agreement; and
 2. If there is no corresponding adjustment with respect to any other item of Work; and
 3. If Contractor believes that Contractor has incurred additional expense as a result thereof 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.

SC-12.01 *Change of Contract 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;

SUPPLEMENTARY CONDITIONS – SEMCOG

ATTACHMENTS 1, 2, 3

EPA General Terms and Conditions

Effective October 2, 2017

1. Introduction

The recipient and any sub-recipient must comply with the applicable EPA general terms and conditions outlined below. These terms and conditions are in addition to the assurances and certifications made as part of the award and terms, conditions or restrictions reflected on the official assistance award document. Recipients **must** review their official award document for additional administrative and programmatic requirements. Failure to comply with the general terms and conditions outlined below and those directly reflected on the official assistance award document may result in enforcement actions as outlined in 2 CFR 200.338 and 200.339.

2. Uniform Administrative Requirements, Cost Principles and Audit Requirements for Federal Awards

This award is subject to the requirements of the Uniform Administrative Requirements, Cost Principles and Audit Requirements for Federal Awards; Title 2 CFR, Parts 200 and 1500. 2 CFR 1500.1, Adoption of 2 CFR 200, states Environmental Protection Agency adopts the Office of Management and Budget (OMB) guidance Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards to Non-Federal Entities (subparts A through F of 2 CFR 200), as supplemented by 2 CFR Part 1500, as the Environmental Protection Agency (EPA) policies and procedures for financial assistance administration. 2 CFR Part 1500 satisfies the requirements of 2 CFR 200.110(a) and gives regulatory effect to the OMB guidance as supplemented by 2 CFR Part 1500. This award is also subject to applicable requirements contained in EPA programmatic regulations located in 40 CFR Chapter 1 Subchapter B.

2.1. Implementing Procurement Standards. Per 2 CFR 200.110, there is a two-year grace period available to non-Federal entities for implementation of the procurement standards in 2 CFR 200.317 through 200.326. As detailed in the 2015 OMB Compliance Supplement, non-Federal entities choosing to delay implementation will need to specify in their documented policies and procedures that they continue to comply with 40 CFR Part 30 or 31, as applicable, for two additional fiscal years which begins after December 26, 2014.

2.2. Effective Date and Incremental or Supplemental Funding. Consistent with the OMB Frequently Asked Questions at <https://cfo.gov/cofar> on Effective Date and Incremental Funding, any new funding through an amendment (supplemental or incremental) on or after December 26, 2014, and any unobligated balances (defined at 200.98) remaining on the award at the time of the amendment, will be subject to the requirements of the Uniform Administrative Requirements, Cost Principles and Audit Requirements (2 CFR 200 and 1500).

Financial Information

3. Reimbursement Limitation

EPA's financial obligations to the recipient are limited by the amount of federal funding awarded to date as reflected on the award document. If the recipient incurs costs in anticipation of receiving additional funds from EPA, it does so at its own risk. See 2 CFR 1500.8

4. Payment Methods

The Debt Collection Improvement Act of 1996 requires that Federal payments be made by electronic funds transfer. In order to comply with the Act, a recipient must receive payments via one of two electronic methods available to them:

4.1. Automated Standard Application for Payments (ASAP). The ASAP system is the preferred method of payment for EPA grantees. ASAP enrollment is highly encouraged for organizations that have multiple grants/cooperative agreements and for those with a frequent need to request funds. If the recipient uses multiple bank accounts for EPA grants/cooperative agreements, the recipient must enroll in ASAP. To enroll in ASAP, please complete the ASAP Initiate Enrollment form located at:

<http://www2.epa.gov/financial/forms> and email it to LVFC-grants@epa.gov or mail it to:

USEPA LVFC

4220 S. Maryland Pkwy

Bldg C, Suite 503

Las Vegas, NV 89119

Under this payment mechanism, the recipient initiates an electronic payment request online via ASAP, which is approved or rejected based on the amount of available funds authorized by EPA in the recipient's ASAP account. Approved funds are credited to the account at the financial institution of the recipient organization identified on the recipient's ASAP enrollment application. Additional information concerning ASAP and enrollment can be obtained by contacting the EPA Las Vegas Finance Center, at 702-798-2485, or by visiting: www.fms.treas.gov/asap.

4.2. Electronic Funds Transfer (EFT).

Under this payment mechanism, the EPA Las Vegas Finance Center will obtain the recipient's banking information from the System for Award Management (SAM). Once the agreement is awarded and no restrictions are identified by the awarding office, a Las Vegas Finance Center Representative will send the recipient an email message with the EFT Control Number and payment information. Additional information concerning EFT can be obtained by contacting the EPA Las Vegas Finance Center at 702-798-2485, or by visiting: <http://www2.epa.gov/financial/grants>.

NOTE: If the banking information is not correct or changes at any time prior to the end of this agreement, the recipient must update the organization's SAM registration and notify the EPA Las Vegas Finance Center as soon as possible. This is vital to ensure proper and timely deposit of funds.

5. Payment Drawdown

The recipient agrees to draw cash only as needed for its disbursement. Failure on the part of the recipient to comply with this condition may cause the undisbursed portions of the assistance agreement to be revoked or financing method changed to a reimbursable basis.

Selected Items of Cost

6. Consultant Cap

EPA participation in the salary rate (excluding overhead) paid to individual consultants retained by recipients or by a recipient's contractors or subcontractors shall be limited to the maximum daily rate for a Level IV of the Executive Schedule, available at: <https://www.opm.gov/policy-data-oversight/pay-leave/salaries-wages/>, to be adjusted annually. This limit applies to consultation services of designated individuals with specialized skills who are paid at a daily or hourly rate. This rate does not include transportation and subsistence costs for travel performed (the recipient will pay these in accordance with their normal travel reimbursement practices).

Subagreements with firms for services which are awarded using the procurement requirements in Subpart D of 2 CFR 200 are not affected by this limitation unless the terms of the contract provide the recipient with responsibility for the selection, direction and control of the individuals who will be providing services under the contract at an hourly or daily rate of compensation. See 2 CFR 1500.9.

7. Establishing and Managing Subawards

If the recipient chooses to pass funds from this assistance agreement to other entities, the recipient must comply with applicable provisions of 2 CFR Part 200 and the EPA Subaward Policy, which may be found at: <https://epa.gov/grants/epa-subaward-policy>.

As a pass-through entity, the recipient agrees to:

7.1. Be responsible for selecting subrecipients and as appropriate conducting subaward competitions using a system for properly differentiating between subrecipients and procurement contractors under the standards at 2 CFR 200.330 and EPA's supplemental guidance in Appendix A of the EPA Subaward Policy.

a. For-profit organizations and individual consultants, in almost all cases, are not eligible subrecipients under EPA financial assistance programs and the pass-through entity must obtain prior written approval from EPA's Award Official for subawards to these entities unless the EPA-approved budget and work plan for this agreement contain a precise description of such subawards.

b. Stipends and travel assistance for trainees (including interns) and similar individuals who are not employees of the pass-through entity must be classified as participant support costs rather than subawards as required by 2 CFR 200.75 and 2 CFR 200.92.

7.2. Establish and follow a system that ensures all subaward agreements are in writing and contain all of the elements required by 2 CFR 200.331(a). EPA has developed a template for subaward agreements that is available in Appendix D of the EPA Subaward Policy.

7.3. Prior to making subawards, ensure that each subrecipient has a "unique entity identifier." This identifier is required for registering in the System for Award Management (SAM) and by 2 CFR Part 25 and 2 CFR 200.331(a)(1). The unique entity identifier currently is the subrecipient's Data Universal Numbering System (DUNS) number. Information regarding obtaining a DUNS number and registering in SAM is available in the General Condition of the pass-through entity's agreement with EPA entitled "**Central Contractor Registration/System for Award Management and Universal Identifier Requirements**" T&C of the pass-through entity's agreement with the EPA.

7.4. Ensure that subrecipients are aware that they are subject to the same requirements as those that apply to the pass-through entity's EPA award as required by 2 CFR 200.331(a)(2). These requirements include, among others:

a. Title VI of the Civil Rights Act and other Federal statutes and regulations prohibiting discrimination in Federal financial assistance programs, as applicable.

b. Reporting Subawards and Executive Compensation under Federal Funding Accountability and Transparency Act (FFATA) set forth in the General Condition pass-through entity's agreement with EPA entitled "**Reporting Subawards and Executive Compensation.**"

c. Limitations on individual consultant fees as set forth in 2 CFR 1500.9 and the General Condition of the pass-through entity's agreement with EPA entitled "**Consultant Fee Cap.**"

d. EPA's prohibition on paying management fees as set forth in General Condition of the pass-through entity's agreement with EPA entitled "**Management Fees.**"

e. The Procurement Standards in 2 CFR Part 200 including those requiring competition when the subrecipient acquires goods and services from contractors (including consultants).

EPA provides general information on other statutes, regulations and Executive Orders on the Grants internet site at www.epa.gov/grants. Many Federal requirements are agreement or program specific and EPA

encourages pass-through entities to review the terms of their assistance agreement carefully and consult with their EPA Project Officer for advice if necessary.

7.5. Establish and follow a system for evaluating subrecipient risks of noncompliance with Federal statutes, regulations and the terms and conditions of the subaward as required by 2 CFR 200.331(b) and document the evaluation. Risk factors may include:

- a.** Prior experience with same or similar subawards;
- b.** Results of previous audits;
- c.** Whether new or substantially changed personnel or systems, and;
- d.** Extent and results of Federal awarding agency or the pass-through entity's monitoring.

7.6. Establish and follow a process for deciding whether to impose additional requirements on subrecipients based on risk factors as required by 2 CFR 200.331(c). Examples of additional requirements authorized by 2 CFR 200.207 include:

- a.** Requiring payments as reimbursements rather than advance payments;
- b.** Withholding authority to proceed to the next phase until receipt of evidence of acceptable performance within a given period of performance;
- c.** Requiring additional, more detailed financial reports;
- d.** Requiring additional project monitoring;
- e.** Requiring the non-Federal entity to obtain technical or management assistance, and
- f.** Establishing additional prior approvals.

7.7. Establish and follow a system for monitoring subrecipient performance that includes the elements required by 2 CFR 200.331(d) and report the results of the monitoring in performance reports as provided in the reporting terms and conditions of this agreement.

7.8. Establish and maintain an accounting system which ensures compliance with the \$25,000 limitation at 2 CFR 200.68 on including subaward costs in Modified Total Direct Cost for the purposes of distributing indirect costs.

7.9. Work with EPA's Project Officer to obtain the written consent of EPA's Office of International and Tribal Affairs (OITA), prior to awarding a subaward to a foreign or international organization, or a subaward to be performed in a foreign country even if that subaward is described in a proposed scope of work.

7.10. Obtain written approval from EPA's Award Official for any subawards that are not described in the approved work plan in accordance with 2 CFR Part 200.308.

7.11. Obtain the written approval of EPA's Award Official prior to awarding a subaward to an individual if the EPA-approved scope of work does not include a description of subawards to individuals.

7.12. Establish and follow written procedures under 2 CFR 200.302(b)(7) for determining that subaward costs are allowable in accordance with 2 CFR Part 200, Subpart E and the terms and conditions of this award. These procedures may provide for allowability determinations on a pre-award basis, through ongoing monitoring of costs that subrecipients incur, or a combination of both approaches provided the pass-through entity documents its determinations.

7.13. Establish and maintain a system under 2 CFR 200.331(d)(3) and 2 CFR 200.521(c) for issuing management decisions for audits of subrecipients that relate to Federal awards. However, the recipient remains accountable to EPA for ensuring that unallowable subaward costs initially paid by EPA are reimbursed or mitigated through offset with allowable costs whether the recipient recovers those costs from the subrecipient or not.

7.14. As provided in 2 CFR 200.332, pass-through entities must obtain EPA approval to make fixed amount subawards. EPA is restricting the use of fixed amount subawards to a limited number of situations that are

authorized in official EPA pilot projects. Recipients should consult with their EPA Project Officer regarding the status of these pilot projects.

By accepting this award, the recipient is certifying that it either has systems in place to comply with the requirements described in Items 7.1 through 7.14 above or will refrain from making subawards until the systems are designed and implemented.

8. Management Fees

Management fees or similar charges in excess of the direct costs and approved indirect rates are not allowable. The term "management fees or similar charges" refers to expenses added to the direct costs in order to accumulate and reserve funds for ongoing business expenses; unforeseen liabilities; or for other similar costs which are not allowable under this assistance agreement. Management fees or similar charges may not be used to improve or expand the project funded under this agreement, except to the extent authorized as a direct cost of carrying out the scope of work.

Reporting and Additional Post-Award Requirements

9. Central Contractor Registration/System for Award Management and Universal Identifier Requirements

9.1. Requirement for System for Award Management (SAM) Unless exempted from this requirement under 2 CFR 25.110, the recipient must maintain the currency of the organization's information in SAM until the submittal of the final financial report required under this award or receipt of the final payment, whichever is later. This requires that the recipient reviews and updates the information at least annually after the initial registration, and more frequently if required by changes in the information or another award term.

9.2. Requirement for Data Universal Numbering System (DUNS) numbers. If the recipient is authorized to make subawards under this award, the recipient:

9.2.1. Must notify potential subrecipients that no entity (definition paragraph 9.3 of this award term) may receive a subaward unless the entity has provided its DUNS number.

9.2.2. May not make a subaward to an entity unless the entity has provided its DUNS number.

9.3. Definitions. For the purposes of this award term:

9.3.1. System for Award Management (SAM) means the Federal repository into which an entity must provide information required for the conduct of business as a recipient. Additional information about registration procedures may be found at the System for Award Management (SAM) Internet site: <https://www.sam.gov>.

9.3.2. Data Universal Numbering System (DUNS) number means the nine-digit number established and assigned by Dun and Bradstreet, Inc. (D&B) to uniquely identify business entities. A DUNS number may be obtained from D&B by telephone (currently 866-705-5711) or the Internet (currently at <http://fedgov.dnb.com/webform>).

9.3.3. Entity, as it is used in this award term, means all of the following, as defined at 2 CFR part 25, subpart C:

9.3.3.1. A Governmental organization, which is a State, local government, or Indian tribe;

9.3.3.2. A foreign public entity;

9.3.3.3. A domestic or foreign nonprofit organization;

9.3.3.4. A domestic or foreign for-profit organization; and

9.3.3.5. A Federal agency, but only as a subrecipient under an award or subaward to a non-Federal entity.

9.3.4. Subaward:

9.3.4.1. This term means a legal instrument to provide support for the performance of any portion of the substantive project or program for which the recipient received this award and that the recipient awards to an eligible subrecipient.

9.3.4.2. The term does not include procurement of property and services needed to carry out the project or program (for further explanation, see 2 CFR 200 Subpart D).

9.3.4.3. A subaward may be provided through any legal agreement, including an agreement that the recipient considers a contract.

9.3.5. Subrecipient means an entity that:

9.3.5.1. Receives a subaward from the recipient under this award; and

9.3.5.2. Is accountable to the recipient for the use of the Federal funds provided by the subaward.

10. Reporting Subawards and Executive Compensation

10.1. Reporting of first-tier subawards.

10.1.1. Applicability. Unless the recipient is exempt as provided in paragraph 10.4. of this award term, the recipient must report each action that obligates \$25,000 or more in Federal funds that does not include Recovery funds (as defined in section 1512(a)(2) of the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5) for a subaward to an entity (see definitions in paragraph 10.5 of this award term).

10.1.2. Where and when to report. (1) The recipient must report each obligating action described in paragraph 10.1.1 of this award term to www.fsrs.gov. (2) For subaward information, report no later than the end of the month following the month in which the obligation was made. (For example, if the obligation was made on any date during the month of November of a given year, the obligation must be reported by no later than December 31 of that year.)

10.1.3. What to report. The recipient must report the information about each obligating action as described in the submission instructions available at: <http://www.fsrs.gov>.

10.2. Reporting Total Compensation of Recipient Executives.

10.2.1. Applicability and what to report. The recipient must report total compensation for each of their five most highly compensated executives for the preceding completed fiscal year, if:

10.2.1.1. the total Federal funding authorized to date under this award is \$25,000 or more;

10.2.1.2. in the preceding fiscal year, the recipient received:(i.) 80 percent or more of their annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); (ii.) and \$25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and

10.2.1.3. The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at: <http://www.sec.gov/answers/execomp.htm>.)

10.2.2. Where and when to report. The recipient must report executive total compensation described in paragraph 10.2.1 of this award term: (i.) As part of the registration Central System for Award Management profile available at www.sam.gov. (ii.) By the end of the month following the month in which this award is made, and annually thereafter.

10.3. Reporting of Total Compensation of Subrecipient Executives.

10.3.1. Applicability and what to report. Unless exempt as provided in paragraph 10.4. of this award term, for each first-tier subrecipient under this award, the recipient shall report the names and total compensation of each of the subrecipient's five most highly compensated executives for the subrecipient's preceding completed fiscal year, if:

10.3.1.1. in the subrecipient's preceding fiscal year, the subrecipient received: (i.) 80 percent or more of its annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and (ii.) \$25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts), and Federal financial assistance subject to the Transparency Act (and subawards); and

10.3.1.2. The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at: <http://www.sec.gov/answers/execomp.htm>.)

10.3.2. Where and when to report. The recipient must report subrecipient executive total compensation described in paragraph 10.3.1. of this award term:

10.3.2.1. To the recipient.

10.3.2.2. By the end of the month following the month during which the recipient makes the subaward. For example, if a subaward is obligated on any date during the month of October of a given year (i.e., between October 1 and 31), the recipient must report any required compensation information of the subrecipient by November 30 of that year.

10.4. Exemptions

10.4.1. If, in the previous tax year, the recipient had gross income, from all sources, under \$300,000, the recipient is exempt from the requirements to report:

10.4.1.1. subawards, and the total compensation of the five most highly compensated executives of any subrecipient.

10.5. Definitions. For purposes of this award term:

10.5.1. Entity means all of the following, as defined in 2 CFR Part 25: (i.) A Governmental organization, which is a State, local government, or Indian tribe; (ii.) A foreign public entity; (iii.) A domestic or foreign nonprofit organization; (iv.) A domestic or foreign for-profit organization; (v.) A Federal agency, but only as a subrecipient under an award or subaward to a non-Federal entity.

10.5.2. Executive means officers, managing partners, or any other employees in management positions.

10.5.3. Subaward:

10.5.3.1. This term means a legal instrument to provide support for the performance of any portion of the substantive project or program for which you received this award and that the recipient award to an eligible subrecipient.

10.5.3.2. The term does not include procurement of property and services needed to carry out the project or program (for further explanation, see 2 CFR 200 Subpart D).

10.5.3.3. A subaward may be provided through any legal agreement, including an agreement that the recipient or a subrecipient considers a contract.

10.5.4. Subrecipient means an entity that:

10.5.4.1. Receives a subaward from the recipient under this award; and

10.5.4.2. Is accountable to the recipient for the use of the Federal funds provided by the subaward.

10.5.5. Total compensation means the cash and noncash dollar value earned by the executive during the recipient's or subrecipient's preceding fiscal year and includes the following (for more information see 17 CFR 229.402(c)(2)):

10.5.5.1. Salary and bonus.

10.5.5.2. Awards of stock, stock options and stock appreciation rights. Use the dollar amount recognized for financial statement reporting purposes with respect to the fiscal year in accordance with the Statement of Financial Accounting Standards No. 123 (Revised 2004) (FAS 123R), Shared Based Payments.

- 10.5.5.3.** Earnings for services under non-equity incentive plans. This does not include group life, health, hospitalization or medical reimbursement plans that do not discriminate in favor of executives, and are available generally to all salaried employees.
- 10.5.5.4.** Change in pension value. This is the change in present value of defined benefit and actuarial pension plans.
- 10.5.5.5.** Above-market earnings on deferred compensation which is not tax-qualified.
- 10.5.5.6.** Other compensation, if the aggregate value of all such other compensation (e.g. severance, termination payments, value of life insurance paid on behalf of the employee, perquisites or property) for the executive exceeds \$10,000.

11. Recipient Integrity and Performance Matters - Reporting of Matters Related to Recipient Integrity and Performance

11.1. General Reporting Requirement

If the total value of your currently active grants, cooperative agreements, and procurement contracts from all Federal awarding agencies exceeds \$10,000,000 for any period of time during the period of performance of this Federal award, then you as the recipient during that period of time must maintain the currency of information reported to the System for Award Management (SAM) that is made available in the designated integrity and performance system (currently the Federal Awardee Performance and Integrity Information System (FAPIIS)) about civil, criminal, or administrative proceedings described in paragraph 2 of this award term and condition. This is a statutory requirement under section 872 of Public Law 110-417, as amended (41 U.S.C. 2313). As required by section 3010 of Public Law 111-212, all information posted in the designated integrity and performance system on or after April 15, 2011, except past performance reviews required for Federal procurement contracts, will be publicly available.

11.2. Proceedings About Which You Must Report

Submit the information required about each proceeding that:

- 11.2.1.** Is in connection with the award or performance of a grant, cooperative agreement, or procurement contract from the Federal Government;
- 11.2.2.** Reached its final disposition during the most recent five-year period; and
- 11.2.3.** Is one of the following:
 - 11.2.3.1.** A criminal proceeding that resulted in a conviction, as defined in paragraph 5 of this award term and condition;
 - 11.2.3.2.** A civil proceeding that resulted in a finding of fault and liability and payment of a monetary fine, penalty, reimbursement, restitution, or damages of \$5,000 or more;
 - 11.2.3.3.** An administrative proceeding, as defined in paragraph 5. of this award term and condition, that resulted in a finding of fault and liability and your payment of either a monetary fine or penalty of \$5,000 or more or reimbursement, restitution, or damages in excess of \$100,000; or
 - 11.2.3.4.** Any other criminal, civil, or administrative proceeding if:
 - 11.2.3.4.1.** It could have led to an outcome described in paragraph 11.2.3.1, 11.2.3.2, or 11.2.3.3 of this award term and condition;
 - 11.2.3.4.2.** It had a different disposition arrived at by consent or compromise with an acknowledgment of fault on your part; and
 - 11.2.3.4.3.** The requirement in this award term and condition to disclose information about the proceeding does not conflict with applicable laws and regulations.

11.3. Reporting Procedures

Enter in the SAM Entity Management area the information that SAM requires about each proceeding described in paragraph 2 of this award term and condition. You do not need to submit the information a

second time under assistance awards that you received if you already provided the information through SAM because you were required to do so under Federal procurement contracts that you were awarded.

11.4. Reporting Frequency

During any period of time when you are subject to the requirement in paragraph 11.1 of this award term and condition, you must report proceedings information through SAM for the most recent five year period, either to report new information about any proceeding(s) that you have not reported previously or affirm that there is no new information to report. Recipients that have Federal contract, grant, and cooperative agreement awards with a cumulative total value greater than \$10,000,000 must disclose semiannually any information about the criminal, civil, and administrative proceedings.

11.5. Definitions

For purposes of this award term and condition:

11.5.1. Administrative proceeding means a non-judicial process that is adjudicatory in nature in order to make a determination of fault or liability (*e.g.*, Securities and Exchange Commission Administrative proceedings, Civilian Board of Contract Appeals proceedings, and Armed Services Board of Contract Appeals proceedings). This includes proceedings at the Federal and State level but only in connection with performance of a Federal contract or grant. It does not include audits, site visits, corrective plans, or inspection of deliverables.

11.5.2. Conviction, for purposes of this award term and condition, means a judgment or conviction of a criminal offense by any court of competent jurisdiction, whether entered upon a verdict or a plea, and includes a conviction entered upon a plea of *nolo contendere*.

11.5.3. Total value of currently active grants, cooperative agreements, and procurement contracts includes—

11.5.3.1. Only the Federal share of the funding under any Federal award with a recipient cost share or match; and

11.5.3.2. The value of all expected funding increments under a Federal award and options, even if not yet exercised.

12. Federal Financial Reporting (FFR)

Pursuant to 2 CFR 200.327 and 200.343, EPA recipients must submit the Federal Financial Report (SF-425) at least annually and no more frequently than quarterly. EPA's standard reporting frequency is annual unless an EPA Region has included an additional term and condition specifying greater reporting frequency within this award document. EPA recipients must submit the SF-425 no later than 30 days after the end of each specified reporting period for quarterly and semi-annual reports, and 90 calendar days for annual and final reports. Extension of reporting due dates may be approved by EPA upon request of the recipient. The FFR form is available on the internet at:

<http://www2.epa.gov/financial/forms>. All FFRs must be submitted to the Las Vegas Finance Center (LVFC) via email LVFC-grants@epa.gov or mail it to:

USEPA LVFC
4220 S. Maryland
PkwY Bldg C, Suite
503
Las Vegas, NV 89119

The LVFC will make adjustments, as necessary, to obligated funds after reviewing and accepting a final Federal Financial Report. Recipients will be notified and instructed by EPA if they must complete any additional forms for the closeout of the assistance agreement.

13. Indirect Cost Rate Agreements

Recipients are entitled to reimbursement of indirect costs, subject to any statutory or regulatory administrative cost limitations, if they have a current Federally-approved indirect cost rate agreement or have submitted an indirect cost rate proposal to their cognizant federal agency for review and approval and a final rate has been determined by the cognizant agency. Recipients are responsible for

maintaining an approved indirect cost rate for the life of the award. Recipients with differences between their provisional rates and final rates are not entitled to more than the award amount, without prior approval from EPA.

14. Audit Requirements

In accordance with 2 CFR 200.501(a), the recipient hereby agrees to obtain a single audit from an independent auditor, if their organization expends \$750,000 or more in total Federal funds in their fiscal year beginning on or after December 26, 2014.

The recipient must submit the form SF-SAC and a Single Audit Report Package within 9 months of the end of the recipient's fiscal year or 30 days after receiving the report from an independent auditor. The SF-SAC and a Single Audit Report Package MUST be submitted using the Federal Audit Clearinghouse's Internet Data Entry System available at:

[https://harvester.census.gov/facides/\(S\(3wauez2yufokbe3engv0dtek\)\)/account/login.aspx](https://harvester.census.gov/facides/(S(3wauez2yufokbe3engv0dtek))/account/login.aspx).

For complete information on how to accomplish the single audit submissions, you will need to visit the Federal Audit Clearinghouse Web site: <https://harvester.census.gov/facweb/Default.aspx>.

15. Closeout Requirements

Reports required for closeout of the assistance agreement must be submitted in accordance with this agreement. Submission requirements and frequently asked questions can also be found at:

<http://www2.epa.gov/grants/frequently-asked-questions-about-closeout-information>.

16. Suspension and Debarment

Recipients shall fully comply with Subpart C of 2 CFR Part 180 entitled, "Responsibilities of Participants Regarding Transactions Doing Business with Other Persons," as implemented and supplemented by 2 CFR Part 1532. Recipient is responsible for ensuring that any lower tier covered transaction, as described in Subpart B of 2 CFR Part 180, entitled "Covered Transactions," includes a term or condition requiring compliance with Subpart C. Recipient is responsible for further requiring the inclusion of a similar term or condition in any subsequent lower tier covered transactions. Recipient acknowledges that failing to disclose the information required under 2 CFR 180.335 may result in the delay or negation of this assistance agreement, or pursuance of legal remedies, including suspension and debarment.

Recipients may access suspension and debarment information at: <http://www.sam.gov>. This system allows recipients to perform searches determining whether an entity or individual is excluded from receiving Federal assistance. This term and condition supersedes EPA Form 5700-49, "Certification Regarding Debarment, Suspension, and Other Responsibility Matters."

17. Disclosing Conflict of Interests

17.1. For awards to Non-federal entities and individuals (other than states and fellowship recipients under 40 CFR Part 46).

As required by 2 CFR 200.112, EPA has established a policy (COI Policy) for disclosure of conflicts of interest (COI) that may affect EPA financial assistance awards. EPA's COI Policy is posted at <http://www2.epa.gov/grants/epas-financial-assistance-conflict-interest-policy>. The posted version of EPA's COI Policy is applicable to new funding (initial awards, supplemental and incremental funding) awarded on or after October 1, 2015. This COI term and condition supersedes prior COI terms and conditions for this award based on either EPA's May 22, 2015 Revised Interim COI Policy or December 26, 2014 Interim COI Policy.

For competitive awards, recipients must disclose any competition related COI described in section 4.0(a) of the COI Policy that are discovered after award to the EPA Grants Specialist listed on the Assistance Agreement/Amendment within 30 calendar days of discovery of the

COI. The Grants Specialist will respond to any such disclosure within 30 calendar days.

EPA's COI Policy requires that recipients have systems in place to address, resolve and disclose to EPA COIs described in sections 4.0(b), (c) and/or (d) of the COI Policy that affect any contract or subaward regardless of amount funded under this award. The recipient's COI Point of Contact for the award must disclose any COI to the EPA Grants Specialist listed on the Assistance Agreement/Amendment within 30 calendar days of the discovery of the potential COI and their approach for resolving the COI.

EPA's COI Policy requires that subrecipients have systems in place to address, resolve and disclose COI's described in section 4.0(b)(c) and (d) of the COI Policy regardless of the amount of the transaction. Recipients who are pass-through entities as defined at 2 CFR 200.74 must require that subrecipients being considered for or receiving subawards disclose COI to the pass-through entities in a manner that, at a minimum, is in accordance with sections 5.0(d) and 7.0(c) of EPA's COI Policy. Pass-through entities must disclose the subrecipient COI along with the approach for resolving the COI to the EPA Grants Specialist listed on the Assistance Agreement/Amendment within 30 calendar days of receiving notification of the COI by the subrecipient.

EPA only requires that recipients and subrecipients disclose COI's that are discovered under their systems for addressing and resolving COI. If recipients or subrecipients do not discover a COI, they do not need to advise EPA or the pass-through entity of the absence of a COI.

Upon notice from the recipient of a potential COI and the approach for resolving it, the Agency will then make a determination regarding the effectiveness of these measures within 30 days of receipt of the recipient's notice unless a longer period is necessary due to the complexity of the matter. Recipients may not request payment from EPA for costs for transactions subject to the COI pending notification of EPA's determination. Failure to disclose a COI may result in cost disallowances.

Disclosure of a potential COI will not necessarily result in EPA disallowing costs, with the exception of procurement contracts that the Agency determines violate 2 CFR 200.318(c)(1) or (2), provided the recipient notifies EPA of measures the recipient or subrecipient has taken to eliminate, neutralize or mitigate the conflict of interest when making the disclosure.

17.2. For awards to states including state universities that are state agencies or

instrumentalities As required by 2 CFR 200.112, EPA has established a policy (COI Policy) for disclosure of conflicts of interest (COI) that may affect EPA financial assistance awards. EPA's COI Policy is posted at:

<http://www2.epa.gov/grants/epas-financial-assistance-conflict-interest-policy>. The posted version of EPA's COI Policy is applicable to new funding (initial awards, supplemental, incremental funding) awarded on or after October 1, 2015. This COI term and condition supersedes prior COI terms and conditions for this award based on either EPA's May 22, 2015 Revised Interim COI Policy or December 26, 2014 Interim COI Policy.

For competitive awards, recipients must disclose any competition related COI described in section 4.0(a) of the COI Policy that are discovered after award to the EPA Grants Specialist listed on the Assistance Agreement/Amendment within 30 calendar days of discovery of the COI. The Grants Specialist will respond to any such disclosure within 30 calendar days.

States including state universities that are state agencies and instrumentalities receiving funding

from EPA are only required to disclose subrecipient COI as a pass-through entity as defined by 2 CFR 200.74. Any other COI are subject to state laws, regulations and policies. EPA's COI Policy requires that subrecipients have systems in place to address, resolve and disclose COIs described in section 4.0(b)(c) and (d) of the COI Policy that arise after EPA made the award regardless of the amount of the transaction. States who are pass-through entities as defined at 2 CFR 200.74 must require that subrecipients being considered for or receiving subawards disclose COI to the state in a manner that, as a minimum, in accordance with sections 5.0(d) and 7.0(c) of EPA's COI Policy. States must disclose the subrecipient COI along with the approach for resolving the COI to the EPA Grants Specialist listed on the Assistance Agreement/Amendment within 30 calendar days of receiving notification of the COI by the subrecipient.

EPA only requires that subrecipients disclose COI's to state pass-through entities that are discovered under their systems for addressing, resolving, and disclosing COI. If subrecipients do not discover a COI, they do not need to advise state pass-through entities of the absence of a COI.

Upon receiving notice of a potential COI and the approach for resolving it, the Agency will make a determination regarding the effectiveness of these measures within 30 days of receipt of the state's notice of a subrecipient COI unless a longer period is necessary due to the complexity of the matter. States may not request payment from EPA for costs for transactions subject to the COI pending notification of EPA's determination. A subrecipient's failure to disclose a COI to the state and EPA may result in cost disallowances.

Disclosure of a potential subrecipient COI will not necessarily result in EPA disallowing costs, with the exception of procurement contracts that the Agency determines violate 2 CFR 200.318(c)(1) or (2), provided the subrecipient has taken measures that EPA and the state agree eliminate, neutralize or mitigate the conflict of interest.

Programmatic General Terms and Conditions

18. Sufficient Progress

EPA will measure sufficient progress by examining the performance required under the workplan in conjunction with the milestone schedule, the time remaining for performance within the project period and/or the availability of funds necessary to complete the project. EPA may terminate the assistance agreement for failure to ensure reasonable completion of the project within the project period.

19. Copyrighted Material and Data

In accordance with 2 CFR 200.315, EPA has the right to reproduce, publish, use and authorize others to reproduce, publish and use copyrighted works or other data developed under this assistance agreement for Federal purposes.

Examples of a Federal purpose include but are not limited to: (1) Use by EPA and other Federal employees for official Government purposes; (2) Use by Federal contractors performing specific tasks for the Government; (3) Publication in EPA documents provided the document does not disclose trade secrets (e.g. software codes) and the work is properly attributed to the recipient through citation or otherwise; (4) Reproduction of documents for inclusion in Federal depositories; (5) Use by State, tribal and local governments that carry out delegated Federal environmental programs as "co-regulators" or act as official partners with EPA to carry out a national environmental program within their jurisdiction and; (6) Limited use by other grantees to carry out Federal grants provided the use is consistent with the terms of EPA's authorization to the other grantee to use the copyrighted works or other data.

Under Item 6, the grantee acknowledges that EPA may authorize another grantee(s) to use the copyrighted works or other data developed under this grant as a result of:

- the selection of another grantee by EPA to perform a project that will involve the use of the

- copyrighted works or other data or;
- termination or expiration of this agreement.

In addition, EPA may authorize another grantee to use copyrighted works or other data developed with Agency funds provided under this grant to perform another grant when such use promotes efficient and effective use of Federal grant funds.

20. Patents and Inventions

Rights to inventions made under this assistance agreement are subject to federal patent and licensing regulations, which are codified at Title 37 CFR Part 401 and Title 35 USC Sections 200-212.

Pursuant to the Bayh-Dole Act (set forth in 35 USC 200-212), EPA retains the right to a worldwide, nonexclusive, nontransferable, irrevocable, paid-up license to practice the invention owned by the assistance agreement holder, as defined in the Act. To streamline the invention reporting process and to facilitate compliance with the Bayh-Dole Act, the recipient must utilize the Interagency Edison extramural invention reporting system at <http://iEdison.gov>. Annual utilization reports must be submitted through the system. The recipient is required to notify the Project Officer identified on the award document when an invention report, patent report, or utilization report is filed at <http://iEdison.gov>. EPA elects not to require the recipient to provide a report prior to the close-out of a funding agreement listing all subject inventions or stating that there were none.

In accordance with Executive Order 12591, as amended, government owned and operated laboratories can enter into cooperative research and development agreements with other federal laboratories, state and local governments, universities, and the private sector, and license, assign, or waive rights to intellectual property “developed by the laboratory either under such cooperative research or development agreements and from within individual laboratories.”

21. Acknowledgement Requirements for Non-ORD Assistance Agreements

The recipient agrees that any reports, documents, publications or other materials developed for public distribution supported by this assistance agreement shall contain the following statement:

"This project has been funded wholly or in part by the United States Environmental Protection Agency under assistance agreement (number) to (recipient). The contents of this document do not necessarily reflect the views and policies of the Environmental Protection Agency, nor does the EPA endorse trade names or recommend the use of commercial products mentioned in this document."

Recipients of EPA Office of Research Development (ORD) research awards must follow the acknowledgement requirements outlined in the research T&Cs available at: <http://www.nsf.gov/awards/managing/rtc.jsp>. A Federal-wide workgroup is currently updating the Federal-Wide Research Terms and Conditions Overlay to the Uniform Administrative Requirements, Cost Principles and Audit Requirements for Federal Awards and when completed recipients of EPA ORD research must abide by the research T&Cs.

22. Electronic and Information Technology Accessibility

Recipients are subject to the program accessibility provisions of Section 504 of the Rehabilitation Act, codified in 40 CFR Part 7, which includes an obligation to provide individuals with disabilities reasonable accommodations and an equal and effective opportunity to benefit from or participate in a program, including those offered through electronic and information technology (“EIT”). In compliance with Section 504, EIT systems or products funded by this award must be designed to meet the diverse needs of users (e.g., U.S. public, recipient personnel) without barriers or diminished function or quality. Systems shall include usability features or functions that accommodate the needs of persons with disabilities, including those who use assistive technology. At this time, the EPA will consider a recipient’s websites, interactive tools, and other EIT as being in compliance with Section 504 if such

technologies meet standards established under Section 508 of the Rehabilitation Act, codified at 36 CFR Part 1194. While Section 508 does not apply directly to grant recipients, we encourage recipients to follow either the 508 guidelines or other comparable guidelines that concern accessibility to EIT for individuals with disabilities.

Recipients may wish to consult the latest Section 508 guidelines issued by the U.S. Access Board or W3C's Web Content Accessibility Guidelines (WCAG) 2.0 (see <http://www.access-board.gov/sec508/guide/index.htm>).

23. Human Subjects

Human subjects research is any activity that meets the regulatory definitions of both research AND human subject. *Research* is a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge. *Human subject* means a living individual about whom an investigator (whether professional or student) conducting research obtains (1) data through intervention or interaction with the individual, or (2) identifiable private information. [40 CFR 26.102 (d)(f)]

No research involving human subjects will be conducted under this agreement without prior written approval of the EPA to proceed with that research. If engaged in human subjects research as part of this agreement, the recipient agrees to comply with all applicable provisions of EPA Regulation 40 CFR 26 (Protection of Human Subjects). This includes, at Subpart A, the Basic Federal Policy for the Protection of Human Research Subjects, also known as the Common Rule. It also includes, at Subparts B, C, and D, prohibitions and additional protections for children, nursing women, pregnant women, and fetuses in research conducted or supported by EPA.

The recipient further agrees to comply with EPA's procedures for oversight of the recipient's compliance with 40 CFR 26, as given in EPA Order 1000.17 Change A1 (Policy and Procedures on Protection of Human Research Subjects in EPA Conducted or Supported Research). As per this order, no human subject may be involved in any research conducted under this assistance agreement, including recruitment, until the research has been approved or determined to be exempt by the EPA Human Subjects Research Review Official (HSRRO) after review of the approval or exemption determination of the Institutional Review Board(s) (IRB(s)) with jurisdiction over the research under 40 CFR 26.

For HSRRO approval, the recipient must forward to the Project Officer: (1) copies of all documents upon which the IRB(s) with jurisdiction based their approval(s) or exemption determination(s), (2) copies of the IRB approval or exemption determination letter(s), (3) copy of the IRB-approved consent forms and subject recruitment materials, if applicable, and (4) copies of all supplementary IRB correspondence.

Following the initial approvals indicated above, the recipient must, as part of the annual report(s), provide evidence of continuing review and approval of the research by the IRB(s) with jurisdiction, as required by 40 CFR 26.109(e). Materials submitted to the IRB(s) for their continuing review and approval are to be provided to the Project Officer upon IRB approval. During the course of the research, investigators must promptly report any unanticipated problems involving risk to subjects or others according to requirements set forth by the IRB. In addition, any event that is significant enough to result in the removal of the subject from the study should also be reported to the Project Officer, even if the event is not reportable to the IRB of record.

24. Light Refreshments and/or Meals

APPLICABLE TO ALL AGREEMENTS EXCEPT STATE CONTINUING ENVIRONMENTAL PROGRAMS (AS DESCRIBED BELOW):

Unless the event(s) and all of its components are described in the approved workplan, the recipient agrees to obtain prior approval from EPA for the use of grant funds for light refreshments and/or meals served at meetings, conferences, training workshops and outreach activities (events). The recipient must send

requests for approval to the EPA Project Officer and include:

- (1) An estimated budget and description for the light refreshments, meals, and/or beverages to be served at the event(s);
- (2) A description of the purpose, agenda, location, length and timing for the event; and,
- (3) An estimated number of participants in the event and a description of their roles.

Costs for light refreshments and meals for recipient staff meetings and similar day-to-day activities are not allowable under EPA assistance agreements.

Recipients may address questions about whether costs for light refreshments, and meals for events may be allowable to the recipient's EPA Project Officer; however, the Agency Award Official or Grant Management Officer will make final determinations on allowability. Agency policy prohibits the use of EPA funds for receptions, banquets and similar activities that take place after normal business hours unless the recipient has provided a justification that has been expressly approved by EPA's Award Official or Grants Management Officer.

EPA funding for meals, light refreshments, and space rental may not be used for any portion of an event where alcohol is served, purchased, or otherwise available as part of the event or meeting, even if EPA funds are not used to purchase the alcohol.

Note: U.S. General Services Administration regulations define light refreshments for morning, afternoon or evening breaks to include, but not be limited to, coffee, tea, milk, juice, soft drinks, donuts, bagels, fruit, pretzels, cookies, chips, or muffins. (41 CFR 301-74.7)

FOR STATE CONTINUING ENVIRONMENTAL PROGRAM GRANT RECIPIENTS EXCLUDING STATE UNIVERSITIES:

If the state maintains systems capable of complying with federal grant regulations at 2 CFR 200.432 and 200.438, EPA has waived the prior approval requirements for the use of EPA funds for light refreshments and/or meals served at meetings, conferences, and training, as described above. The state may follow its own procedures without requesting prior approval from EPA. However, notwithstanding state policies, EPA funds may not be used for (1) evening receptions, or (2) other evening events (with the exception of working meetings). Examples of working meetings include those evening events in which small groups discuss technical subjects on the basis of a structured agenda or there are presentations being conducted by experts. EPA funds for meals, light refreshments, and space rental may not be used for any portion of an event (including evening working meetings) where alcohol is served, purchased, or otherwise available as part of the event or meeting, even if EPA funds are not used to purchase the alcohol.

By accepting this award, the state is certifying that it has systems in place (including internal controls) to comply with the requirements described above.

25. Tangible Personal Property

25.1 Reporting Pursuant to 2 CFR 200.312 and 200.314, property reports, if applicable, are required for Federally-owned property in the custody of a non-Federal entity upon completion of the Federal award or when the property is no longer needed. Additionally, upon termination or completion of the project, residual unused supplies with a total aggregate fair market value exceeding \$5,000 not needed for any other Federally-sponsored programs or projects must be reported. For Superfund awards under Subpart O, refer to 40 CFR 35.6340 and 35.6660 for property reporting requirements. Recipients should utilize the Tangible Personal Property Report form series (SF-428) to report tangible personal property.

25.2 Disposition

25.2.1 Most Recipients. Consistent with 2 CFR 200.313, unless instructed otherwise on the official award document or this award term, the recipient may keep the equipment and continue to use it on the project originally funded through this assistance agreement or on other federally

funded projects whether or not the project or program continues to be supported by Federal funds.

25.2.2 State Agencies. Per 2 CFR 200.313(b), state agencies may manage and dispose of equipment acquired under this assistance agreement in accordance with state laws and procedures.

25.2.3 Superfund Recipients. Equipment purchased under Superfund projects is subject to specific disposal options in accordance with 40 CFR Part 35.6345.

26. Dual Use Research of Concern (DURC)

The recipient agrees to conduct all life science research* in compliance with [EPA's Order on the Policy and Procedures for Managing Dual Use Research of Concern](#) (EPA DURC Order) and [United States Government Policy for Institutional Oversight of Life Sciences Dual Use Research of Concern \(iDURC Policy\)](#). If the recipient is an institution within the United States that receives funding through this agreement, or from any other source, the recipient agrees to comply with the iDURC Policy if they conduct or sponsor research involving any of the agents or toxins identified in Section 6.2.1 of the iDURC Policy. If the institution is outside the United States and receives funding through this agreement to conduct or sponsor research involving any of those same agents or toxins, the recipient agrees to comply with the iDURC Policy. The recipient agrees to provide any additional information that may be requested by EPA regarding DURC and iDURC. The recipient agrees to immediately notify the EPA Project Officer should the project use or introduce use of any of the agents or toxins identified in the iDURC Policy. The recipient's Institution/Organization must also comply with USG iDURC policy and EPA DURC Order and will inform the appropriate government agency if funded by such agency of research with the agents or toxins identified in Section 6.2.1 of the iDURC Policy. If privately funded the recipient agrees to notify the National Institutes of Health at DURC@od.nih.gov.

**"Life Sciences Research,"* for purposes of the EPA DURC Order, and based on the definition of research in 40 CFR §26.102(d), is a systematic investigation designed to develop or contribute to generalizable knowledge involving living organisms (e.g., microbes, human beings, animals, and plants) and their products. EPA does not consider the following activities to be research: routine product testing, quality control, mapping, collection of general-purpose statistics, routine monitoring and evaluation of an operational program, observational studies, and the training of scientific and technical personnel. [Note: This is consistent with Office of Management and Budget Circular A-11.]

Public Policy Requirements

27. Civil Rights Obligations

This term and condition incorporates by reference the signed assurance provided by the recipient's authorized representative on: 1) EPA Form 4700-4, "Preaward Compliance Review Report for All Applicants and Recipients Requesting EPA Financial Assistance"; and 2) Standard Form 424B or Standard Form 424D, as applicable.

These assurances and this term and condition obligate the recipient to comply fully with applicable civil rights statutes and implementing EPA regulations.

a. Statutory Requirements

- i. In carrying out this agreement, the recipient must comply with:
 1. Title VI of the Civil Rights Act of 1964, which prohibits discrimination based on race, color, and national origin, including limited English proficiency (LEP), by entities receiving Federal financial assistance.
 2. Section 504 of the Rehabilitation Act of 1973, which prohibits discrimination against persons with disabilities by entities receiving Federal financial assistance; and
 3. The Age Discrimination Act of 1975, which prohibits age discrimination by entities

- receiving Federal financial assistance.
- ii. If the recipient is an education program or activity (e.g., school, college or university) or if the recipient is conducting an education program or activity under this agreement, it must also comply with:
 - 1. Title IX of the Education Amendments of 1972, which prohibits discrimination on the basis of sex in education programs and activities operated by entities receiving Federal financial assistance. For further information about your compliance obligations regarding Title IX, see 40 CFR Part 5 and <https://www.justice.gov/crt/title-ix>
- iii. If this agreement is funded with financial assistance under the Clean Water Act (CWA), the recipient must also comply with:
 - 1. Section 13 of the Federal Water Pollution Control Act Amendments of 1972, which prohibits discrimination on the basis of sex in CWA-funded programs or activities.

b. Regulatory Requirements

- i. The recipient agrees to comply with all applicable EPA civil rights regulations, including:
 - 1. For Title IX obligations, 40 C.F.R. Part 5; and
 - 2. For Title VI, Section 504, Age Discrimination Act, and Section 13 obligations, 40 CFR Part 7.
 - 3. As noted on the EPA Form 4700-4 signed by the recipient's authorized representative, these regulations establish specific requirements including maintaining compliance information, establishing grievance procedures, designating a Civil Rights Coordinator and providing notices of non-discrimination.

c. TITLE VI – LEP, Public Participation and Affirmative Compliance Obligation

- i. As a recipient of EPA financial assistance, you are required by Title VI of the Civil Rights Act to provide meaningful access to LEP individuals. In implementing that requirement, the recipient agrees to use as a guide the Office of Civil Rights (OCR) document entitled "Guidance to Environmental Protection Agency Financial Assistance Recipients Regarding Title VI Prohibition Against National Origin Discrimination Affecting Limited English Proficient Persons." The guidance can be found at: <https://www.federalregister.gov/documents/2004/06/25/04-14464/guidance-to-environmental-protection-agency-financial-assistance-recipients-regarding-title-vi>
- ii. If the recipient is administering permitting programs under this agreement, the recipient agrees to use as a guide OCR's Title VI Public Involvement Guidance for EPA Assistance Recipients Administering Environmental Permitting Programs. The Guidance can be found at <http://edocket.access.gpo.gov/2006/pdf/06-2691.pdf>.
- iii. In accepting this assistance agreement, the recipient acknowledges it has an affirmative obligation to implement effective Title VI compliance programs and ensure that its actions do not involve discriminatory treatment and do not have discriminatory effects even when facially neutral. The recipient must be prepared to demonstrate to EPA that such compliance programs exist and are being implemented or to otherwise demonstrate how it is meeting its Title VI obligations.

28. Drug-Free Workplace

The recipient organization of this EPA assistance agreement must make an ongoing, good faith effort to maintain a drug-free workplace pursuant to the specific requirements set forth in Title 2 CFR Part 1536 Subpart B. Additionally, in accordance with these regulations, the recipient organization must identify all known workplaces under its federal awards, and keep this information on file during the performance of the award.

Those recipients who are individuals must comply with the drug-free provisions set forth in Title 2 CFR Part 1536 Subpart C.

The consequences for violating this condition are detailed under Title 2 CFR Part 1536 Subpart E. Recipients can access the Code of Federal Regulations (CFR) Title 2 Part 1536 at www.ecfr.gov/.

29. Hotel-Motel Fire Safety

Pursuant to 15 USC 2225a, the recipient agrees to ensure that all space for conferences, meetings, conventions or training seminars funded in whole or in part with federal funds complies with the protection and control guidelines of the Hotel and Motel Fire Safety Act (PL 101-391, as amended). Recipients may search the Hotel-Motel National Master List at <https://apps.usfa.fema.gov/hotel/> to see if a property is in compliance, or to find other information about the Act.

30. Lobbying and Litigation

a. All Recipients.

- i. The chief executive officer of this recipient agency shall ensure that no grant funds awarded under this assistance agreement are used to engage in lobbying of the Federal Government or in litigation against the U.S. unless authorized under existing law. The recipient shall abide by the Cost Principles available at 2 CFR 200 which generally prohibits the use of federal grant funds for litigation against the U.S. or for lobbying or other political activities.
- ii. The recipient agrees to comply with Title 40 CFR Part 34, New Restrictions on Lobbying. The recipient shall include the language of this provision in award documents for all subawards exceeding \$100,000, and require that subrecipients submit certification and disclosure forms accordingly.
- iii. In accordance with the Byrd Anti-Lobbying Amendment, any recipient who makes a prohibited expenditure under Title 40 CFR Part 34 or fails to file the required certification or lobbying forms shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such expenditure.
- iv. Contracts awarded by a recipient shall contain, when applicable, the anti-lobbying provision as stipulated in the Appendix II to Part 200—Contract Provisions for Non-Federal Entity Contracts Under Federal Awards.
- v. Pursuant to Section 18 of the Lobbying Disclosure Act, the recipient affirms that it is not a nonprofit organization described in Section 501(c)(4) of the Internal Revenue Code of 1986; or that it is a nonprofit organization described in Section 501(c)(4) of the Code but does not and will not engage in lobbying activities as defined in Section 3 of the Lobbying Disclosure Act. Nonprofit organizations exempt from taxation under section 501(c)(4) of the Internal Revenue Code that engage in lobbying activities are ineligible for EPA subawards.

31. Recycled Paper

When directed to provide paper documents, the recipient agrees to use recycled paper and double sided printing for all reports which are prepared as a part of this agreement and delivered to EPA. This requirement does not apply to reports prepared on forms supplied by EPA.

32. Resource Conservation and Recovery Act

Consistent with goals of section 6002 of RCRA (42 U.S.C. 6962), State and local institutions of higher education, hospitals and non-profit organization recipients agree to give preference in procurement programs to the purchase of specific products containing recycled materials, as identified in 40 CFR Part 247.

Consistent with section 6002 of RCRA (42 U.S.C. 6962) and 2 CFR 200.322, State agencies or agencies of a political subdivision of a State and its contractors are required to purchase certain items made from recycled materials, as identified in 40 CFR Part 247, when the purchase price exceeds \$10,000 during the

course of a fiscal year or where the quantity of such items acquired in the course of the preceding fiscal year was \$10,000 or more. Pursuant to 40 CFR 247.2 (d), the recipient may decide not to procure such items if they are not reasonably available in a reasonable period of time; fail to meet reasonable performance standards; or are only available at an unreasonable price.

33. Trafficking in Persons

a. Provisions applicable to a recipient that is a private entity.

- i. The recipient, the recipient's employees, subrecipients under this award, and subrecipients' employees may not—
 1. Engage in severe forms of trafficking in persons during the period of time that the award is in effect;
 2. Procure a commercial sex act during the period of time that the award is in effect; or
 3. Use forced labor in the performance of the award or subawards under the award.
- ii. We as the Federal awarding agency may unilaterally terminate this award, without penalty, if the recipient or a subrecipient that is a private entity—
 1. Is determined to have violated a prohibition in paragraph a of this award term; or
 2. Has an employee who is determined by the agency official authorized to terminate the award to have violated a prohibition in paragraph a of this award term through conduct that is either—
 - a. Associated with performance under this award; or
 - b. Imputed to the recipient or subrecipient using the standards and due process for imputing the conduct of an individual to an organization that are provided in 2 CFR part 180, "OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement)," as implemented by our Agency at 2 CFR 1532.

b. Provision applicable to a recipient other than a private entity. EPA may unilaterally terminate this award, without penalty, if a subrecipient that is a private entity—

- i. Is determined to have violated an applicable prohibition in paragraph a. of this award term; or
- ii. Has an employee who is determined by the agency official authorized to terminate the award to have violated an applicable prohibition in paragraph a of this award term through conduct that is either—
 1. Associated with performance under this award; or
 2. Imputed to the subrecipient using the standards and due process for imputing the conduct of an individual to an organization that are provided in 2 CFR part 180, "OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement)," as implemented by EPA at 2 CFR 1532

c. Provisions applicable to any recipient.

- i. The recipient must inform the EPA immediately of any information received from any source alleging a violation of a prohibition in paragraph a of this award term.
- ii. Our right to terminate unilaterally that is described in paragraph a and b:
 1. Implements section 106(g) of the Trafficking Victims Protection Act of 2000 (TVPA), as amended (22 U.S.C. 7104(g)), and
 2. Is in addition to all other remedies for noncompliance that are available to us under this award.

- iii. The recipient must include the requirements of paragraph a of this award term in any subaward made to a private entity.
- d. **Definitions.** For purposes of this award term:
- i. “Employee” means either:
 - 1. An individual employed by you or a subrecipient who is engaged in the performance of the project or program under this award; or
 - 2. Another person engaged in the performance of the project or program under this award and not compensated by you including, but not limited to, a volunteer or individual whose services are contributed by a third party as an in-kind contribution toward cost sharing or matching requirements.
 - ii. “Forced labor” means labor obtained by any of the following methods: the recruitment, harboring, transportation, provision, or obtaining of a person for labor or services, through the use of force, fraud, or coercion for the purpose of subjection to involuntary servitude, peonage, debt bondage, or slavery.
 - iii. “Private entity”:
 - 1. Means any entity other than a State, local government, Indian tribe, or foreign public entity, as those terms are defined in 2 CFR 175.25.
 - 2. Includes:
 - a. A nonprofit organization, including any nonprofit institution of higher education, hospital, or tribal organization other than one included in the definition of Indian tribe at 2 CFR 175.25(b).
 - b. A for-profit organization.
 - iv. “Severe forms of trafficking in persons,” “commercial sex act,” and “coercion” have the meanings given at section 103 of the TVPA, as amended (22 U.S.C. 7102).

Administrative Conditions - Procurement Excerpt

1. GENERAL TERMS AND CONDITIONS

The recipient agrees to comply with the current EPA general terms and conditions available at: <https://www.epa.gov/grants/epa-general-terms-and-conditions-effective-october-2-2017-or-later>
These terms and conditions are in addition to the assurances and certifications made as a part of the award and the terms, conditions, or restrictions cited throughout the award.

The EPA repository for the general terms and conditions by year can be found at <http://www.epa.gov/grants/grant-terms-and-conditions>

2. UTILIZATION OF SMALL, MINORITY AND WOMEN'S BUSINESS ENTERPRISES

GENERAL COMPLIANCE, 40 CFR, Part 33

The recipient agrees to comply with the requirements of EPA's Disadvantaged Business Enterprise (DBE) Program for procurement activities under assistance agreements, contained in 40 CFR, Part 33.

MBE/WBE REPORTING, 40 CFR, Part 33, Subpart E

MBE/WBE reporting is required in annual reports. Reporting is required for assistance agreements where there are funds budgeted for procuring construction, equipment, services and supplies, including funds budgeted for direct procurement by the recipient or procurement under subawards or loans in the "Other" category that exceed the threshold amount of \$150,000, including amendments and/or modifications.

Based on EPA's review of the planned budget, this award meets the conditions above and is subject to the Disadvantaged Business Enterprise (DBE) Program reporting requirements. However, if recipient believes this award does not meet these conditions, it must provide **[SEE DBE COORDINATOR INFO LISTED BELOW]** with a justification and budget detail within 21 days of the award date clearly demonstrating that, based on the planned budget, this award is not subject to the DBE reporting requirements.

The recipient agrees to complete and submit a "MBE/WBE Utilization Under Federal Grants, Cooperative Agreements and Interagency Agreements" report (EPA Form 5700-52A) on an annual basis. All procurement actions are reportable, not just that portion which exceeds \$150,000.

When completing the annual report, recipients are instructed to check the box titled "annual" in section 1B of the form. For the final report, recipients are instructed to check the box indicated for the "last report" of the project in section 1B of the form. Annual reports are due by October 30th of each year. Final reports are due by October 30th or 90 days after the end of the project period, whichever comes first.

The reporting requirement is based on total procurements. Recipients with expended and/or budgeted funds for procurement are required to report annually whether the planned procurements take place during the reporting period or not. If no budgeted procurements take place during the reporting period, the recipient should check the box in section 5B when completing the form.

MBE/WBE reports should be sent to

Adrienne M. Callahan, Region 5 MBE/WBE Coordinator
USEPA, Acquisition and Assistance Branch
77 West Jackson Boulevard (MC-10J)
Chicago, IL 60604
callahan.adrienne@epa.gov

The current EPA Form 5700-52A can be found at the EPA Office of Small Business Program's Home Page at http://www.epa.gov/osbp/dbe_reporting.htm

This provision represents an approved deviation from the MBE/WBE reporting requirements as described in 40 CFR, Part 33, Section 33.502; however, the other requirements outlined in 40 CFR Part 33 remain in effect, including the Good Faith Effort requirements as described in 40 CFR Part 33 Subpart C, and Fair Share Objectives negotiation as described in 40 CFR Part 33 Subpart D and explained below.

FAIR SHARE OBJECTIVES, 40 CFR, Part 33, Subpart D

A recipient must negotiate with the appropriate EPA award official, or his/her designee, fair share objectives for MBE and WBE participation in procurement under the financial assistance agreements.

In accordance with 40 CFR, Section 33.411 some recipients may be exempt from the fair share objectives requirements as described in 40 CFR, Part 33, Subpart D. Recipients should work with their DBE coordinator, if they think their organization may qualify for an exemption.

Accepting the Fair Share Objectives/Goals of Another Recipient

The dollar amount of this assistance agreement, or the total dollar amount of all of the recipient's financial assistance agreements in the current federal fiscal year from EPA is \$250,000, or more. The recipient accepts the applicable MBE/WBE fair share objectives/goals negotiated with EPA by the **Michigan Department of Environmental Quality** as follows:

MBE: 10.00%

WBE: 7.50%

By signing this financial assistance agreement, the recipient is accepting the fair share objectives/goals stated above and attests to the fact that it is purchasing the same or similar construction, supplies, services and equipment, in the same or similar relevant geographic buying market as the **Michigan Department of Environmental Quality**.

Negotiating Fair Share Objectives/Goals, 40 CFR, Section 33.404

The recipient has the option to negotiate its own MBE/WBE fair share objectives/goals. If the recipient wishes to negotiate its own MBE/WBE fair share objectives/goals, the recipient agrees to submit proposed MBE/WBE objectives/goals based on an availability analysis, or disparity study, of qualified MBEs and WBEs in their relevant geographic buying market for construction, services, supplies and equipment.

The submission of proposed fair share goals with the supporting analysis or disparity study means that the recipient is **not** accepting the fair share objectives/goals of another recipient. The recipient agrees

to submit proposed fair share objectives/goals, together with the supporting availability analysis or disparity study, to the Regional MBE/WBE Coordinator within 120 days of its acceptance of the financial assistance award. EPA will respond to the proposed fair share objective/goals within 30 days of receiving the submission. If proposed fair share objective/goals are not received within the 120 day time frame, the recipient may not expend its EPA funds for procurements until the proposed fair share objective/goals are submitted.

SIX GOOD FAITH EFFORTS, 40 CFR, Part 33, Subpart C

Pursuant to 40 CFR, Section 33.301, the recipient agrees to make the following good faith efforts whenever procuring construction, equipment, services and supplies under an EPA financial assistance agreement, and to require that sub-recipients, loan recipients, and prime contractors also comply. Records documenting compliance with the six good faith efforts shall be retained:

- (a) Ensure DBEs are made aware of contracting opportunities to the fullest extent practicable through outreach and recruitment activities. For Indian Tribal, State and Local and Government recipients, this will include placing DBEs on solicitation lists and soliciting them whenever they are potential sources.
- (b) Make information on forthcoming opportunities available to DBEs and arrange time frames for contracts and establish delivery schedules, where the requirements permit, in a way that encourages and facilitates participation by DBEs in the competitive process. This includes, whenever possible, posting solicitations for bids or proposals for a minimum of 30 calendar days before the bid or proposal closing date.
- (c) Consider in the contracting process whether firms competing for large contracts could subcontract with DBEs. For Indian Tribal, State and local Government recipients, this will include dividing total requirements when economically feasible into smaller tasks or quantities to permit maximum participation by DBEs in the competitive process.
- (d) Encourage contracting with a consortium of DBEs when a contract is too large for one of these firms to handle individually.
- (e) Use the services and assistance of the SBA and the Minority Business Development Agency of the Department of Commerce.
- (f) If the prime contractor awards subcontracts, require the prime contractor to take the steps in paragraphs (a) through (e) of this section.

SUPPLEMENTARY CONDITIONS – SEMCOG
ATTACHMENT 3
GRANT SIGNAGE REQUIREMENTS

AGREEMENT EXCERPT – SECTION III (7):

Ensure that a visible project identification sign (with the Great Lakes Restoration Initiative logo) is erected as appropriate at each on-the-ground protection or restoration project. Each sign must give project information and credit the Great Lakes Restoration Initiative (GLRI) and appropriate federal agencies for funding. CITY OF WALLED LAKE will determine the design, placement, and materials for each sign. The GLRI logo should be accompanied with the statement indicating that the CITY OF WALLED LAKE received financial support in the amount of \$46,500 from the EPA.

One (1) sign required.

See example on following page. Final design to be determined / approved through the construction submittals process.

Cost and installation of the sign shall be incidental to the project.



MERCER BEACH IMPROVEMENTS

THIS PROJECT WAS FUNDED IN PART THROUGH A GRANT IN THE AMOUNT OF \$46,500 FROM THE ENVIRONMENTAL PROTECTION AGENCY THROUGH THE GREAT LAKES RESTORATION INITIATIVE AND THE SOUTHEAST MICHIGAN COUNCIL OF GOVERNMENTS

4-FT x 6-FT x 3/4" MARINE GRADE PLYWOOD - PAINT ALL SIDES

REQUIRED LOGOS (3)

3-1/2" HGT LETTERS, ARIAL FONT OR AS SELECTED

2" HGT LETTER, REQUIRED TEXT, ARIAL FONT OR AS SELECTED

ONE-SIDED SIGN

MOUNT SIGN WITH MIN (2) 4"x4" NOM. PRESS-TREATED POSTS, MIN 3-FT BURY DEPTH



PROPOSAL REQUEST
SECTION 00934

CONTRACTOR: _____ Request Number: _____

Date: _____
Project: _____
From: _____
ENGINEER: Boss Engineering Contract: _____

INTENT: This is not a Change Order. This is a request to CONTRACTOR for a detailed price breakdown of proposed changes in the Work. Where Unit Prices are established in the Agreement, they will be used for changes in pay item quantities. Any changes to cost other than those due to quantity changes must be clearly stated.

PROPOSED CHANGES:

REASON:

It is required that the spaces provided for the change in Contract Price, signature and date be filled in and (2) copies returned to ENGINEER. A quotation, showing the Proposal Request number and detailed cost setting forth the breakdown of labor, material, and markup, is to be attached to each copy of the Proposal Request, showing the Contract Price addition, deduction, or no change for this request.

RECOMMENDED BY:

ENGINEER: Boss Engineering

CONTRACTOR'S QUOTATION:

Will the Work covered by this Proposal Request require an extension of the Contract Times
_____?

If yes, how many calendar days _____?

Proposed Change in Contract Price (circle one): Addition Deduction No change in
Contract Price

_____ Dollars
(\$ _____)

CONTRACTOR

BY _____

DATE _____

END OF SECTION

WORK CHANGE DIRECTIVE
SECTION 00940
Work Change Directive

No. _____

Date of Issuance: _____ Effective Date _____

Project: Mercer Beach Improvements, Ph 2	Owner: City of Walled Lake, Michigan	Owner's Contract No.:N/A
Contract: Mercer Beach Improvements, Ph 2		Date of Contract:
Contractor:		Engineer's Project No. 20-048-1

Contractor is directed to proceed promptly with the following change(s):

Item No.	Description

Attachments (list documents supporting change):

Purpose for Work Change Directive:

Authorization for Work described herein to proceed on the basis of Cost of the Work due to:

- Nonagreement on pricing of proposed change.
- Necessity to expedite Work described herein prior to agreeing to changes on Contract Price and Contract Time.

Estimated change in Contract Price and Contract Times:

Contract Price _____ (increase/decrease) Contract Time 0 (increase/decrease)
days

Recommended for Approval by Engineer:	Date
Authorized for Owner by:	Date
Received for Contractor by:	Date
Received by Funding Agency (if applicable):	Date:

Change Order

No. _____

Date of Issuance: _____ Effective Date: _____

Project: Mercer Beach Improvements, Ph 2	Owner: City of Walled Lake, Michigan	Owner's Contract No.: NA
Contract: Mercer Beach Improvements, Ph 2		Date of Contract:
Contractor:		Engineer's Project No.:20-048-1

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

Description:

Attachments (list documents supporting change):

CHANGE IN CONTRACT PRICE:

CHANGE IN CONTRACT TIMES:

Original Contract Price:

\$ _____

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

\$ _____

Contract Price prior to this Change Order:

\$ _____

[Increase] [Decrease] of this Change Order:

\$ _____

Contract Price incorporating this Change Order:

\$ _____

Original Contract

Times: Working days Calendar days

Substantial completion (days or date): _____

Ready for final payment (days or date): _____

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

Substantial completion (days): _____

Ready for final payment (days): _____

Contract Times prior to this Change Order:

Substantial completion (days or date): _____

Ready for final payment (days or date): _____

[Increase] [Decrease] of this Change Order:

Substantial completion (days or date): _____

Ready for final payment (days or date): _____

Contract Times with all approved Change Orders:

Substantial completion (days or date): _____

Ready for final payment (days or date): _____

RECOMMENDED:

By: _____
Engineer (Authorized Signature)

Date: _____

Approved by Funding Agency (if applicable):

ACCEPTED:

By: _____
Owner (Authorized Signature)

Date: _____

ACCEPTED:

By: _____
Contractor (Authorized Signature)

Date: _____

Date: _____

Change Order

Instructions

A. GENERAL INFORMATION

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

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

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

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

B. COMPLETING THE CHANGE ORDER FORM

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

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

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

Field Order

No. _____

Date of Issuance: _____ Effective Date: _____

Project: Mercer Beach Improvements, Ph 2	Owner: City of Walled Lake, Michigan	Owner's Contract No.: NA
Contract: Mercer Beach Improvements, Ph 2		Date of Contract:
Contractor:		Engineer's Project No.: 20-048-1

Attention:

You are hereby directed to promptly execute this Field Order issued in accordance with General Conditions Paragraph 9.04.A, for minor changes in the Work without changes in Contract Price or Contract Times. If you consider that a change in Contract Price or Contract Times is required, please notify the Engineer immediately and before proceeding with this Work.

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

Description:

Attachments:

Engineer: _____

Receipt Acknowledged by Contractor: _____ **Date:** _____

Copy to Owner

BONDS, PERMITS, INSURANCE AND FEES

Description

The work shall consist of securing and furnishing all bonds, permits, insurance and fees for the successful completion of the work contained in the plans and/or within this document that the Owner is not expressly responsible for. This work shall be included with any other mobilization and closeout costs as part of the Mobilization work item. The Owner shall pay all inspection costs associated with the project not associated with the above-mentioned permits.

The following shall be listed as additionally insured on the contractor's coverage:

1. City of Walled Lake, Michigan and all elected and appointed officials

2. Boss Engineering Company
3121 E. Grand River
Howell, Michigan 48843

The Contractor shall be required to secure a **100% Performance Bond and a One Year 25% Maintenance and Guarantee Bond** as part of the project. The Performance Bond shall be provided to the Owner prior to commencing construction and the Guarantee Bond shall be provided to the Owner upon Substantial Completion of the project.

Measurement and Payment

The completed work for "Bonds, Permits, Insurance, Fees & Mobilization" will be incidental to the Contract and no separate pay item is provided.

SOIL EROSION AND SEDIMENTATION CONTROL

Description

This work shall consist of the construction and maintenance of soil erosion and sedimentation controls (SESC) and the timing limitations required to minimize the erosion of soil and the sedimentation of watercourses.

Materials

Materials used for permanent erosion and sedimentation controls shall meet the requirements as set forth on the construction plans or in the proposal and shall meet state, county and local standards, whichever is most restrictive at the discretion of the Engineer or local governing agency. The Engineer or local governing agency shall approve materials used for temporary controls.

General Requirements

Construction operations shall be conducted in such a manner as to reduce erosion and sedimentation to a practical minimum. Temporary or permanent control measures shall be constructed, to the extent possible, and as directed by the Engineer.

Temporary erosion and sedimentation controls, as directed on the construction plans and by the Engineer or the local governing agency, shall be used to minimize potential erosion problems or correct conditions that develop during construction.

Permanent soil erosion controls for all slopes, channels, ditches or any disturbed land areas shall be completed within 15 calendar days after final grading. When it is not possible to permanently stabilize a disturbed area, temporary control measures shall be maintained until permanent controls are completed.

Construction of permanent erosion and sedimentation controls shall meet the requirements as specified on the construction plans. Construction of temporary erosion and sedimentation controls shall meet the requirements specified on the construction plans or as directed by the Engineer or as directed by the local governing agency.

The Contractor shall maintain all temporary controls during the period that the temporary controls are required and all permanent controls until the contract has been completed and accepted. Such maintenance shall consist of the repair of all damaged areas, replacement of lost facilities, and periodic removal of sediment.

Measurement and Payment

The completed work as measured for "Soil Erosion and Sedimentation Control" will be paid for at the contract unit price as part of the following contract item.

<u>Pay Item</u>	<u>Pay Unit</u>
Inlet Protection Filters	Each
Silt Fence	Lineal Feet
Seed & Mulch (Restoration)	Square Yard

Work for the soil erosion and sedimentation control will include furnishing, placing, maintaining and removing the controls. Other soil erosion control measures not identified or known such as tree protection fencing, etc. shall be considered minor and incidental to related items of this special provision unless proven and determined to be major and non-incidental at the discretion of the City.

Any permanent or temporary erosion and sedimentation controls that are damaged due to the Contractor's operations or where work required is attributed to the Contractor's negligence, carelessness, or failure to install permanent or temporary controls at the proper time, shall be repaired without additional cost to the owner.

DRAINAGE STRUCTURES

Description

This work shall consist of all Work relating to installation of prefabricated plastic storm structures with lids, constructing and reconstructing manholes, catch basins and inlet structures as shown on the drawings, furnishing and placing metal covers, excavating, backfilling and removal of excess materials.

Materials

Plastic structures shall be Nyoplast or approved equal. Otherwise, manholes, catch basins, and inlet structures shall be precast reinforced concrete constructed in accordance with the details shown on the plans. Joints shall be premium modified tongue and groove joints with rubber gaskets.

Construction

Excavation and preparation shall be per manufacturers recommendations and/or as outlined on the construction plan drawings and in Section 01005- "Storm Sewer", where applicable. Precast units shall be constructed on poured-in-place or precast concrete slabs. Precast slabs shall be supported by a compacted 6-inch granular or approved sub-base.

Backfilling of the structure shall be per the construction plan drawings and shall be as outlined in Section 01005- "Storm Sewer", where applicable. The backfilling may begin immediately and progress with the construction of the structure.

Drainage Structure Covers

New covers, including frame and grates or lids, conforming to details on the plans shall be furnished on new or existing structures per construction plans and manufacturer recommendations. Otherwise, it shall be furnished in a full mortar bed and set to the required elevation. Tolerance is ± 0.05 . Covers shall be per manufacturer requirements.

Reconstructing Drainage Structure Covers

Where called for on the plans or directed by the Engineer, existing manholes, catch basins or inlets shall be reconstructed to the required line and elevation and to conform essentially to the details shown on the plans using the covers on the existing structures.

Where reconstruction to the top of footing is necessary, the work will be classified as a new structure of the detail and depth required.

Cleanout

All catch basins, manholes, leaching basins and inlets installed on the project shall be maintained and shall be reasonably free of accumulation of silt, debris, and other foreign matter at the time of final acceptance.

Measurement and Payment

The completed work as measured for “Drainage Structures” will be paid for per related Base-Unit Price Work listing of connecting storm piping for this project and includes all equipment, labor, and materials to complete related work per manufacturer recommendations and as described on the plan drawings.

Dewatering may be necessary prior to and during construction, Any dewatering for underground work shall be completed as described in provision 01005– “Storm Sewer” and considered incidental to the related items of work.

Any permanent or temporary erosion and sedimentation controls that are damaged due to the Contractor's operations or where work required is attributed to the Contractor's negligence, carelessness, or failure to install permanent or temporary controls at the proper time, shall be repaired without additional cost to the owner.

010004 - RESERVED

This section is intentionally left BLANK.

STORM SEWER

Description

This work includes removal, furnishing and installing of all excavations, sewer pipe, connecting Nyoplast drainage structures, edge drains, and backfilling in accordance with Oakland County Water Resources Commission Specifications.

Materials

The locations of the various types of pipe are shown on the Drawings.

All sewer pipe and drain pipe used in this work shall meet the requirements of the standard specifications of the American Society for Testing and Materials (ASTM). Pipe shall be of the following types as noted on the Drawings.

Reinforced Concrete Sewer Pipe (RCSP)

ASTM C-76, Class as designated on the Drawings or special design conforming to ASTM C655

Reinforced Concrete Elliptical Pipe (CMP)

ASTM C-507 VE or HE Class as designated on the Drawings

Corrugated Metal Pipe

AASH70 galvanized and bituminous coated M190 with paved invert

Corrugated Polyethylene Pipe

ASTM 405 and 667

Perforated Drain Pipe Wrapped in Geotextile Fabric

AASHTO #M-252 PE Pipe and ASTM #F-800 PVC Pipe

The Contractor shall conduct construction for each sewer line in such a manner as to result in 100 feet or less of open ditch at any one time and backfilling will accompany excavation in such a manner as to avoid large piles of surplus soil. Some surplus of material will usually result from backfilling and this material shall be hauled to points designated by the Engineer. All hauling and other costs related to disposal of excess soil are incidental to this contract and no payment will be allowed the Contractor for this work.

Excavation for Sewers

The following specifications shall govern excavation for sewers.

- A. **Earthwork** - Earthwork shall include the furnishing of all labor, materials, and equipment necessary for excavation, trenching or tunneling in earth and in rock, the complete drainage of excavations, the temporary and permanent sheeting, bracing and shoring of sides of excavations, the disposal of excavated materials during construction and of excess excavated materials after backfilling, and the backfilling around the completed structures, as required in this work. Cost of all earthwork, backfilling, drainage and other work described in this section shall be included in the amount bid per lineal foot of sewer construction.
- B. **Classification of Excavation** - Earth, as a name for excavated material, shall include all glacial deposits, whether cemented or not, except solid boulders one-half cubic yard or more in volume. It shall include all alluvial deposits and material of every kind that can be excavated with equal facility by the equipment and means used for other earth excavation in the work. Rock, as a name for excavated material, shall include pre-glacial solid ledge rock that can be removed most practically by blasting, barring, or wedging or by some other standard method of quarrying solid rock; it shall include fragile, friable, or disintegrated materials of any kind that can be excavated with equal facility by equipment and means used for earth excavation in this work.
- C. **Method of Excavation** - All excavation shall be by open cut from the surface except where otherwise indicated on the plans. All excavations for sewers and appurtenances shall be made up in such a manner and to such depth and width as will give ample room for building the structures and for bracing, sheeting and supporting the sides of the excavation for pumping and draining of ground water and sewage which may be encountered, and for the removal from the trench of all materials excavated.
- D. **Limits of Excavation in Earth** - Trenches shall be excavated to a width 12 inches greater than the nominal diameter of the pipe. In that part of the ditch that is below the top of the pipe, the trench width shall not be greater than two (2) feet, plus the pipe diameter.
- E. **Disposal of Water and Sewage** - The Contractor shall remove by pumping, bailing, or other acceptable method all water which may accumulate or be found in the trenches and other excavations made under this contract and he shall take all necessary precautions to keep the trenches and other excavations entirely clear of water while the sewers and other structures are being constructed. Where existing sewers or drains are encountered in the construction of the new work, the Contractor shall make adequate provision for diverting the flow of the existing sewers or drains so as to keep the new work entirely dry during construction. Newly laid concrete shall be adequately protected from injury resulting from ground water or sewage, or from the handling or disposal of water and sewage. The Contractor shall at all times have upon the work sufficient pumping equipment ready for immediate use to carry out the intent of this paragraph.

F. **Well Pointing and Other Measures for Stabilization of Construction Areas** -

If wet areas of construction are encountered, the contractor shall make use of well pointing equipment and of other measures which, in the judgment of the Engineer are required for laying sewer under dry conditions and with proper bedding of the pipe. The use of stone for stabilization will be allowed when such use is requested by the Contractor. The Contractor shall include the cost of furnishing well pointing equipment and of all expenses for labor and power for the operation of well pointing equipment and for the furnishing and placing of stone in the unit cost bid for construction of sanitary sewers and of house sewers and no extra payment shall be allowed for well pointing nor for the use of stone. It shall be the condition of this contract that the Contractor shall pay all costs for dewatering, pumping, furnishing and placing of stone and all other costs for construction in wet or unstable ground and these costs shall be considered incidental to the construction.

G. **Bracing and Sheeting** - The Contractor shall furnish, put in place, and maintain

such sheeting, bracing and shoring as may be required to properly support the side of any excavation and to prevent any movement of earth that could in any way injure the work under construction. The Contractor shall coordinate with utility providers and is responsible for supporting existing underground utilities and utility poles where necessary to protect utilities and safely complete the work. If the Engineer is of the opinion that, at any point, sufficient and proper supports have not been provided, he may order additional supports at the expense of the Contractor; but neither the placing of such additional supports by the order of the Engineer nor the failure of the Engineer to order such additional supports placed, shall release the Contractor from his responsibility for the sufficiency of such supports and the integrity of the work. In the removing of sheeting and bracing after the sewer or appurtenances have been constructed, special care shall be taken to prevent any caving of the sides of the excavation and injury to the completed work or to adjacent property. No payment will be allowed the Contractor for bracing and sheeting except for sheeting permanently left in place upon orders of the Engineer.

H. **Accident Prevention** - Precaution shall be exercised at all times for the

protection of persons (including employees) and property. The safety provisions of applicable laws, building and construction codes shall be observed. Machinery, equipment and all hazards shall be guarded (or hazards eliminated) in accordance with the safety provisions of the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America, to the extent that such provisions are not in contravention of applicable law.

The Contractor shall put up and maintain barriers and supply such watchmen as will effectively prevent accidents, and in addition, during night hours he shall put up and maintain sufficient lights and flares to warn and safeguard the public against accidents. The Contractor, in executing the work on this project, shall

not unnecessarily impede or interfere with traffic on public highways or streets. The Contractor shall confer with and keep police and fire departments fully informed as to streets or alleys which are to be closed to traffic for construction purposes.

- I. **Use of Explosives** - Explosives shall be used only with the permission of the Engineer and in accordance with the laws and regulations that apply thereto. Blasting shall be done only by skilled workmen with extreme care for the convenience and safety of property and the public.

Sewer Construction

- A. **Intent** - It is the intent of this section of the Specifications to provide for a type of sewer construction that results in properly bedded sewers that are true and to the proper grades as designated in the construction plans. All divisions of this section of the Specifications and all divisions of other sections of these Specifications which relate to the construction of storm sewers shall be interpreted as pointing toward construction procedures which result in a structural strength of the sewer pipe at least equal to that of the applicable ASTM Sand Bearing Test.
- B. **Preparation of the Trench Bottoms** - The foundations in the trench shall be formed to prevent any subsequent settlement and resulting excessive pressure which may cause rupture or damage to the sewer pipe after backfilling, or at a future date. If the foundation is rock, an equalizing bed of concrete or well compacted sand shall be placed on the rock with a thickness of at least four (4) inches. If the sub-grade is of unstable soil or of water sand, well pointing or the use of stone will be required. The sub-grade shall be carefully formed so that the pipe rests on the correct line and grade. The Contractor may provide the required grade, either by:
 1. Stopping trenching approximately two (2) inches above the finish grade and hand-finishing the trench by excavating a shallow trough to receive the bottom quadrant of the pipe barrel. In addition, bell holes shall be excavated so that after the placement, only the barrel of the pipe receives bearing pressure from the trench bottom. This procedure may be used in clay soils or in other stable soils, but is not applicable to water sands or unstable soils and may not be used when soil conditions are unstable; or,
 2. Excavation to a level four (4) inches or more below the final line and refilling with tamped granular material to the finish grade.
- C. **Joints** - All storm sewer pipe designated C-76 reinforced concrete pipe shall have premium joints.

- D. **Pipe Laying** - Pipe shall be protected during handling against impact, shocks and free fall. Pipe shall be kept clean at all times and no pipe shall be used in the work that does not conform to the appropriate ASTM specifications.

The laying of pipe in finished trenches shall be commenced at the lowest point, with the spigot ends pointing in the direction of flow. All pipes shall be laid with ends abutting and true to line and grade. They shall be carefully centered so that when laid they form a sewer with a uniform invert.

Preparatory to making the pipe joints, all surfaces of the portions of the pipe jointing material shall be clean, free of dirt or stones and dry. Lubricants, primers, adhesives and other materials shall be used as recommended by the pipe or joint manufacturer's specifications. The jointing materials shall be joined and adjusted in such a workmanlike manner as to obtain the degree of water tightness required. Trenches shall be kept water-free and dry during bedding, laying and jointing the pipe and for as long a period thereafter as is required for proper setting of the joint.

As soon as possible after the joint is made, sufficient backfill material shall be placed along each side of the pipe to offset conditions that might tend to move the pipe offline and grade.

RCP end sections shall be installed per current MDOT Standard Specifications for Construction. The Contractor shall use a suitable alignment laser for horizontal and vertical alignment and the use of batter boards and strings for alignment will not be allowed. The alignment laser shall be of a type and manufacture especially suitable to the construction of storm sewers and the instrument shall provide a target, which shall insure an instant and continuous visual check on the instrument alignment. A competent and skilled superintendent or operator for the laser beam instrument shall be provided at all times.

Perforated Edge Drain pipe installation shall be per standard MDOT details or as detailed on the Contract Drawings and shall be provided behind all new and replacement curb and gutter that has no edge drain and shall be adequately drained to a catch basin unless coordinated and approved otherwise by the Engineer prior to work.

- F. **Backfilling** - After the sewer pipe has been properly positioned for grade and horizontal alignment, the trench shall be backfilled from the sub-grade to a level at least 12 inches above the top of the pipe with MDOT Class IIIA granular material compacted to 95% maximum unit weight. Backfill for the remaining unfilled portion of the trench shall be in accordance with one of the following described methods or as indicated on the plans.

1. Class A Backfill (Within Influence of Roadway) - Backfilling under this designation shall consist of furnishing and placing MDOT Class III granular material in 12 inch layers, compacted to 95% its maximum weight as determined by the latest A.A.S.H.T.O. methods for the entire remaining depth of the trench within the road influence. Contractor shall be responsible for damages to pipe during backfilling. Unless otherwise provided for in the Bid Proposal, the cost of furnishing, placing and compacting the required granular material shall be included in the unit price for sewer construction and no additional payment will be allowed. Surplus excavated material shall be hauled and disposed of on the site as directed by the Engineer.
2. Class B Backfill (Not Within Roadway Influence) - Backfilling under this designation shall consist of backfilling the trench from 12 inches above the top of the pipe to the top of the trench, with selected material excavated from the trench, compacted with heavy construction equipment in layers not exceeding 24 inches in depth.
3. Bioswale Backfill (bioswale area only) - Backfill material shall be as identified on the construction plan drawings and where applicable as required for Class B Backfill. Compaction is only required if directed by the Engineer and will be considered part of the related item of work.

Backfilling shall be done by ramping the backfill down the trench to provide compaction by the heavy equipment at all levels of the backfill as required by the Engineer. Where trenches are too narrow in width to provide access by heavy equipment other methods and equipment shall be used to achieve the required degree of compaction. Contractor shall be responsible for any damages to pipe during backfilling.

Granular material, which is encountered in the excavated material, may be used for the required MDOT Class III granular material if approved by the Engineer. The use of such material shall not be without prior approval of the Engineer.

The surface area of trenches shall be restored to the condition existing prior to commencing excavation except where indicated otherwise on the drawings.

Any pipe or structures that are damaged during construction shall be replaced by the Contractor at no expense to the Owner.

Any depression resulting from settlement of the trench backfill previous to the date of total acceptance of all work under this contract shall be brought to the proper grade and the surface made to match the adjacent surface as specified heretofore.

F. **Use of ASTM Construction Specifications** - Concrete Sewer Pipe shall be installed in accordance with ASTM 76 except wherein modified by these specifications. If ASTM 76 shall be in conflict with other provisions of these specifications, then the provisions of these specifications shall govern. The Engineer shall, in all instances, be the final judge as to whether the aforesaid ASTM designations for construction provisions shall govern or whether these provisions have been modified by specific sections of these specifications. In no instance, however, shall provisions of any items of these specifications be judged to relax or negate requirements of these herein mentioned ASTM specifications if, by judgment of the Engineer, quality of construction will therein be reduced.

Allowable Tolerances in Sewer Grade

Sewers shall be installed to the alignment and grade as shown on the drawings. A variation of one-quarter inch from this grade will be sufficient reason to cause the work to be rejected and re-laid.

Measurement and Payment

The completed work as measured for "Storm Sewer" will be paid at the contract unit prices for all labor equipment and materials needed and the final measured installed quantities per related item indicated in the Base-Unit Price Work listing, as shown below, and will include installation of the Nyoplast (wrapped inline riser) drainage structures.

<u>Pay Item</u>	<u>Pay Unit</u>
8" PVC Perf. Pipe - incl Wrapped Inline Risers (Bio-basin)	Lineal Feet
6" PVC Perforated Wall Drain	Square Yard

Sewer of the diameter and class specified will be measured in place, by length in linear feet, from center to center of manholes and catch basins. Excavation and backfill material will not be measured separately but shall be considered as incidental to the storm sewer construction.

Payment per linear foot of PVC storm sewer connection shall include all work necessary to connect the pipe to existing storm sewer pipe, including pipe, bends, etc.

PAVEMENT REMOVAL

Description

This provision shall consist of all work related to asphalt and concrete material removals, including milling operations, saw cutting, removal and disposal of asphalt, asphalt transition patches and concrete such as sidewalk and curb & gutter, and all other work related to removing and disposing of asphalt and concrete. Refer to Section 204 and 501 of current Michigan Department of Transportation Standard Specifications for Construction for additional information except as modified herein.

Removal of Existing Pavement

For existing asphalt surfaces to be removed or milled and necessary base material to be removed, the Contractor shall provide a sawcut along the lines designated on the plans, or as directed in the field by the Engineer. The sawcut shall be full depth through the pavement or to adequate depth for milling operation and shall be vertical and straight. Removal of asphalt and aggregate base material between the sawcut limits shall be done in an efficient manner such that no adjacent pavement remaining is disturbed or damaged. Removed materials shall be loaded and disposed of offsite in an approved manner by the end of each workday. Removal of existing aggregate base, if needed, shall be included with this item as indicated on the Contract Drawings, or at the discretion of the Engineer.

This work also includes related removal of sidewalk & sidewalk ramps, milling or removal of asphalt street parking, bike lane & shoulder pavement, removal of concrete drive approaches and curb & gutter to minimum proposed cross-sectional depths as shown on the plans and/or designated by the Engineer regardless of depth to prepared base or subgrade below paved surfaces and curb, and includes all necessary sawcutting.

Safe Road access and pedestrian access to Mercer Beach shall be maintained during construction unless sufficiently identified as not possible prior to or during related construction activity per discretion of the City. Related work shall be part of or incidental to related traffic control items

Measurement and Payment

Measurement and payment includes all labor and equipment to perform the work of Pavement Removal whether or not identified below. The pavement removed shall be measured in the field and shall be paid for by the square yard regardless of depth and material removed to prepared base grade or subgrade. The work includes hauling and disposing of pavement and unusable excess material off site.

<u>Pay Item</u>	<u>Pay Unit</u>
Misc. Clearing and Grubbing (asphalt transition patches)	Lump Sum
Remove Concrete Pavement (gray, stamped, ramp)	Square Yard

Temporary pavement patches or misc. pavement removal shall be considered incidental to related items of work. A smooth sawcut of varying depth shall be maintained where existing pavement meets pavement removal areas.

Any sawcutting or pavement removal beyond what is indicated on the drawings shall be considered incidental to the related pavement removal quantities unless coordinated with the Engineer prior to work and determined by the Engineer or City prior to work as an increase to related pay item quantities.

Sawcut sections that require another unplanned sawcut due to not being smooth, that do not meet standards or due to contractor negligence will not be paid. Sawcutting for removal of concrete sidewalk, driveway, and curb & gutter is considered minimal if necessary and shall be incidental to the related items of work.

EARTH EXCAVATION

Description

This work shall be done in accordance with Sections 205 of the 2020 Michigan Department of Transportation Standard Specifications for Construction except as modified herein.

Construction

All excavation directly or indirectly related to items of work shall be included as part of the pay item(s) listed below or are considered incidental or part of the related items of work, which includes replacement or removal from the site. Miscellaneous, unknown or unrelated excavation shall also be considered incidental although excessive unknown or unrelated excavation may be considered by the City for reimbursement.

Miscellaneous, unknown or unrelated excavation is not anticipated on this project. However, related excavation material requiring removal shall be removed from the site at no additional expense to the City unless determined otherwise by the City or Engineer.

Contractor may coordinate reuse of excavated material at the discretion of the Engineer. Temporary stockpiling, moving excavated material onsite and/or removing of excavated material from the site may be permitted at the discretion of the Engineer and at no additional compensation to the Contractor.

This work also includes stripping and temporary stockpiling or storage of topsoil for reuse or disposal. Any disturbed or stockpiled materials shall be maintained with adequate soil erosion control measures at the discretion of the Engineer or governing authority. Related stripping and topsoil storage for reuse shall be considered incidental to related items of work and shall not be measured and paid separately.

All excess excavated material will become the property of the Contractor and shall be disposed of in accordance with Section 205 of the 2020 Michigan Department of Transportation Standard Specifications for Construction

Measurement and Payment

The completed work as measured for "Earth Excavation" will be paid for at the contract unit price as part of the following contract item.

<u>Pay Item</u>	<u>Pay Unit</u>
Bioswale Trench Excavation	Cubic Yard

Preparation of subgrade and base materials includes grading and compaction if required.

AGGREGATE BASE

Description

This work involves placement of aggregate base on a prepared subbase or subgrade and shall be completed in accordance with Section 302 of the 2020 Michigan Department of Transportation Standard Specifications for Construction, except as herein provided:

Materials

The material shall meet the requirements specified in Tables 902-1 and 902-2 of the 2020 Michigan Department of Transportation Standard Specifications for Construction.

The Contractor shall be responsible for sampling the aggregates at the jobsite at any time prior to rolling and compacting, for gradation and other specification compliance testing. Materials shall be produced entirely by crushing rock, boulders, cobbles or slag. Only fines produced by the crushing process shall be permissible; no plastic fines shall be added. The contractor will be solely responsible for degradation and segregation during shipment, placement and compaction of the material.

Construction

Work includes all materials, equipment and labor needed for installation of Aggregate base material and preparing the material for paving. Aggregate base material under roads and parking areas shall be tested for compaction at minimum 98% compaction per MDOT standards and minimum 95% compaction if used under sidewalk. Do not use Sodium Chloride to aid in placing and compacting aggregate base. The “Miscellaneous Aggregate” pay item involves similar installation and preparation of base material that may be necessary in addition to the proposed 6-inch or 8-inch gravel depths below proposed pavement areas and aggregate base needed for temporary access. All other aggregate needed for contractor operations such as for temporary parking, construction staging or restoration areas are considered incidental to related items of work.

Measurement and Payment

The completed work as measured for Aggregate Base shall be paid at the contract unit prices for all labor equipment and materials needed and the final measured installed quantities per related item indicated in the Base-Unit Price Work listing.

Unless approved in writing by the City prior to work, material depth deeper than what is specified and identified by the pay item will not be paid extra under “Misc. Aggregate”.

010009 - RESERVED

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CONCRETE WORK

Description

Work including the necessary base preparation and replacement of all permanent type pavement bases, roadway bases and surfaces, concrete sidewalks, curbs and gutters, lawns, and driveways, damaged or removed due to the construction of the proposed pavement, pipe and appurtenant structures. All such Work shall be in accordance with the best modern practice, construction plan drawings, OWNER'S standards, and/or as specified herein.

References

MDOT: Where MDOT is referenced in the specifications, the work shall be in accordance with the current Michigan Department of Transportation Standard Specifications for Construction.

Section 601	PCC Pavement Mixtures.
Section 602	Concrete Pavement Construction.
Section 604	Contractor Quality Control for Concrete
Section 605	Furnishing Portland Cement Concrete
Section 901	Cement and Lime.
Section 902	Aggregates
Section 903	Admixtures and Curing Materials for Concrete.

Submittals

Shop Drawing submittals shall include:

1. Material Certificates: Provide copies of materials certificates signed by materials producer and contractor, certifying that each materials item complies with, or exceeds specified requirements.
2. Warranty: Submit in accordance with requirements covering the items included under this Section.

Quality Assurance

Certification: Contractor shall submit certificates of compliance with applicable MDOT Standard Specifications.

Site Conditions

Weather Conditions: Concrete Paving will not be allowed between November 1 and May 1 without the Engineer and City of Walled Lake approvals.

Products

- A. Aggregate Base

Aggregate base shall be constructed as indicated on the construction plans in one layer. Where not indicated on the construction plans shall be placed in not less than 4 inches of compacted aggregate placed or as determined by the Engineer with placement in one layer. Aggregate base shall meet requirements of MDOT Specifications for 21AA aggregate.

Depending on location and depth, Class II Sand may be acceptable alternate materials to aggregate under sidewalk per discretion of the Engineer. Crushed concrete will not be permitted as an acceptable alternative to aggregate if within 300 feet from a lake, drain, stream, or other watercourse. Desired compaction is required prior to concrete installation.

B. Concrete Roadways

Concrete pavement surfaces shall be replaced with concrete where shown on Drawings. Thickness shall be equal to that removed, but in no cases less than 6 inches.

Concrete for pavements and bases shall meet minimum requirements for Class P concrete per Section 601 of the 2020 MDOT Standard Specifications for Construction.

Replacement of reinforcing steel shall be similar to that in the existing pavement and shall provide the same cross-sectional area of reinforcement per foot as the existing pavement.

C. Concrete Driveways

All concrete driveways removed shall be replaced with Class P concrete, 6 inches thick with minimum 8-inch compacted Aggregate Base.

D. Concrete Curb and Gutter

Concrete curb and gutter to be replaced shall have the same cross-section as that removed, or as shown on Drawings, using Class P concrete and in accordance with owner's standards.

6" perforated edge drain wrapped in geotextile fabric shall be placed on both sides of the road and outlet into the nearest drainage structures.

The slab on grade at mailbox areas shall have concrete placed to extend the slab to back of curb.

Contractor shall provide backfill for the void area immediately behind the new curb created by the reduction from the existing curb width of 2'-6" to the proposed width of 2'-0". Where stamped concrete is not required, Topsoil shall be provided for the top 3" of backfill behind the curb unless identified otherwise on the plans.

E. Concrete Sidewalks

Concrete sidewalks shall be replaced with walks 4-inches thick (6 inches thick at driveway crossings) over 4-inches thick prepared Class II Sand or approved equal base. Sidewalks shall be the same width as the existing walks or as shown on the Drawings. Concrete shall be Grade P1. Concrete sidewalk ramps shall be 6 inches thick.

With the exception sidewalk ramps to driveways, all sidewalk ramps shall include detectible warning plates or truncated domes as indicated on the Contract Drawings and per ADA requirements and City material standards and will be paid for per related pay item. "Class II Sand, 4", CIP" includes all materials, equipment and labor necessary to install and prepare this base material item for paving.

F. Stamped/Textured Concrete

Areas shall be prepared and stamped concrete installation completed per the Contract Drawings for stamped concrete and per related contract provisions and work items.

Concrete shall be placed as an integral color, stamped with manufactured polyvinyl flexible form/skin, sprayed with release/antiquing agent applied to dry/curing concrete mixed with a clear sealer. Integral color and release agent shall be provided by SGS Solomon Colors – Brickform. Texturing form and Sealer shall be provided by Euclid Chemical /Increte Systems, Tampa, Florida.

- Representative sample of existing work – a stamped colored brick pattern - to match can be viewed at the drive entrance to Walled Lake City Hall and Fire Station 1499 E. West Maple Road
- Sealer shall be Increte CN0311 'Crystal Clear Acrylic' sealer.
- Mixing agent for release and for sealer shall be Xylol.
- Integral color shall be a liquid color, plant mixed and brought to site.
- Colors and release agent from manufacturer's standard color range. As selected from a construction phase submittal
- Stamping texture/form/skin shall be a running bond brick pattern selected from manufacturer's standard range. As selected from a construction phase submittal.

G. Concrete Storm Sewer and Rip Rap

Concrete storm sewer shall be referenced per separate provision within this contract for Storm Sewer. Rip rap at the concrete pipe outlets to watercourses shall be minimum 6" diameter cobble stone. All rip rap shall be per Contract Drawings and placed over keyed in geo-textile fabric.

H. Restoration

Restoration surrounding concrete work shall be per Contract Drawings and per related contract provisions and work items.

Construction

A. Coordination of Work

Type of restoration shall be as noted on Contract Drawings regardless of existing surface.

The placing and preparing of base and surface courses shall follow immediately after backfilling the trench so that not more than 200 feet of length of trench shall be incomplete at one time. If areas of trench in excess of 200 feet are left incomplete, contractor shall provide such necessary temporary roadway surface as directed by engineer.

Any material placed in the trench other than that specified shall be considered as a temporary surface and shall be removed. No payment will be allowed for temporary roadway construction.

All utilities, such as catch basins, manhole castings, water valve boxes, etc., shall be adjusted prior to installation of new pavement so that the finished surface will meet such utilities smoothly when surfacing is completed.

Sawcut Joints: Damaged areas shall be removed by sawing a straight-cut parallel with longitudinal and transverse construction or contraction joints. No saw cuts shall be nearer than 5 feet to a longitudinal or transverse joint or to the edge of the pavement. If the damaged area is less than 5 feet from an existing joint, the existing surface shall be saw-cut 5 feet from the damaged area, removed, and replaced. If the damaged area is less than 5 feet from the edge of the pavement, the removal and replacement shall be extended to said edge of pavement.

Concrete saw cutting shall be done with a carborundum saw to a minimum depth of half the slab thickness or that depth required to cut reinforcing steel. Bituminous surfaces shall be cut full depth with exception of milling next to existing pavement where full depth cuts may not be required.

After the trench is backfilled and before the pavement over the trench is replaced, all angular and ragged irregularities on the edges of the cut pavement shall be removed giving a smooth and regular edge of pavement.

Sawcutting for removal of concrete sidewalk, driveway, and curb & gutter is considered minimal if necessary and shall be incidental to the related items of work.

B. Excavation

Before paving or repaving is started, all trenches and area around structures shall be excavated or backfilled to the level of the subgrade as required by the type of pavement replacement and cross-section specified. All existing pavement that has been undercut by the excavation for the pipe or structures shall be removed. The finished subgrade shall be smoothed, trimmed, and compacted to the required grade and cross-section. Compaction of the finish subgrade shall be obtained by suitable means approved by the Engineer. Excavation for sidewalk and curb and gutter installation or replacement shall be incidental to the related items of work.

C. Aggregate Base

Place and prepare aggregate base on a prepared subbase or subgrade in accordance with related contract provision for Aggregate Base material and per construction methods described in Section 302 of MDOT Specifications. Approved crushed concrete or sand base may be used as an alternate to aggregate material in sidewalk.

D. Aggregate Pavements

Aggregate surfaces shall be replaced with aggregate. After placing aggregate, this surface shall immediately be opened to traffic and as holes and ruts appear, they shall be filled with aggregate and the surface shall be maintained as a smooth, dust-free street surface until Work is accepted by engineer and owner.

E. Concrete Construction

Pavement: The surface of concrete pavements shall be properly consolidated and struck off to such elevations matching adjacent pavement and make uniform by transverse floating. As soon as all excess moisture has disappeared, the pavement shall be given a final light brooming finish by dragging a seamless strip of damp burlap or cotton fabric. Edges of all joints shall be tooled.

As soon as concrete surfaces have hardened sufficiently to prevent marring, they shall be covered by an approved curing compound, or they shall be thoroughly wetted and cured by an approved method for a period of six days unless otherwise directed by engineer.

Curb and Gutter: Concrete curb and gutter shall be placed as an integrated part of the concrete pavements over prepared compacted subgrade, perforated drain tile and prepared compacted gravel base as described in Contract Documents and on the Contract Drawings.

1. One-inch expansion joints shall be placed opposite expansion joints in an abutting pavement. If curb or curb and gutter does not abut a concrete pavement, place expansion joints at all spring lines of street returns. If intersecting streets are more than 300 feet apart, place expansion joints at 200-foot intervals. For MDOT Standard Details A, B, C5, C6, and D curb and gutter, place expansion joints in abutting pavement.
2. If the structure does not abut a concrete pavement or base, contraction joints shall be placed at approximately 50-foot intervals.
3. Intermediate plane of weakness joints shall be placed at approximately 10-foot intervals between other joints as called for above.
4. Curb returns and curb cuts for driveways shall be installed as required.
5. The gutter and top of curb shall not vary more than 3/16-inch in 10 feet when checked with a 10-foot straightedge.
6. After the back forms are removed, honeycomb and minor defects shall be filled with mortar, composed of one-part Portland cement and two-parts sand.
7. As soon as concrete surfaces have hardened sufficiently to prevent marring, they shall be covered by an approved curing compound, or they shall be thoroughly wetted and cured by an approved method for a period of 6 days unless otherwise directed by the Engineer.

Gray/Standard Sidewalks: Forms shall be of metal or wood, straight and free of distortion, and of sufficient strength to resist springing during the placing of concrete. Forms shall be securely staked, braced, and tied to the required line and grade. Flexible steel or adequately sized lumber may be used for short radius forms.

The sidewalk subgrade shall be compacted to 95 percent compaction by tamping. After wetting the subgrade, the concrete shall be placed to the proper depth and spaded along the form faces.

Concrete shall be alternately tamped and screeded until all voids are removed and the surface has been brought to the required grade. The surface shall then be floated to produce a smooth, dense surface, free from irregularities. All edges and joints shall be rounded to a radius of 1/4-inch with an edging tool and trowel. As soon as all excess moisture has disappeared, the surface shall be finished by light brooming.

Sidewalks shall be divided into blocks approximately square, using slab division forms or by cutting joints after floating. These joints shall be 1/4 depth of the slab thickness (min. 3/4-inch-deep by 1/8- to 1/4-inch in width and shall be finished smooth and true to line. Bituminous expansion joints shall be provided at intervals of 50 feet and at junctions with structures, foundations, and curbs. Control joints shall be located between expansion joints at intervals equal to the sidewalk width.

As soon as concrete surfaces have hardened sufficiently to prevent marring, they shall be covered by an approved curing compound, or they shall be thoroughly wetted and cured by an approved method for a period of six days unless otherwise directed by engineer.

Stamped/Textured and Colored Sidewalks: Forming and preparation of sidewalk subgrade shall be the same as for standard concrete.

Finishing: Concrete shall be alternately tamped and screeded until all voids are removed and the surface has been brought to grade. The surface shall then be floated to produce a smooth, dense surface, free from irregularities. All edges and joints shall be rounded to 1/4-inch radius with an edging tool. While concrete is still in a plastic state, apply the selected texturing pattern to the surface of the concrete. Pattern shall be properly tamped into the surface to provide adequate relief of the texture.

Per manufacturers instructions apply the liquid sealer/release agent following the stamping. Of not specified by the manufacturer – mix 3 gallons of clear sealer with 1 quart Xylol and 1/2 cup release agent. Mixture 100%. Apply at rate of 150 sqft/gal. *Agitate sprayer frequently so that release agent stays in suspension while spraying.* Apply a minimum of 2 coats.

All control joints in stamped/textured concrete shall be cut and as soon as practical following placement and no more than 12 hours after placement. These joints shall be 1/4 depth of the slab thickness (min. 3/4-inch-deep by 1/8- to 1/4-inch in width and shall be finished smooth and true to line. Bituminous expansion joints shall be provided at intervals of 50 feet and at junctions with structures, foundations, and curbs. Control joints shall be located between expansion joints at intervals equal to the sidewalk width.

The Contractor shall erect and maintain suitable barricades and employ such watchers as may be necessary to exclude vehicle and pedestrian traffic from the newly constructed concrete until adequate concrete curing has occurred.

Any part of the concrete construction damaged by traffic or otherwise damaged prior to its acceptance shall be repaired or replaced by and at the expense of the Contractor in a manner satisfactory to the Engineer. The Contractor shall provide protection against both public traffic and the traffic caused by the Contractor's own employees and agents.

The Contractor shall have available materials for protecting the unhardened concrete against damage by rain – and without marring or damaging the finish. When rain is imminent, the unhardened concrete shall be immediately covered with paper, plastic film, or other suitable material, and planks or forms placed along slip-formed pavement edges. “Tenting” of the covering will be required if there is a danger that the covering will mar or damage the finish of the unhardened concrete.

Concrete shall be cured by covering with polyethylene sheeting for a period of at least seven days. Polyethylene sheeting shall not be permitted to come into direct contact with freshly placed concrete. Concrete having imprints of polyethylene sheeting, or any imprint other than the desired surface texture, will be removed and replaced at the contractor's expense.

F. Restoration:

Restoration surrounding concrete work shall be per Contract Drawings and per related contract provisions and work items.

Measurement and Payment

All related items may not be listed below. The completed work as measured for "Concrete Work" will be paid as shown if applicable and on the Base-Unit Price Work listing.

<u>Item</u>	<u>Pay Unit</u>
Concrete Formed Trench Spillways for Trench Grates	Each
Conc. Integral Curb (Double 8"x8" reinf. Curb)	Square Foot
Conc. Integral C&T Curb (Single 8"x8" reinf. Curb)	Square Foot
Cast-in-Place Concrete Steps/Platform	Square Foot
4-inch Concrete Sidewalk	Square Foot
4-inch Colored & Textured (C&T) Sidewalk	Square Foot
Concrete Ramp (6" sidewalk w/curb & truncated dome)	Each

All standard and modified concrete curb and gutter will be installed as indicated on the Contract Drawings.

TOPSOIL, SEED & MULCH

Description

This work shall consist of any labor, materials, and equipment used to provide, hold place, shape, and place topsoil to complete the Work in designated areas after grading operations are complete, and install seed and mulch for final restoration with maintained vegetation.

Submittals:

Provide Topsoil Analysis Reports for imported topsoil. Reports shall include Unified Soil Classification system description of the soil, gradation, and chemical attributes. Reference standards include ASTM D2974 – Standard Test Methods for Moisture, Ash, and Organic Matter of Peat and Other Organic Soils; and ASTM D5268, Standard Specification for Topsoil Used for Landscaping Purposes.

Materials

Topsoil shall consist of natural, friable, sandy loam, native upland topsoil. Composition shall be in general accordance with ASTM D5268 with gradation, chemical, and nutrient attributes as described below:

TEXTURE CLASS	% OF TOTAL WEIGHT	AVERAGE %
Sand (0.05-2.0 mm dia. range)	25-75	50
Silt (0.002-0.05 dia. range)	15-40	27.5
Clay (<0.002 mm dia. range)	15-30	22.5

CHEMICAL ATTRIBUTE	RANGE
pH	6.8-7.5
Organic Matter	1%-3%
Salinity	EC<2 mmhos/cm

NUTRIENT	CONCENTRATION
Nitrogen	5 ppm air dried basis
Phosphorus	5 ppm
Potassium	30 ppm
Iron (Fe)	5 ppm

Imported or salvaged topsoil meeting the above criteria shall be clear of contaminants and screened. Material shall be free from objects larger than 1-1/2 maximum dimension including hard clods, shale, decomposed shale, substantial subsoil, noxious weed parts (roots, seeds or shoots), grass, refuse, stumps, roots, brush, or other foreign matter, hazardous or toxic substances, and/or deleterious material harmful to plant growth or that may hinder grading, planting, or maintenance. Unacceptable topsoil, as determined by the Engineer, and excess topsoil will be the Contractor's responsibility and for removal and

proper disposal from the site. Screened topsoil shall be placed evenly with a minimum 4-inch depth.

Seed

MDOT approved mix for Turf Loam to Heavy Soil (THM).

- 30% Kentucky Bluegrass,
- 20% Perennial Ryegrass,
- 50% Creeping Red Fescue.

Application rate 5lbs/100sf or 220 lbs/acre. All seed varieties must come from the pre-approved seed list. Seed mixture specifications shall be provided prior to installation.

Mulch

Straw mulch shall be generously applied immediately following seeding operation to stabilize seed and prevent seed from removal due to weather and bird activity.

Construction

Contractor shall prepare areas by grading and shaping as needed prior to installation. Contractor shall also prepare areas for excavated and/or imported topsoil material to be stockpiled prior to excavation or delivery of materials. Approved on-site topsoil that is excavated and stock-piled for re-use, and non-stockpiled topsoil that is reshaped and reused shall be considered incidental to the related work items. Non-stockpiled topsoil shall be reused within 48 hours or shall be stockpiled for future use or removed from the site. Non-stock-piled topsoil may require additional soil erosion and sedimentation control measures as required by the Engineer at no increased cost to the project. Imported topsoil installed for this project, shall be measured and paid as part of this special provision and work item.

Topsoil, Seed & Mulch shall be maintained to meet all soil erosion control measures until vegetation has occurred and necessary measures have been approved for removal by the Engineer and the City soil erosion control enforcement officer as part of the soil erosion control permit. Any necessary soil erosion measures required to maintain erosion control shall be incidental to this pay item and related items of Work and are as indicated on the construction plan drawings.

Reconditioning Existing Lawns

Recondition existing lawn areas damaged by contractor's operations including storage of materials and equipment and movement of vehicles. Also recondition existing lawn areas where minor regrading is required.

The contractor shall be responsible for utility lines or drainage pipes. Repair of these items shall be incidental to the contract.

Provide fertilizer, sod, and soil amendments as specified for new lawns, and as required, to provide a satisfactorily reconditioned lawn.

Provide new screened topsoil, as required, to fill low spots and meet new finish grades.

Cultivate bare and compacted areas thoroughly to provide a satisfactory planting bed.

Remove diseased and unsatisfactory lawn areas; do not bury into soil. Remove topsoil containing foreign materials resulting from contractor's operations, including oil drippings, stone, gravel, and other loose building materials.

Where substantial lawn remains but is thin, mow, rake, aerate if compacted, fill low spots, remove humps, and cultivate soil, fertilize, and hydroseed. Remove weeds before seeding, or if extensive, apply selective chemical weed killers as required.

Water newly planted lawn areas and keep moist until new grass is established.

Measurement and Payment

The completed work as measured for “Topsoil, Seed and Mulch” will be paid at the contract unit price for the following items:

<u>Pay Item</u>	<u>Pay Unit</u>
Seed & Mulch (Restoration)	SY

Payment for items in “Topsoil, Seed & Mulch” includes all equipment, labor, and materials to provide, place and complete this item of Work, including relating equipment, labor, and materials that may not be mentioned herein and are incidental to this item of Work.

Specifications shall be provided and approved by the Engineer for the related items of Work prior to installation.

TRAFFIC CONTROL

Description

The intent is that local traffic shall be maintained throughout the project with two-way traffic and short duration one lane operation if needed with Flag Control. The work covered by this Specification shall consist of measures necessary to protect and maintain local traffic and to protect the work while the Contract is in force.

Note: TRAFFIC CONTROL COORDINATION WITH ADJACENT CONTRACTED WORK WILL BE REQUIRED. As work is in the same general location, construction traffic control signage may already be in place and the level of traffic controls needed may be minimized or removed on this project or reduced to replacement construction signage if the adjacent project is completed prior to completion of this project.

Two lanes of traffic shall be fully open at the end of each workday. Temporary signs that do not apply shall be removed at the end of each workday.

During the duration of this project, the contractor will not be permitted to close East Walled Lake Drive for any duration of time without a related traffic control plan and devices along with notification and approval by the City of Walled Lake. **Access for residential driveways, regular through traffic and for emergency vehicles shall be maintained unless other arrangements are made. If access cannot be maintained due to site conditions, parking and transportation options shall be coordinated with the owner prior to limiting access. Although Mercer Beach will be closed through the duration of the project, safe access to Mercer Beach including parking and pedestrian access shall be accommodated where possible through the duration of the project. Contractor shall coordinate with the City and assure adequate beach closure signage is provided.** All maintenance gravel and other materials, equipment and labor required to maintain traffic shall be included as part of the Traffic Control pay item. Any such reduction or other work zone traffic control shall be implemented in strict compliance with the Michigan Manual of Uniform Traffic Control Devices and requirements of the City of Walled Lake.

All work shall be performed on Monday through Friday between the hours of 7am and 5pm unless approved otherwise by the City of Walled Lake. No work shall be performed on observed federal holidays. All work shall be completed by the scheduled end of project.

General Provisions and Responsibilities

The Engineer reserves the right to require additional traffic control devices as deemed necessary for protecting and regulating traffic during all construction stages. In no case

shall traffic be allowed to back up into or through the intersections of Pontiac Trail. If this may occur, detours may be required.

The Contractor shall furnish, install and maintain all traffic control devices for this project, and shall remove such traffic control devices from the project when no longer required, as determined by the Engineer.

The Contractor shall be responsible for the actions of their Subcontractors in relation to placement, maintenance and removal of traffic control devices.

Safety Program

The Contractor shall provide a copy of their safety program and designate in writing to the Engineer a Safety Supervisor and an alternate. The identity of these persons, including their addresses and 24-hour telephone numbers along with any pager or cell phone numbers shall be supplied. These numbers shall also be forwarded to the Walled Lake Police Department, in order that immediate 24-hour communication may be possible in case of emergencies at night, over weekends, Holiday and at such other times when construction operations may or may not be in progress. Changes in the designation of the Safety Supervisor or the alternate shall immediately be known to the Engineer.

When equipment and materials to be used in the work are located within the right-of-way of any street or road the Contractor shall safeguard the traveling public by furnishing, placing and maintaining suitable and enough approved signs, lights and barricades necessary to protect motorists. Such protection will be considered included in this Maintaining Traffic provision and pay item for Traffic Control. Materials and Equipment shall be stored in accordance with Section 812 of the 2012 Standard Specifications for Construction unless otherwise specifically authorized.

The Contractor shall, for safety and protection of through and local traffic, furnish, erect, maintain, relocate as directed by the Engineer, and upon completion of the work remove all traffic control devices and barricades for the project. This includes advance warning signs, barricades and channeling devices at intersecting streets on which traffic is to be maintained.

All traffic control devices placed by the Contractor shall conform to the design, condition, placement and lighting requirements specified in the Michigan Manual of Uniform Traffic Control Devices and the plans. Only traffic control devices appropriate to conditions at the time shall be displayed.

All traffic control devices shall be cleaned, repainted, reflectorized or replaced to meet minimum standards and as determined by the Engineer, and shall be maintained in place, in proper condition until work is completed or until no longer required.

When shoulders at the edge of pavement are low, high, soft and rough, the Contractor shall place and maintain enough approved Plastic Drums to warn traffic of localized hazards.

Plastic Drums will be required at the inside of curves, driveways, intersection and other local hazards.

When, in the opinion of the Engineer, Traffic Control Devices are deficient, inadequate or improper, or conditions within work area are such that safety is adversely affected the Contractor or his safety Supervisor will be immediately notified. A statement of the corrective action to be taken will accompany such notice. If the Contractor fails to comply promptly with such instruction, the Engineer may stop any or all work on the project until satisfactory corrective action is taken. If a Contractor neglects to take any corrective action, the Engineer may order such work as deemed necessary to ensure public safety by outside forces at the Contractors expense.

Hand Patching may be required anytime during construction that the traveled surface becomes potholed, raveled or otherwise deemed unsafe as the result of construction operations or as directed by the Engineer, the Contractor shall fill the area with Hot Mix Asphalt to provide a smooth and safe driving surface and shall be paid for as Hand Patching.

Tapered Joints will not be allowed. The contractor shall bring up the driving lanes equal at the end of each paving day.

Measurement and Payment

The completed work as measured for Traffic Control shall be paid for at the contract unit prices for the following contract items:

<u>Item</u>	<u>Pay Unit</u>
Traffic Control	Lump Sum

Payment for items in Traffic Control includes equipment, labor, and materials to complete the item of work.

The cost of any emergency work and/or other work ordered to be performed by the Engineer at the Contractor's expense, as previously described within this provision, will be absorbed by the Contractor. Should the City's expenditures exceed the bid amount, deduction will be made from other payments due the Contractor.

MISCELLANEOUS

Description

Work involves relocation and removal/reinstall/replacement of electrical wiring/conduits, fencing and other items as listed below. All items not listed as MISCELLANEOUS or other technical provision shall be as referenced on the construction plan drawing, measured and paid as described in the Bid Unit Pay Item listing. Other miscellaneous work will be considered incidental to related items of work unless considered and approved otherwise by the City.

Conduit and Boxes For Electrical Systems

Rigid Metal Conduit and Fittings: Heavy wall, galvanized steel, schedule 40, threaded. Fittings and Conduit Bodies: Use all steel threaded fittings and conduit bodies.

PVC Externally Coated Metal Conduit: Rigid heavy wall, schedule 40, steel conduit with external 40 mil (0.1mm) PVC coating. Conduit must be hot dipped galvanized inside and out including threads. The PVC coating bond to the galvanized steel conduit shall be stronger than the tensile strength of the coating itself. Fittings and Conduit Bodies: Threaded type, material to match conduit. PVC coated fittings and couplings shall have specially formed sleeves to tightly seal to conduit PVC coating. The sleeves shall extend beyond the fitting or coupling a distance equal to the pipe outside steel diameter or two inches (50 mm) whichever is greater.

Intermediate Metal Conduit (IMC) and Fittings: Conduit: Galvanized steel, threaded. Fittings and Conduit Bodies: Use all steel threaded fittings and conduit bodies.

Electrical Metallic Tubing (EMT) and Fittings: Conduit: Steel, galvanized tubing. Fittings: All steel, set screw, water-tight, concrete tight. No push-on or indenter types permitted. Conduit Bodies: All steel threaded conduit bodies.

Exterior Sidewalk Boxes and Junction Boxes: All shall be UL listed for sidewalk installation, Quazite type, weatherproof cover of non-skid finish, open bottom. All boxes shall be of sufficient size to provide free space for all conductors enclosed in the box and shall comply with NEC requirements.

Conduit Installation: Size power conductor raceways for conductor type installed. Conduit size shall be 1-inch (26 mm) minimum except as specified elsewhere. Caution: Per the NEC, the allowable conductor ampacity is reduced when more than three current-carrying conductors are installed in a raceway. Contractor must take the NEC ampacity adjustment factors into account when sizing the raceway and wiring system. 40% fill shall be maximum for all new conduit fills. Arrange conduit to maintain headroom and present a neat appearance. No continuous conduit run shall exceed 100 feet (30 meters) without a junction box. Cut conduit square using a saw or pipe cutter; de-burr cut ends.

All conduit terminations (except for terminations into conduit bodies) shall use connectors or conduit hubs with one locknut or shall use double locknuts (one each side of box wall) and insulating bushing. Provide bushings for the ends of all conduit not terminated in box walls. Install no more than the equivalent of three 90-degree bends between boxes. Use hydraulic one-shot conduit bender or factory elbows for bends in conduit larger than 2-inch (50 mm) size unless sweep elbows are required. Conduit shall be bent according to manufacturer's recommendations. Torches or open flame shall not be used to aid in bend of PVC conduit. Use suitable conduit caps or other approved seals to protect installed conduit against entrance of dirt and moisture.

Provide 1/8-inch (3 mm) nylon pull string in empty conduit, except sleeves and nipples. Install expansion fitting in PVC conduit runs as recommended by the manufacturer. Avoid moisture traps where possible. Where moisture traps are unavoidable, provide junction boxes with drain fittings at conduit low points.

PVC conduit shall transition to galvanized rigid metal conduit before it enters a concrete pole base, foundation, wall (where exposed) or up through a concrete floor. Use PVC-coated rigid steel factory elbows for bends in plastic conduit larger than 2". PVC elbows are allowed in PVC conduit runs 2" and smaller.

All conduit installed underground shall be buried a minimum of 24" below finished grade, whether or not the conduit is concrete encased. PVC conduit shall be cleaned with solvent and dried before application of glue. The temperature rating of glue/cement shall match weather condition. Apply full even coat of cement/glue to entire area that will be inserted into fitting. The entire installation shall meet manufacturers recommendations.

Conduit Installation Schedule: Conduit other than that specified below for specific applications shall not be used. Underground Installations Within Five Feet (1.5 m) of Foundation Wall: Rigid steel conduit. Underground Installations More than Five Feet (1.5 m) From Foundation Wall: Schedule 40 PVC conduit.

Fencing and Trench Drain

Work and location shall be as specified on the Contract Drawings.

Measurement and Payment

The completed work as measured for "Miscellaneous" shall be paid at the contract unit prices for the final measured installed quantities per related item indicated in the Base-Unit Price Work listing and at the contract unit prices for the following contract items (list below may not be complete – refer to Base Unit Price Work listing for complete list of items):

<u>Item</u>	<u>Pay Unit</u>
Light Pole Base (incl assoc. conduit)	Each
Install Light Fixture Assembly Provided by Owner	Each

Control Panel	Each
2" Conduit	Lump Sum
#10 THWN Wire	Lineal Feet
Sidewalk Junction Box (17x30x18)	Lineal Feet
Sidewalk Junction Box (11x18x18)	Each
Remove & Salvage Lake Information Sign (incl base)	Lump Sum
Remove & Salvage Benches & Waste Receptacles	Each
Remove & Salvage Entrance Archway (incl footings)	Lump Sum
Remove & Salvage Decorative Light Fixture	Each
Remove Conc. Light Pole Bases & Assoc. Wire/Conduit	Each
Remove/Reloc. Elec. Service incl Assoc Pole& OH Wire	Lump Sum
Remove & Salvage Decorative Metal Fencing (incl ftgs)	Lump Sum
Benches and Tables (6')	Each
Decorative Metal Fencing (3-ft hgt)	Lineal Feet
Signs & Posts	Each

Payment for items in 'Miscellaneous' includes all equipment, labor, and materials to complete the item of work.

Refer to Base-Unit Price listing and plan drawings other misc. items not listed here or in other provisions.

APPENDIX A

SOIL BORING REPORT

Hartley Geotechnical Group, LLC

Consulting Civil Engineers
400 Ann Arbor Road, Suite 192
Plymouth, MI 48170
(734) 454-4020
Soildr@comcast.net

10/2/2018
HG 18-112

Chelsea Pesta
City of Walled Lake
1499 E. West Maple Road
Walled Lake, MI 48390

Re: Soil Test Borings
Walled Lake, MI

Dear Madam:

Per your instructions, we made 6 Soil Test Borings as shown on the enclosed drawing. These Soil Test Borings were to determine the composition and compaction of the soils that will be supporting construction. The proposed construction include replacement of the underground storm sewer and reconstructing the asphalt road.

DRILLING AND TESTING METHODS:

The Soil Test Borings were drilled with 4" auger equipment on an all terrain vehicle. A split spoon sampler was used to obtain the soil samples in general conformance with ASTM D-1586 "Penetration Test and Split Barrel Sampling of Soils". The Standard Penetration Tests were started at a depth of 2.5' and performed at 2.5' increments to the required depth.

The Standard Penetration Test is used to determine the Standard Penetration Resistance ("N" Value) of the soil at the test depth. This is accomplished by determining the number of blows required to drive a 2.0 inch O.D. Split Spoon Sampler into the soil in three six-inch depth increments with a 140 pound hammer dropping 30". The total number of blows required for the second and third six-inch increments (the last foot) of penetration of each test is the Standard Penetration Resistance ("N" Value) of the soil at test depth. The number of blows are shown on the attached Test Boring Reports.

Testing included the estimation of the unconfined compressive strength of the cohesive soils with a calibrated hand penetrometer. The unconfined compressive strength was measured by the resistance of the clay soil sample to the penetration of a calibrated spring-loaded penetrometer. The penetrometer can measure a maximum unconfined compressive strength of 4 1/2 tons per square foot. The results of the penetration testing of the clay samples is shown on the attached Test Boring Reports.

The Geotechnical Engineer estimated the permeability of the soils in general conformance with the "Modern Sewer Design Manual", 1980, Published by the American Iron Institute. The attached test Boring Reports reveal the soil strata and the Coefficient of Permeability of the soils.

Please note that these permeability figures have no factor of safety added.

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WATER CONDITIONS:

The borings were checked for ground water during and upon completion of the drilling activities. The water elevations are shown on the attached test boring reports.

ANALYSIS, CONCLUSIONS AND RECOMMENDATIONS:

Analysis:

Per your direction, soil test borings were performed close to the roadways near Mercer Beach Walled Lake, Michigan. The borings reveal that the soil conditions vary greatly across this area. The soil conditions vary from stiff to hard clay (SB-4 & SB-5) to fill that overlies topsoil (SB-1, SB-2, SB-3 & SB-6). The seismic site class of the site is D.

The boring locations were provided by Boss Engineering.

Recommended Soil Parameters:

The proposed construction includes replacing the underground storm sewer and reconstructing the asphalt road. The borings generally reveal soil conditions that vary greatly across the subject area. Generally the soil conditions are sandy clay and clayey sand, however several borings reveal sandy layers. The following are general soil parameters for the sandy clay and clayey sand soil conditions that will be directly supporting the proposed construction.

Design bearing Capacity = Variable

CBR Value = 5

Subgrade Modulus, K = 125 pci

Soil/concrete friction factor = 0.35

Soil Unit Weight = 120 pcf

Angle of internal friction = 19 Degrees

Relative Permeability = Medium Permeability to Very Low Permeability

Coefficient of permeability = 1×10^{-2} cm/sec to 1×10^{-6} cm/sec

Maximum Angle of Repose = 57 Degrees

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Pavement:

The borings reveal that the supporting soils will be loose to medium compact clayey sand and stiff to hard silty clay.

Any area to be paved must be cut to the bottom of sub base elevation. The resulting subgrade must be proof compacted with heavy rubber tired equipment. Areas that are found to yield excessively must be undercut and replaced.

Any fill that will be added to bring to finished grade must be non organic, placed in lifts not to exceed 9", and compacted to 95% of its maximum density as determined by the Modified Proctor Test (A.S.T.M. D-1557). In addition, the upper 12" of floor slab subgrade should be compacted to at least 98% of its maximum density. The compacted fill must be tested as it is placed and compacted to provide assurance that the proper degree of compaction is achieved.

The proof compacted clayey sand and sandy clay should be capable of achieving a CBR value of at least 5 or better when compacted to 95% of the maximum dry density.

The pavement and granular sub base can be designed for a California Bearing Ratio= CBR=5 and an "effective" roadbed resilient modulus of 4500 PSI. The effective resilient modulus takes into account the effects of subgrade weakening during the spring thaw and frozen conditions during the winter months.

It is also recommended that BX 1100 Geogrid (or equal) be installed on the proof compacted sub grade prior to the placement of the 21AA crushed stone. The underlying sub grade must be adequately sloped to promote good surface drainage and reduce water infiltration into the subgrade and base coarse.

All pavement will require regular maintenance and occasional repairs to keep the pavement in serviceable condition. Of particular importance is timely sealing of joints and cracks, which if not performed can allow water to enter the pavement section and cause rapid deterioration of during the freeze-thaw cycles. If the appropriate maintenance and repairs are not performed on a timely basis, the serviceable life of the pavement can be significantly reduced.

General Requirements:

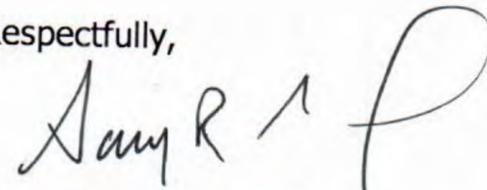
Temporary excavations deeper than 5' should be properly sloped or otherwise structurally retained to provide stable and safe working conditions. In all cases the Michigan Occupational Safety and Health Act (MIOSHA) as well as any additional local requirements must be followed to provide adequate protection for the workers, structures and underground utilities.

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The construction plan is not known. The storm sewer design and pavement design are not part of this scope.

Respectfully,



Gary R. Groenewoud, P.E.



HARTLEY GEOTECHNICAL GROUP

TEST BORING REPORT

BORING NO.	SB #1 (6' WEST OF STAKE)	HG JOB NO.	HG 18-112
GROUND SURFACE ELEV.	97.17	CLIENT	CITY OF WALLED LAKE
DATUM	ARROW ON HYDRANT = 100.0	DATE DRILLED	SEPTEMBER 27, 2018
PROJECT	CITY OF WALLED LAKE WALLED LAKE, MI	DRILLER	T. HAYES
		DRILLING METHOD	4" AUGER ON ATV

ELEV.	IN FEET	SAMPLE		STRATA CHANGE	SOIL CLASSIFICATION	W.L.
		TYPE	NO.			
1	—				LOOSE MOIST BLACK SILTY MEDIUM SAND TOPSOIL 1.0 WITH TRACES OF RUBBISH FILL	
2	—	SS	3		LOOSE MOIST DARK BROWN CLAYEY MEDIUM SAND TOPSOIL WITH POCKETS OF GRAY SILTY MEDIUM 2.6 SAND FILL.	
3	—		2			
4	—	SS	3		FIRM MOIST MOTTLED MEDIUM/DARK BROWN SANDY CLAY FILL	
5	—		3			qu = 3200 PSF @ 4.0'
6	—		3	5.0	LOOSE MOIST BLACK SILTY MEDIUM SAND TOPSOIL 5.9 (91.3)	
7	—	SS	3		LOOSE MOIST MOTTLED GRAY/BROWN SILTY, CLAYEY 6.9 FINE SAND	▽ W.L. = 6.9' (90.3) AT COMPLETION
8	—		3	7.5	LOOSE WET MOTTLED GRAY/BROWN MEDIUM SAND	
9	—				END OF BORING	
10	—					
11	—					
12	—					
13	—					
14	—					
15	—					

SAMPLE TYPES

S.S. - 2 O.D. Split Spoon Sample
 L.S. - Sectional Linear Sample
 A.S. - Auger Sample
 C.C.P. - Continuous Cone Penetration Test

NO. - Number of Blows Required To Drive Sampler into Soil in 6" Depth Increments, Using 140 lb Hammer Dropping 30" (12" Depth Increments During C.C.P. Test)

W.L. - Water Level
 w - Moisture Content
 qu - Unconfined Compressive Strength in P.S.F.
 nd - Natural Density

HARTLEY GEOTECHNICAL GROUP

TEST BORING REPORT

BORING NO.	SB #2 (5' EAST OF STAKE)	HG JOB NO.	HG 18-112
GROUND SURFACE ELEV.	96.77	CLIENT	CITY OF WALLED LAKE
DATUM	ARROW ON HYDRANT = 100.0	DATE DRILLED	SEPTEMBER 27, 2018
PROJECT	CITY OF WALLED LAKE WALLED LAKE, MI	DRILLER	T. HAYES
		DRILLING METHOD	4" AUGER ON ATV

ELEV.	IN FEET	SAMPLE		STRATA CHANGE	SOIL CLASSIFICATION	W.L.
		TYPE	NO.			
	1				LOOSE MOIST BLACK SILTY MEDIUM SAND TOPSOIL 0.9 WITH TRACES OF RUBBISH FILL	
	2	SS	4		MEDIUM COMPACT MOIST DARK BROWN SILTY, CLAYEY MEDIUM SAND TOPSOIL FILL	
	3		5			
	3		6	3.1		
	4		1	3.6	VERY LOOSE DARK BROWN SILTY MEDIUM SAND TOPSOIL (93.2)	
	4	SS	1	4.7	VERY LOOSE MOIST BROWN MEDIUM SAND	
	5		2		LOOSE MOIST BROWN MEDIUM SAND	
	5			5.6		▽ W.L. = 5.6' (91.2) AT COMPLETION
	6		2		LOOSE WET BROWN MEDIUM SAND	
	7	SS	1	7.1		
	7		2	7.3	PLASTIC MOIST GRAY SILTY CLAY	qu = 1800 PSF @ 7.2'
	8			7.5	FIRM MOIST GRAY SILTY CLAY	qu = 2600 PSF @ 7.4'
	8				END OF BORING	
	9					
	10					
	11					
	12					
	13					
	14					
	15					

SAMPLE TYPES

S.S. - 2 O.D. Split Spoon Sample
 L.S. - Sectional Linear Sample
 A.S. - Auger Sample
 C.C.P. - Continuous Cone Penetration Test

NO. - Number of Blows Required To Drive Sampler into Soil in 6" Depth Increments, Using 140 lb Hammer Dropping 30" (12" Depth Increments During C.C.P. Test)

W.L. - Water Level
 w - Moisture Content
 qu - Unconfined Compressive Strength in P.S.F.
 nd - Natural Density

HARTLEY GEOTECHNICAL GROUP

TEST BORING REPORT

BORING NO.	SB #3 (1' NORTH OF STAKE)	HG JOB NO.	HG 18-112
GROUND SURFACE ELEV.	98.01	CLIENT	CITY OF WALLED LAKE
DATUM	ARROW ON HYDRANT = 100.0	DATE DRILLED	SEPTEMBER 27, 2018
PROJECT	CITY OF WALLED LAKE WALLED LAKE, MI	DRILLER	T. HAYES
		DRILLING METHOD	4" AUGER ON ATV

ELEV.	IN FEET	SAMPLE		STRATA CHANGE	SOIL CLASSIFICATION	W.L.
		TYPE	NO.			
1	—	SS	3	2.8	LOOSE MOIST DARK BROWN CLAYEY MEDIUM SAND TOPSOIL WITH TRACES OF FINE TO MEDIUM GRAVEL AND BURIED WOOD FILL	qu = 3800 PSF @ 4.7' qu = 8800 PSF @ 6.2' W.L. = 8.0' (90.0) AFTER 3 HOURS W.L. = 8.9' (89.1) AT COMPLETION qu = 9000 PSF @ 9.8'
2	—					
3	—					
4	—	SS	2	4.4	LOOSE WET GRAY CLAYEY MEDIUM SAND	
5	—					
6	—	SS	7	6.0	STIFF MOIST MOTTLED GRAY/BROWN SILTY CLAY	
7	—					
8	—					
9	—	SS	8	9.0	HARD MOIST MOTTLED GRAY/BROWN SILTY CLAY	
10	—					
11	—		9	10.0	HARD MOIST MOTTLED GRAY/BROWN SILTY CLAY WITH SEAMS OF WET GRAY CLAYEY MEDIUM SAND	
12	—					
13	—					
14	—					
15	—					
					END OF BORING	

SAMPLE TYPES

S.S. - 2 O.D. Split Spoon Sample
 L.S. - Sectional Linear Sample
 A.S. Auger Sample
 C.C.P. Continuous Cone Penetration Test

NO. - Number of Blows Required To Drive Sampler into Soil in 6" Depth Increments, Using 140 lb Hammer Dropping 30" (12" Depth Increments During C.C.P. Test)

W.L. - Water Level
 w - Moisture Content
 qu - Unconfined Compressive Strength in P.S.F.
 nd - Natural Density

HARTLEY GEOTECHNICAL GROUP

TEST BORING REPORT

BORING NO.		SB #4 (8' EAST OF STAKE)		HG JOB NO.		HG 18-112	
GROUND SURFACE ELEV.		100.85		CLIENT		CITY OF WALLED LAKE	
DATUM		ARROW ON HYDRANT = 100.0		DATE DRILLED		SEPTEMBER 27, 2018	
PROJECT		CITY OF WALLED LAKE		DRILLER		T. HAYES	
		WALLED LAKE, MI		DRILLING METHOD		4" AUGER ON ATV	
ELEV.	IN FEET	SAMPLE		STRATA CHANGE	SOIL CLASSIFICATION	W.L.	
		TYPE	NO.				
	1				LOOSE MOIST DARK BROWN SILTY MEDIUM SAND		
	2	SS	4	0.3	TOPSOIL (100.6)		qu = 5000 PSF @ 2.0'
	3		5		STIFF MOIST BROWN SILTY CLAY		
	4		6				
	5		6	3.1	HARD MOIST BROWN SILTY CLAY		qu = >9000 PSF @ 3.8'
	6	SS	7				
	7		7				
	8		5	5.5	STIFF MOIST BROWN SILTY CLAY		qu = 6700 PSF @ 6.3'
	9	SS	3	6.7	LOOSE WET BROWN SILTY MEDIUM SAND	▽	W.L. = 6.5' (94.4)
	10		4	6.9	FIRM MOIST BROWN SANDY CLAY WITH SEAMS OF WET BROWN SILTY MEDIUM SAND	▽	AFTER 2 HOURS W.L. = 7.6' (93.3) AT COMPLETION
	11		6	8.0	STIFF MOIST MOTTLED GRAY/BROWN SILTY CLAY		
	12	SS	10	9.1	HARD MOIST MOTTLED GRAY/BROWN SILTY CLAY		qu = 5700 PSF @ 8.8'
	13		14	10.0	END OF BORING		qu = >9000 PSF @ 9.8'
	14						
	15						

SAMPLE TYPES

S.S. - 2 O.D. Split Spoon Sample
 L.S. - Sectional Linear Sample
 A.S. - Auger Sample
 C.C.P. - Continuous Cone Penetration Test

NO. - Number of Blows Required To Drive Sampler into Soil in 6" Depth Increments, Using 140 lb Hammer Dropping 30" (12" Depth Increments During C.C.P. Test)

W.L. - Water Level
 w - Moisture Content
 qu - Unconfined Compressive Strength in P.S.F.
 nd - Natural Density

HARTLEY GEOTECHNICAL GROUP

TEST BORING REPORT

BORING NO.	SB #5 (10' NORTHWEST OF STAKE) HG JOB NO.		HG 18-112
GROUND SURFACE ELEV.	104.63		CLIENT
DATUM	ARROW ON HYDRANT = 100.0		CITY OF WALLED LAKE
PROJECT	CITY OF WALLED LAKE		CHelsea PESTA
	WALLED LAKE, MI		DATE DRILLED
			DRILLER
			DRILLING METHOD
			4" AUGER ON ATV

ELEV.	IN FEET	SAMPLE		STRATA CHANGE	SOIL CLASSIFICATION	W.L.
		TYPE	NO.			
1					LOOSE MOIST DARK BROWN SILTY MEDIUM SAND TOPSOIL WITH TRACES OF RUBBLE FILL	
2		SS	4	2.1 (102.5)		
3			3			
4			4		STIFF MOIST BROWN SILTY CLAY	
5		SS	4			qu = 5000 PSF @ 2.3'
6			5			
7		SS	7			qu = 6000 PSF @ 3.8'
8			7			
9			9		HARD MOIST BROWN SILTY CLAY	
10		SS	11			qu = >9000 PSF @ 6.5'
11			11			
12		SS	2		LOOSE MOIST BROWN MEDIUM SAND WITH TRACES OF FINE GRAVEL	
13			2	9.6		
14			5		HARD MOIST BROWN SILTY CLAY	
15			5			qu = 4200 PSF @ 9.8'
			11.2			W.L. = 11.2' (93.4) AT COMPLETION
		SS	2		LOOSE WET BROWN VERY CLAYEY MEDIUM SAND WITH SEAMS OF WET BROWN SILTY MEDIUM SAND	
			4			
			7	12.5		
					END OF BORING	

SAMPLE TYPES

S.S. - 2 O.D. Split Spoon Sample
 L.S. - Sectional Linear Sample
 A.S. - Auger Sample
 C.C.P. - Continuous Cone Penetration Test

NO. - Number of Blows Required To Drive Sampler into Soil in 6" Depth Increments, Using 140 lb Hammer Dropping 30" (12" Depth Increments During C.C.P. Test)

W.L. - Water Level
 w - Moisture Content
 qu - Unconfined Compressive Strength in P.S.F.
 nd - Natural Density

HARTLEY GEOTECHNICAL GROUP

TEST BORING REPORT

BORING NO.	SB #6	HG JOB NO.	HG 18-112
GROUND SURFACE ELEV.	96.5	CLIENT	CITY OF WALLED LAKE
DATUM	ARROW ON HYDRANT = 100.0	DATE DRILLED	SEPTEMBER 27, 2018
PROJECT	CITY OF WALLED LAKE WALLED LAKE, MI	DRILLER	T. HAYES
		DRILLING METHOD	4" AUGER ON ATV

ELEV.	IN FEET	SAMPLE		STRATA CHANGE	SOIL CLASSIFICATION	W.L.
		TYPE	NO.			
	1				LOOSE MOIST DARK BROWN SILTY MEDIUM SAND TOPSOIL WITH TRACES OF FINE GRAVEL FILL	
	2	SS	3			
	3		3	2.9		
	4	SS	1		VERY LOOSE MOIST BLACK SILTY MEDIUM SAND TOPSOIL WITH TRACES OF FINE GRAVEL FILL	
	5		1	4.6 (91.9)		
	6		2	5.1	LOOSE MOIST BROWN MEDIUM SAND	▽ W.L. = 5.1' (91.4)
	7	SS	3		LOOSE WET BROWN SILTY MEDIUM SAND	AT COMPLETION
	8		4	6.9		
	9		3	7.5	LOOSE WET MOTTLED BROWN/GRAY MEDIUM SAND	
	10				END OF BORING	
	11					
	12					
	13					
	14					
	15					

SAMPLE TYPES

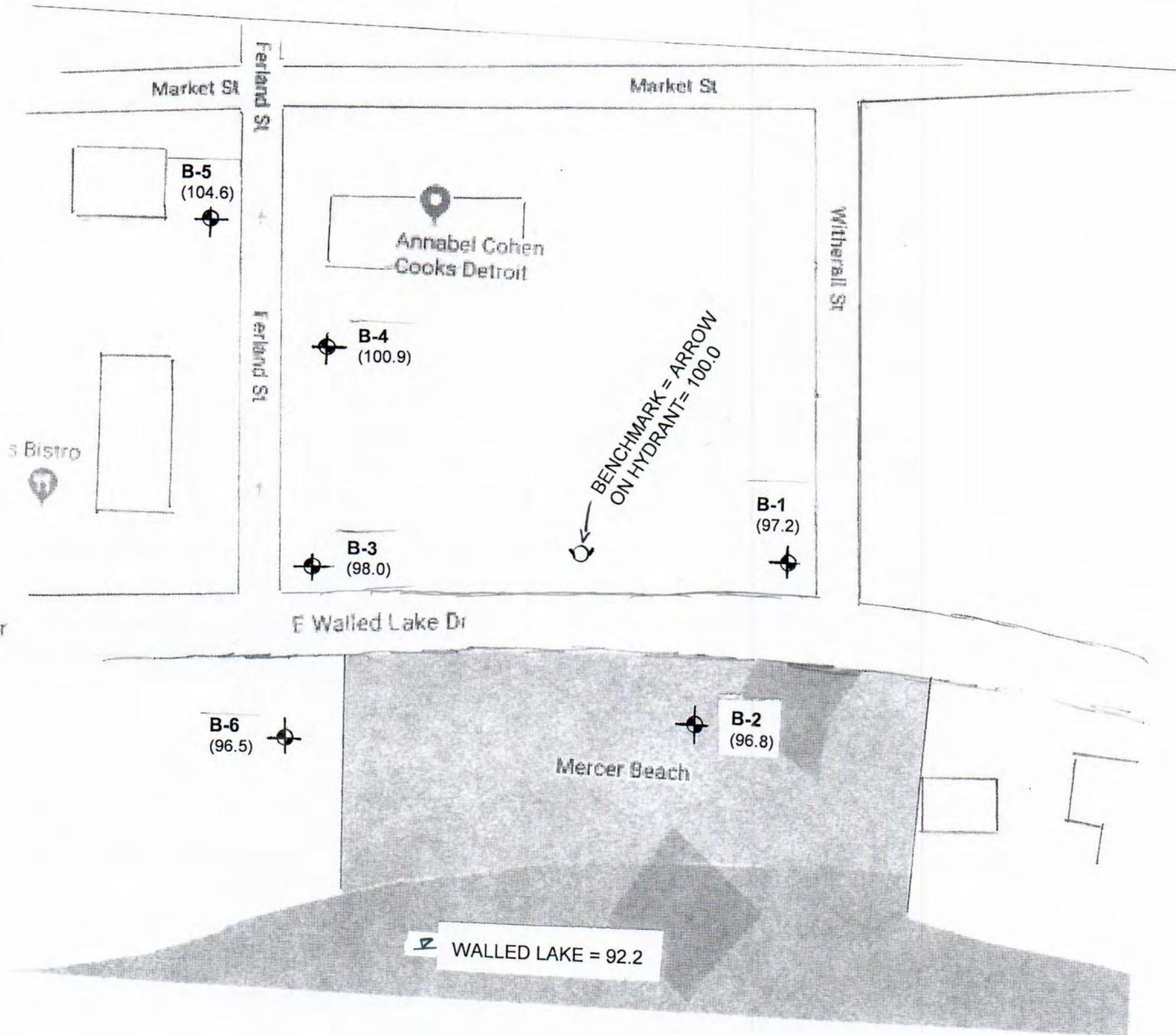
S.S. - 2 O.D. Split Spoon Sample
 L.S. - Sectional Linear Sample
 A.S. - Auger Sample
 C.C.P. - Continuous Cone Penetration Test

NO. - Number of Blows Required To Drive Sampler into Soil in 6" Depth Increments, Using 140 lb Hammer Dropping 30" (12" Depth Increments During C.C.P. Test)

W.L. - Water Level
 w - Moisture Content
 qu - Unconfined Compressive Strength in P.S.F.
 nd - Natural Density

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**SOIL BORING LOCATIONS
HG 18-112**