



**SPECIFICATIONS
(ISSUED FOR CONSTRUCTION)
SUBJECT TO ADDENDUM**

Lake Opeka Shoreline Restoration Project
1015 Howard Avenue
Des Plaines, IL 60018

January 2024

Prepared for:
Des Plaines Park District
Lake Park Golf Course & Marina
1015 Howard Avenue
Des Plaines, IL 60018

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DES PLAINES PARK DISTRICT

INVITATION TO BID

The Des Plaines Park District is seeking sealed bids for the Lake Opeka Shoreline Restoration Project.

This scope of work includes the stabilization of approximately 5,500 linear feet of shoreline using a combination of living and hard-edge treatments including:

- Prairie buffer with riprap toe along western shoreline
- Prairie buffer with vegetated riprap toe and aquatic planting shelf along the southern and eastern shoreline
- Riprap edge along eastern shoreline
- Steel sheet pile wall along northern shoreline
- Fishing access sheet pile wall plaza along northern shoreline
- Fishing access sheet pile wall eastern shoreline
- 4 proposed sheet pile wall fishing access nodes
- 1 sediment forebays at major storm sewer outfall along eastern shoreline

Scope of work also includes removal and replacement of bituminous pedestrian pathway, final grading, and temporary restoration. Restoration and landscaping will be completed under a separate contract.

Bid documentation will be made available on **Wednesday, January 10, 2024**. Complete digital Bidding Documents will be available for download at www.questcdn.com by inputting QuestCDN eBidDoc #**8919726**. Cost for download is \$30. Please contact QuestCDN at 952-233-1632 or info@questcdn.com for assistance in free membership registration, downloading, and working with this digital information.

Public Notice is hereby given by the Des Plaines Park District, Cook County, Illinois that sealed bids will be received for the Lake Opeka Shoreline Restoration Project. Bids will be received at the front desk until **9:30 AM, Friday, February 2, 2024, at Des Plaines Park District at 2222 Birch Street, Des Plaines, Illinois 60018, Administrative and Leisure Center**. Sealed envelopes or packages containing bids shall be marked "Sealed Bid – Lake Opeka Shoreline Restoration Project." A public bid opening will take place immediately.

All proposals must be made upon the Form of Proposal and Bid Quotation Form furnished by the Owner attached hereto and shall give the amounts bid for work, in numbers, and must be signed and acknowledged by the Contractor.

All work shall be done in accordance with Federal, State, and local rules and regulation. Contractor must secure and pay for all permits and licenses for removal and transport and disposal of waste materials. No oral, telephone, or email proposals or modifications will be considered.

Proposals shall be submitted on the attached Form of Proposal and Bid Quotation Form. All bids must include a ten percent (10%) Bid Guarantee and duly executed and notarized Bid Certification under Section 33E-11 of the criminal code of 1961, as amended, on the form provide by the Des

INVITATION TO BID

Plaines Park District. Failure to provide Bid Certification within 48 hours of the bid opening shall be cause for rejecting the bid. No bidder may withdraw their proposal after the hour set for the opening thereof, or before award of the contract, unless said award is delayed for a period exceeding thirty (30) calendar days.

COMPLIANCE WITH PREVAILING WAGE ACT: The CONTRACTOR is obligated to satisfy the requirements of Section 130/5 of the Illinois Prevailing Wage Act (820 ILCS 130/0.01 et. seq.) including, but not limited to, keeping a record of the name, occupation, and actual hourly wages paid to each employee. A signed, certified transcript of payroll will be required with each progress payment and upon completion of the contract prior to final payment. The contractor shall also supply a certified transcript of payroll for any subcontractors involved in the contract and includes those payroll verifications with all payment requests. Effective January 1, 2010 this section applies to subcontractors as well and is bound by the same prevailing wage requirement.

The Des Plaines Park District may reject any or all of the bids on any basis and without disclosure of a reason. The failure to make such a disclosure shall not result in accrual of any right, claim, or cause of action by any unsuccessful Bidder against the Des Plaines Park District.

INSTRUCTIONS TO BIDDERS

1. Identification of Project

The official name and location of the project shall henceforth be known as:

Lake Opeka Shoreline Restoration Project

The official name and address of the project owner shall henceforth be known as:

DES PLAINES PARK DISTRICT
2222 Birch Street
Des Plaines, Illinois 60018

2. Contract Documents

The Invitation to Bid, the Instructions to Bidder, the General Requirements, Technical, Certification, Quotation, Form of Proposal, and the Project Agreement comprise the Contract Documents.

Bid documentation will be made available on **Wednesday, January 10, 2024**. Complete digital Bidding Documents will be available for download at www.questcdn.com by inputting QuestCDN eBidDoc #**8919726**. Cost for download is \$30. Please contact QuestCDN at 952-233-1632 or info@questcdn.com for assistance in free membership registration, downloading, and working with this digital information.

3. Explanation to Bidders

Any explanation desired by a bidder regarding the meaning or interpretation of the Invitation to Bid, General Requirements, Technical etc., must be requested in writing and with sufficient time allowed for a reply to reach bidders before the submission of their bids. Any interpretation made will be in the form of an addendum of the Invitation to Bid, Specifications etc., and will be furnished to all prospective bidders. Its receipt by the bidder must be acknowledged in the space provided on the Form of Proposal and Bid Quotation Form or by letter or email received before the time set for opening of bids. Oral explanations or instructions given before the award of the contract will not be binding. All inquiries shall be emailed to Thera Novotny at Stantec Consulting Services Inc. no later than 3:00 p.m. on Thursday, January 25, 2024.

Thera.novotny@stantec.com

4. Conditions Affecting the Work

Bidders should visit the site and take such other steps as may be reasonably necessary to ascertain the nature and location of the work, and the general and local conditions which can affect the work or the cost thereof.

Failure to do so will not relieve Bidders from responsibility for estimating properly the difficulty or cost successfully performing the work.

5. Bid Guarantee

Where a bid guarantee is required by the Invitation to Bid, failure to furnish a Bid Guarantee in the proper form and amount, by the time set for opening of bids, may be cause for rejection of the bid, in the absolute discretion of the Owner.

A Bid Guarantee shall be in the form of a bid bond, postal money order, certified check, or cashier's check made payable to the Owner. Bid Guarantees, other than those stated, will be returned (a) to unsuccessful Bidders as soon as practicable after the award of job, and (b) to the successful Bidder upon execution of such further contractual documents and bonds as may be required by the bid as accepted.

The successful Bidder, upon being given a written "Notice of Award", will have (10) calendar days to provide the required Labor and Material Payment Bond, Performance Bond, and Insurance Policies or Certificates for same, and commence with the work. Failure to comply with the conditions set forth in the Contract Documents shall result in the termination of the contract for default. In such event, the Contractor may be liable for any costs of performing the work which exceed the amount of his bid, and the Bid Guarantee shall be available toward offsetting such difference, if not previously returned to the Contractor.

6. Bidder Requirements

Bidders shall be prequalified with the Illinois Department of Transportation in accordance with Article 102.01 of the Standard Specifications for Road and Bridge Construction (SSRBC) and is required by all bidders. All subcontractors shall be registered with the Department as a condition for approval to perform the work on the contract.

7. Preparation and Submission of Bids

Before submitting proposal, each Bidder shall examine carefully all documents, including addenda, pertaining to the work and visit the site to verify conditions under which work will be performed.

Submission of bid will be considered presumptive evidence that the Bidder has visited the site and is conversant with local facilities and difficulties, the requirements of the documents and of pertinent State or Local Codes, State of Labor and Material Markets, and has made due allowance in his bid for all contingencies. Include in bid all costs of labor, material, equipment, allowance, fees, permits, guarantees, applicable taxes, insurance and contingencies, with overhead and profit necessary to produce a complete project, or to complete those portions of the Work covered by the specifications on which proposal is made, including all trades, without further cost to the Owner.

Bidder (Contractor) has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.

Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder's (Contractor's) safety precautions and programs.

Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for

the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.

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.

Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.

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

The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

No compensation will be allowed by reason if any difficulties which the Bidder could have discovered or reasonably know prior to bidding. All proposals must be made upon the Form of Proposal and quotation form furnished by the Owner attached hereto and shall give the amounts bid for work, in numbers, and must be signed and acknowledged by the Contractor.

Public notice is hereby given by the Des Plaines Park District, Cook County, Illinois that sealed bids will be received for the Lake Opeka Shoreline Restoration Project. Bids will be received at the front desk until **9:30 AM, Friday, February 2, 2024, at Des Plaines Park District at 2222 Birch Street, Des Plaines, Illinois 60018, Administrative and Leisure Center**. Sealed envelopes or packages containing bids shall be marked "Sealed Bid – Lake Opeka Shoreline Restoration Project". A public bid opening will take place immediately.

The proposal submitted must not contain erasures, interlineations, or other corrections unless each correction is suitably authenticated and dated by affixing the margin immediately opposite the correction the surnames of the person or persons signing the bid. Modifications of bids already submitted will be considered if received at the office designated in the Invitation to Bid by the time set for opening of bids. Modifications submitted in writing will be considered but should not reveal the amount of the original bid.

8. Prices

Proposal pricing shall include the furnishing of all materials, equipment, tools, insurance, bonds, warranties, and all other facilities, and the performance of all labor and services necessary for the proper completion of the work except as may be otherwise expressly provided in the Contract Documents.

9. Late Bids, Modifications or Withdrawals

Bids, modifications, or withdrawals thereof received from bidders prior to the time set for opening of bids will be returned unopened.

10. Withdrawals of Bids

Bids may be withdrawn by written or electronic request received from bidders prior to the time set for opening of bids. Email withdrawal of bid shall be accepted via email until two hours before bid opening.

11. Public Opening of Bids

Bids will be publicly opened at the time set for opening in the Invitation to Bid. Their content will be made public for the information of bidders and others interested, who may be present either in person or by representative.

12. Award of Contract

Award of contract will be made to the responsible bidder, or as outlined in the specifications, and as determined by the Board of Commissioners of the Des Plaines Park District, whose bid conforms to the Invitation to Bid.

The Board of Park Commissioners may reject any or all of the bids on any basis and without disclosure of a reason. The failure to make such a disclosure shall not result in accrual of any right, claim, or cause of action by any unsuccessful bidder against the Des Plaines Park District.

13. Contract and Insurance

The responsive Bidder shall enter into a written contract, provide the Owner with a Labor and Material Payment Bond, Performance Bond, and copies of Workman's Compensation and Public Liability Insurance Policies or Certificates thereof, within ten (10) calendar days of the written "Notice to Proceed" and prior to the commencement of work.

14. Postponement of Date for Opening Proposals

The Owner reserves the right to postpone the date of presentation and opening of proposals and will give phone or email notice of any such postponement to each interested party as indicated by sign in or email request documentation.

GENERAL REQUIREMENTS

In addition to performing the requirements of said contract, contractors must meet the following requirements:

1. Bidders must submit with their bids the certification required by Article 33E-11 of the Illinois Criminal Code of 1961, as amended. The form of certification for this purpose is attached to these instructions in Section II D. **NO BID SHALL BE ACCEPTED WHICH DOES NOT INCLUDE THIS CERTIFICATION.** The certification of the successful bidder will be attached to and become part of the Contract.
2. **COMPLIANCE WITH PREVAILING WAGE ACT:** The CONTRACTOR is obligated to satisfy the requirements of Section 130/5 of the Illinois Prevailing Wage Act (820 ILCS 130/0.01 et. Seq.) including, but not limited to, keeping a record of the name, occupation, and actual hourly wages paid to each employee. A signed, certified transcript of payroll will be required with each progress payment and upon completion of the contract prior to final payment. The contractor shall also supply a certified transcript of payroll for any subcontractors involved in the contract and includes those payroll verifications with all payment requests. Effective January 1, 2010 this section applies to subcontractors as well and is bound by the same prevailing wage requirement.
3. If the Contractor fails to perform the services as provided in the Contract, or otherwise breaches or defaults under any provision of the Contract and does not remedy such failure, breach or default within forty-eight (48) hours after demand from Park District to take corrective action, or in the event of repeated, or multiple failures, breaches or defaults by Contractor, Park District may terminate the Contract and enter into an agreement with another Contractor or Contractors for the completion of the Lake Opeka Shoreline Restoration Project. In such event, Contractor shall be liable to Park District and shall pay to Park District promptly upon demand the increased cost to Park District of obtaining or providing such services, and also the cost to Park District of obtaining the services of substitute contractor(s), including without limitation the cost of labor and materials associated with preparation of bid documents, advertising and attorneys' fees.
4. Contractor shall provide all proper safeguards and shall assume all risks incurred in performing contracted services. Contractor shall safeguard all DPPD property in area of work.
5. Insurance

General: The Contractor shall not commence work under the Contract until he has obtained all insurance required, and it has been approved by the Owner, nor shall Contractor allow any Subcontractor to commence work on any portion of the work until all insurance required of the Subcontractor has been similarly approved by the Owner.

All such insurance shall be purchased only from companies licensed and duly authorized by the Illinois Department of Insurance to do business in Illinois and to write the types of insurance policies as herein specified. Said companies must have a policy holder's **rating of A+ and a financial rating of A++ as stated in the latest edition of A.M. Best's Insurance Guide.**

The insurance coverage's set forth in this section must be maintained by the Contractor and the Subcontractor (where applicable) until all work is completed by the Contractor and accepted by the Owner.

Automobile Liability: Contractor shall obtain at his expense Comprehensive Automobile Liability Insurance providing for bodily injury and death coverage in limits of an amount not less than \$1,000,000 per person and \$1,000,000 per accident. The Contractor shall be the named insured and the Des Plaines Park District, public officials, employees and agents as additional insured.

Employer's Liability: Contractor shall obtain at his expense insurance protecting Contractor from all liabilities that may be imposed under the Workmen's Compensation Act and the Workmen's Occupational Diseases Act of the State of Illinois. In the event any portion of the work is sublet, the Contractor shall require the Subcontractor similarly to provide such insurance for all their employees. The limit of liability afforded under the Employers Liability Policy shall not be less than the Illinois Statutory Limit.

General Liability: Contractor shall obtain at his expense such comprehensive General Liability insurance as shall protect him from claims for damages for bodily injury, including accidental death, as well as from claims for property damage including loss of use resulting from therefrom, which may arise from activities under or incidental to the Contract, both on or off the site, whether such activities by himself, any Subcontractor or anyone directly or indirectly employed by any of the, or as otherwise may be herein specified. This provision shall be construed as requiring to Contractor to purchase and maintain Contractor's Protective Insurance and Contractual Insurance in like amounts.

General Liability Insurance shall be in an amount not less than \$1,000,000 on account of any one occurrence, including accidental death. Property Damage insurance shall be in an amount not less than \$1,000,000 for bodily injury per person with an aggregate limit of not less than \$2,000,000. If, as a result of any one or more occurrences the Owner shall decide that the foregoing property damage insurance aggregate limits have either been exhausted or are threatened to become exhausted, the Contractor shall immediately purchase, at his own expense, such additional property damage insurance as the Owner may direct.

Summary: The required minimum coverage is summarized as follows:

- | | |
|-------------------------|---|
| 1. Automobile | \$1,000,000 B.I. Per Occurrence
\$1,000,000 B.I. Per Person
\$1,000,000 P.D. Per Occurrence |
| 2. Employer's Liability | III. Statutory Limit \$1,000,000 Min. |
| 3. General Liability | \$1,000,000 B.I. Per Occurrence
\$1,000,000 B.I. Per Person
\$2,000,000 Aggregate Limit |

Certificate of Insurance: Within ten (10) calendar days after receipt of the "Written Notice to Proceed", the Contractor shall file with the Owner, a certificate of Insurance showing complete coverage of all insurance required by this Section, signed by the insurance companies or their authorized agents, certifying to the name and address of the party insured, the description of the work covered by such insurance, the insurance policy numbers, the limits of liability of the policies and the dates of their expirations, with a further certification from said insurance companies that their policies will not be modified, amended, changed, canceled or terminated without thirty (30)

business days prior written notice to the Owner. Such certification must be in the form acceptable to the Owner.

The Owner reserves the right to require a copy of any form of umbrella **or** the Owner reserves the right to require a copy of the entire policy.

Insurance requirements of no less than:

- a. \$1,000,000 liability
- b. \$1,000,000 per occurrence of personal injury.
- c. \$1,000,000 per occurrence of property damage.
- d. \$1,000,000 umbrella coverage.
- e. Care, custody, and control exclusion.
- f. Lost key coverage.
- g. Crime provision both third party and employee.

6. Indemnification

Duty to Defend, Indemnify, Give Notice: Contractor shall defend all suits brought against the Owner and his representatives, officers, agents, and employees by any person (whether employed by Contractor, or not) for damage to property and/or injury to persons (including death) alleged or claimed to have been caused by or through the performance by Contractor of the work, including work required by Guarantees or the condition of the site, and shall indemnify and hold harmless the Owner, his representatives, officers, agents and employees in their individual or their official capacities from and against all claims, damages, losses and expenses, including attorney's fees, caused by or growing out of, incidental to, the performance of the work covered by this Contract. The Contractor shall pay, liquidate and discharge all claims or demands for personal injury (including death), and for loss of and damage to all property caused by, growing out of or incidental to the performance of the work by the Contract including, without limiting the foregoing thereto, damage to the work and other property of the Owner and including all damages for the obstruction of private driveways, streets and alleys and all costs and expenses of suits and reasonable attorney's fees.

The obligation set forth in this section shall, but not by way of limitation, specifically include all claims and judgement arising or alleged to arise under the Illinois laws regarding Structural Work (Illinois Revised Statutes, Chapter 48, Section 60 et. Seq.) and regarding the Protection of Adjacent Landowner's (Illinois Revised Statutes, Chapter 17 ½, Section 51 et seq.) In the event of any such injury (including death) or loss or damage (or claims therefore), the Contractor shall give immediate notice thereof to the Owner. The Contractor shall not be required to indemnify and hold Harmless the Owner, his representatives, officers, agents and employees of each of them, in their individual or their official capacities for such claims or demands which result solely from their own negligence.

Effect of Statutory Limitations: In any and all claims against the Owner, his respective agents, employees and representatives in their personal capacities as individuals as well as in their public and official capacities, made by any employee of the Contractor, and Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts they may be liable, the indemnification obligation under this Section shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under any Workmen's Compensation Act, any Disability Benefit Act or any other Employee Benefit Act.

Labor Law: The Contractor and each and every Subcontractor performing work at the site of the project to which this contract relates shall comply with applicable and provisions of all pertinent Federal, State, and Local Labor Laws.

7. Provide a bid bond or certified check in the amount of ten percent (10%) of the total contract amount.
8. Monthly payout requests by the contractors have to be in the Park District office no later than the 15th of the month for payout within thirty (30) days.
9. Contractor will pay all salaries and expenses of federal social security taxes, federal and state unemployment taxes, payroll taxes relating to such personnel, and will carry workers compensation insurance for such personnel.
10. All successful Contractors shall comply with the provisions of the Illinois Human Rights Act dealing with equal employment opportunities (Section 2-105, 775 ILCS 5/2-105) including equality of employment opportunity and the regulations of the Department of Human Rights of the State of Illinois and also must provide for the adoption and implementation or written Sexual Harassment Policies. The Contract with the successful Bidder will provide for this requirement. The statutory provisions setting forth what such policies shall include as a minimum under the Act are on file with the Des Plaines Park District and available to the Contractor upon request.
11. Contractor will be considered for all purposes, "independent", and it will not at any time directly or indirectly act as an agent, servant, or employee of the Des Plaines Park District, or make any commitments or incur any liabilities on behalf of the Des Plaines Park District without its express written consent.
12. The Contractor shall maintain a supervisory foreman (English speaking) on the job site at all times. The Contractor shall enforce strict discipline and good order among his employees and the Subcontractors at all times work is in progress. The Contractor shall not employ any unfit person or anyone not skilled in the work assigned to him.
13. If any person unemployed on the work site is, in the opinion of the OWNER intemperate, disorderly, incompetent, willfully negligent or dishonest in the performance of his duties, the foreman/ contractor will be instructed to have that employee directed to cease work and vacate the job site immediately.
14. Contractor shall supply all equipment required to perform the services under the Contract. It is the Contractor's responsibility to keep equipment in proper working order and to run periodic checks on equipment. The Contractor shall be solely responsible for the safe condition and adequacy of all equipment.
15. No extra work shall be allowed or paid unless a written proposal is made and accepted by the Owner in writing.
16. Provide three (3) references of facilities served by your company.
17. The Des Plaines Park District may terminate this agreement with a written thirty (30) day notice of intent to terminate.



Des Plaines Park District Bid Requirements

1. Prevailing Wage

2. Vendor Status & W9

Acceptable documentation of firm's ability to comply with Owner's Minority- owned business enterprise/ -woman owned business enterprise (MBE/WBE) requirements. Descriptions of requirements are attached with the Project Specifications. Prospective Bidders shall contact Owner to obtain copies of requirements.

Vendor Questionnaire Packet – Fill out

3. 10 % Illinois Works Job Program Act Apprenticeship

This project is funded with the State of Illinois Capital Funds and it is subject to the 10% apprenticeship goal in accordance to 30 ILCS 559/20-20 (Sec. 20-20. Illinois Works Apprenticeship Initiative):

For public works projects estimated to cost \$500,000 or more, the goal of the Illinois Works Apprenticeship Initiative is that apprentices will perform either 10% of the total labor hour's actually worked in each prevailing wage classification of 10% of the estimated labor hours in each prevailing wage classification, whichever is less.

Please see the link below for additional information:

Illinois Works Apprenticeship Initiative - Illinois Works:

(<https://www2.illinois.gov/dceo/IllinoisWorks/Pages/Apprenticeship.aspx>)

4. Illinois Resident Labor

50% of the labor hours on the project must be performed by actual residents if the State of Illinois (20 ILC 805/805-350)

5. Applications for Payment & Certified Payroll

Submit three (3) signed and notarized original copies of each application for payment and waivers of lien and similar attachments to Architect by a method ensuring receipt within 24 hours. One copy shall included Certified Payroll report(s) for the pay period. This report should track the hours of both Illinois Resident and Apprenticeship Laborers.



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PROPOSAL AND BID QUOTATION FORM

ARTICLE 1—OWNER AND BIDDER

- 1.01 Bids will be received at the front desk until **9:30 AM, Friday, February 2, 2024, at Des Plaines Park District at 2222 Birch Street, Des Plaines, Illinois 60018, Administrative and Leisure Center**. Sealed envelopes or packages containing bids shall be marked “Sealed Bid – Lake Opeka Shoreline Restoration Project.” A public bid opening will take place immediately.
- 1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2—BASIS OF BID

2.01 *Unit Price Bids*

A. Bidder will perform the following Work at the indicated unit prices:

Item No.	Description	Unit	Estimated Quantity	Bid Unit Price	Bid Amount
1	Mobilization & Demobilization	LS	1	\$	\$
2	Traffic Control	LS	1	\$	\$
3	Maintenance and Repair of Haul Roads	LS	1	\$	\$
4	Temporary Facilities	LS	1		
5	Erosion Control	LS	1	\$	\$
6	Tree Protection Fence	LF	2,550	\$	\$
7	Strip & Stockpile Topsoil	SY	15,250	\$	\$
8	Remove Synthetic Turf Tee Boxes	EA	7	\$	\$
9	Tree Removal	EA	11	\$	\$
10	Demolish Bituminous Trail	SF	24,742	\$	\$
11	Demolish Existing Shoreline	SF	14,796	\$	\$
12	Demolish Existing Concrete Outcroppings & Walls	CY	1,012	\$	\$
13	Common Excavation/Prep Shoreline	CY	6,620	\$	\$
14	Geotextile	SY	7,199	\$	\$
15	Furnish and Place Riprap (RR4 and Recycled Stone)	CY	5,430	\$	\$
16	Furnish and Place Riprap Bedding Stone & Drainage Backfill (CA-7)	TN	973	\$	\$
17	Furnish and Place Seeded Riprap	CY	164	\$	\$
18	Furnish and Place Aquatic Shelf Fill	CY	150	\$	\$
19	Furnish and Install Steel Sheet Piling (LZ-3)	SF	15,300	\$	\$
20	Furnish and Place (CA-6)	LS	1	\$	\$
21	Salvage, Handling, Temporary Storage, and Placement of Existing 24-inch Storm Sewer	LS	1	\$	\$

22	Bituminous Trail	SF	24,742	\$	\$
23	Bonded Limestone Aggregate Trail	SF	3,239	\$	\$
24	Metal Edging	LF	795	\$	\$
25	Turf Tee Boxes	EA	7	\$	\$
26	Portland Cement Concrete	SF	3,923	\$	\$
27	Limestone Seating	LS	1	\$	\$
28	Railing	LF	170	\$	\$
29	Chain Link Fence	LF	125	\$	\$
Total of All Unit Price and Lump Sum Bid Items					\$

B. Bidder acknowledges that:

1. Each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and
2. Estimated quantities are not guaranteed and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Work will be based on actual quantities, determined as provided in the Contract Documents.
3. It shall be understood that if, in the opinion of the Park District, the contractor is not meeting the requirements of these specifications, written notice will be given to the contractor outlining said problems. If the problem is not corrected in the allocated amount of time, the Park District reserves the right to reduce the fee paid to the bidder and/or terminate the contract with one (1) additional week's written notice, whichever is in the Park District's best interest.

ARTICLE 3—TIME OF COMPLETION

- 3.01 The Contractor shall commence work on **March 4, 2024**, and perform all base bid improvements on a regular, full-time basis until final completion, and shall so schedule the work so that the project is completed and ready no later than **March 3, 2025**. The Contractor shall complete all work in the contract by the afore mentioned date, including punch list items as defined in Article 108.04 of the Illinois Department of Transportation (IDOT), Standard Specifications for Road and Bridge Construction (SSRBC).
- 3.02 In case of failure to complete the Work on time and/or the deficient punchlist items, the provisions of Article 108.09, Failure to Complete the Work on Time, of the SSRBC shall apply.

ARTICLE 4—BIDDER'S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

4.01 *Bid Acceptance Period*

- A. This Bid will remain subject to acceptance for 30 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

4.02 *Instructions to Bidders*

- A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

4.03 *Receipt of Addenda*

A. Bidder hereby acknowledges receipt of the following Addenda, if any, distributed by the Des Plaines Park District or Stantec Consulting Services Inc.

Addendum Number	Addendum Date

ARTICLE 5—BIDDER’S CERTIFICATIONS

5.01 *Bidder’s Certifications*

A. The Bidder hereby certifies:

1. That this Bid is genuine and not made in the interest of or on behalf of any undisclosed individual, firm, or corporation and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.
2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.
3. Bidder has not solicited or induced any individual, firm, corporation to refrain from bidding.
4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices to obtain for themselves any advantage over any other bidder or over the “Owner.”
5. Bidder will comply with all provisions of the Prevailing Wage Ordinance #17-04 adopted by the Des Plaines Park District. All contracts for work herein are subject to the provisions of Chapter 48, Sections 39s-1 through 39s-12, Illinois Revised Statutes providing for the payment of the prevailing rate of wage to all laborers, workers, and mechanics engaged on the work.
6. Bidder is in compliance with the Criminal Code Act of 1961, Article 33E-11, Public Contracts, and Public Act 85-1295.
7. That all materials, methods, and workmanship shall conform to the drawings, specifications, manufacturer’s standards and specifications.

BIDDER hereby submits this Bid as set forth above:

Bidder:

(typed or printed name of organization)

By:

(individual's signature)

Name:

(typed or printed)

Title:

(typed or printed)

Date:

(typed or printed)

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

Attest:

(individual's signature)

Name:

(typed or printed)

Title:

(typed or printed)

Date:

(typed or printed)

Address for giving notices:

Bidder's Contact:

Name:

(typed or printed)

Title:

(typed or printed)

Phone:

Email:

Address:

Bidder's Contractor License No.: (if applicable)

Des Plaines Park District
2222 Birch Street
Des Plaines, IL 60018

* * * * *

I, _____ (Individual), having been first duly sworn on oath, do depose and state that I presently reside at _____ (Address), and that I am the duly authorized principal, officer or agent of _____ (Name of Contractor) and do hereby certify to Des Plaines Park District, its Commissioners, officers, and employees that neither I nor _____ (Name of Contractor) are barred from bidding on the contract for which this bid is submitted, as a result of violation of either Section 33E-3 ("Bid-rigging") or Section 33E-4 ("Bid-rotating") of Article 33E-11 of the Criminal Code of 1961 of the State of Illinois approved July 28, 1961, as amended. Individually and on behalf of Contractor subscribed and sworn to before me this _____ day of _____, 2023.

- Notary Public -

My commission expires:

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COMPLIANCE WITH PREVAILING WAGE

COMPLIANCE WITH PREVAILING WAGE ACT: The CONTRACTOR is obligated to satisfy the requirements of Section 130/5 of the Illinois Prevailing Wage Act (820 ILCS 130/0.01 et. seq.) including, but not limited to, keeping a record of the name, occupation, and actual hourly wages paid to each employee. A signed, certified transcript of payroll will be required with each progress payment and upon completion of the contract prior to final payment. The contractor shall also supply a certified transcript of payroll for any subcontractors involved in the contract and includes those payroll verifications with all payment requests. Effective January 1, 2010 this section applies to subcontractors as well and is bound by the same prevailing wage requirement.

The District complies with provisions of the Illinois Prevailing Wage Act and changes to made to the Act in Public Act 100-1177. Effective June 1, 2019, the Des Plaines Park District is no longer required to approve an annual prevailing wage ordinance determining the prevailing wage rate that has been ascertained by the Illinois Department of Labor (IDOL). Instead, the prevailing wage schedule published by IDOL's website will automatically set the applicable wage rates for each locality.

The current prevailing wage rates may be obtained from the Illinois Department of Labor's website at the link provided below. For rates applicable to the Des Plaines Park District, please choose the schedule for Cook County.

<https://labor.illinois.gov/>

Cook County Prevailing Wage Rates posted on 12/7/2023

Trade Title	Rg	Type	C	Base	Foreman	Overtime					Pension	Vac	Trng	Other Ins	Add OT 1.5x owed	Add OT 2.0x owed
						M-F	Sa	Su	Hol	H/W						
ASBESTOS ABT-GEN	All	ALL		48.90	49.90	1.5	1.5	2.0	2.0	17.37	15.91	0.00	0.91		0.00	0.00
ASBESTOS ABT-MEC	All	BLD		40.59	43.84	1.5	1.5	2.0	2.0	15.22	15.16	0.00	0.88		2.80	5.60
BOILERMAKER	All	BLD		54.71	59.63	2.0	2.0	2.0	2.0	6.97	25.06	0.00	2.83		0.00	0.00
BRICK MASON	All	BLD		50.81	55.89	1.5	1.5	2.0	2.0	12.50	23.01	0.00	1.16	0.00	0.00	0.00
CARPENTER	All	ALL		53.51	55.51	1.5	1.5	2.0	2.0	12.29	25.26	1.70	0.81		0.00	0.00
CEMENT MASON	All	ALL		50.75	52.75	2.0	1.5	2.0	2.0	17.33	22.00	0.00	1.15	0.00	1.50	3.00
CERAMIC TILE FINISHER	All	BLD		45.62	45.62	1.5	1.5	2.0	2.0	12.75	15.64	0.00	1.04	0.00	0.00	0.00
CERAMIC TILE LAYER	All	BLD		53.14	58.14	1.5	1.5	2.0	2.0	12.75	19.41	0.00	1.12	0.00	0.00	0.00
COMMUNICATION ELECTRICIAN	All	BLD		48.66	58.37	1.5	1.5	2.0	2.0	13.90	14.40	1.25	1.31	0.25	0.00	0.00
ELECTRIC PWR EQMT OP	All	ALL		60.15	66.00	1.5	1.5	2.0	2.0	13.08	20.29	0.00	3.25	0.00	0.00	0.00
ELECTRIC PWR GRNDMAN	All	ALL		46.92	66.00	1.5	1.5	2.0	2.0	10.21	15.83	0.00	2.54	0.00	0.00	0.00
ELECTRIC PWR LINEMAN	All	ALL		60.15	66.00	1.5	1.5	2.0	2.0	13.08	20.29	0.00	3.25	0.00	0.00	0.00
ELECTRICIAN	All	ALL		53.80	58.37	1.5	1.5	2.0	2.0	18.65	19.55	1.25	1.81	0.60	0.00	0.00
ELEVATOR CONSTRUCTOR	All	BLD		65.12	73.26	2.0	2.0	2.0	2.0	16.08	20.56	5.20	0.70		0.00	0.00
FENCE ERECTOR	All	ALL		48.48	50.48	1.5	1.5	2.0	2.0	13.68	18.32	0.00	0.75	0.00	0.00	0.00
GLAZIER	All	BLD		49.75	51.25	1.5	2.0	2.0	2.0	15.44	25.36	0.00	2.07	0.00	0.00	0.00
HEAT/FROST INSULATOR	All	BLD		54.12	57.37	1.5	1.5	2.0	2.0	15.22	17.86	0.00	0.88		4.15	8.30
IRON WORKER	All	ALL		57.00	59.00	2.0	2.0	2.0	2.0	17.05	25.56	0.00	0.49		0.00	0.00
LABORER	All	ALL		48.90	49.65	1.5	1.5	2.0	2.0	17.37	15.91	0.00	0.91		0.00	0.00
LATHER	All	ALL		53.51	55.51	1.5	1.5	2.0	2.0	12.29	25.26	1.70	0.81		0.00	0.00
MACHINIST	All	BLD		55.74	59.74	1.5	1.5	2.0	2.0	9.93	8.95	1.85	1.47		0.00	0.00
MARBLE FINISHER	All	ALL		38.75	52.46	1.5	1.5	2.0	2.0	12.50	20.95	0.00	0.66	0.00	0.00	0.00
MARBLE SETTER	All	BLD		49.96	54.96	1.5	1.5	2.0	2.0	12.50	22.31	0.00	0.85	0.00	0.00	0.00
MATERIAL TESTER I	All	ALL		38.90		1.5	1.5	2.0	2.0	17.37	15.91	0.00	0.91		0.00	0.00
MATERIALS TESTER II	All	ALL		43.90		1.5	1.5	2.0	2.0	17.37	15.91	0.00	0.91		0.00	0.00
MILLWRIGHT	All	ALL		53.51	55.51	1.5	1.5	2.0	2.0	12.29	25.26	1.70	0.81		0.00	0.00

Cook County Prevailing Wage Rates posted on 12/7/2023

OPERATING ENGINEER	All	BLD	1	56.60	60.60	2.0	2.0	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	BLD	2	55.30	60.60	2.0	2.0	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	BLD	3	52.75	60.60	2.0	2.0	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	BLD	4	51.00	60.60	2.0	2.0	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	BLD	5	60.35	60.60	2.0	2.0	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	BLD	6	57.60	60.60	2.0	2.0	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	BLD	7	59.60	60.60	2.0	2.0	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	FLT	1	64.55	64.55	1.5	1.5	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	FLT	2	63.05	64.55	1.5	1.5	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	FLT	3	58.55	64.55	1.5	1.5	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	FLT	4	54.05	64.55	1.5	1.5	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	FLT	5	66.05	64.55	1.5	1.5	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	FLT	6	54.05	64.55	1.5	1.5	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	HWY	1	54.80	58.80	1.5	1.5	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	HWY	2	54.25	58.80	1.5	1.5	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	HWY	3	52.20	58.80	1.5	1.5	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	HWY	4	50.80	58.80	1.5	1.5	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	HWY	5	49.60	58.80	1.5	1.5	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	HWY	6	57.80	58.80	1.5	1.5	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
OPERATING ENGINEER	All	HWY	7	55.80	58.80	1.5	1.5	2.0	2.0	22.95	20.05	2.00	2.70		0.00	0.00
ORNAMENTAL IRON WORKER	All	ALL		55.01	57.51	2.0	2.0	2.0	2.0	14.23	26.00	0.00	2.00	0.00	0.00	0.00
PAINTER	All	ALL		51.55	57.99	1.5	1.5	1.5	2.0	14.76	15.69	0.00	1.86	0.00	0.00	0.00
PAINTER - SIGNS	All	BLD		41.55	46.67	1.5	1.5	2.0	2.0	3.04	3.90	0.00	0.00	0.00	0.00	0.00
PILEDRIVER	All	ALL		53.51	55.51	1.5	1.5	2.0	2.0	12.29	25.26	1.70	0.81		0.00	0.00
PIPEFITTER	All	BLD		55.00	58.00	1.5	1.5	2.0	2.0	12.65	22.85	0.00	3.12	0.00	0.00	0.00
PLASTERER	All	BLD		48.75	51.68	1.5	1.5	2.0	2.0	17.33	20.33	0.00	1.15	0.00	0.00	0.00
PLUMBER	All	BLD		56.80	60.20	1.5	1.5	2.0	2.0	17.00	17.29	0.00	1.73		0.00	0.00
ROOFER	All	BLD		49.25	54.25	1.5	1.5	2.0	2.0	11.83	16.14	0.00	1.11	0.00	0.00	0.00
SHEETMETAL WORKER	All	BLD		51.15	55.24	1.5	1.5	2.0	2.0	14.18	28.45	0.00	1.05	0.00	0.00	0.00

Cook County Prevailing Wage Rates posted on 12/7/2023

SIGN HANGER	All	BLD		35.72	38.58	1.5	1.5	2.0	2.0	7.15	4.60	0.00	0.00	0.00	0.00	0.00
SPRINKLER FITTER	All	BLD		56.70	59.45	1.5	1.5	2.0	2.0	14.45	18.70	0.00	0.75	0.00	0.00	0.00
STEEL ERECTOR	All	ALL		57.00	59.00	2.0	2.0	2.0	2.0	17.05	25.56	0.00	0.49		0.00	0.00
STONE MASON	All	BLD		50.81	55.89	1.5	1.5	2.0	2.0	12.50	23.01	0.00	1.16	0.00	0.00	0.00
TERRAZZO FINISHER	All	BLD		46.94	46.94	1.5	1.5	2.0	2.0	12.75	17.73	0.00	1.07	0.00	0.00	0.00
TERRAZZO MECHANIC	All	BLD		50.85	54.35	1.5	1.5	2.0	2.0	12.75	19.12	0.00	1.10	0.00	0.00	0.00
TRAFFIC SAFETY WORKER I	All	HWY		40.10	41.70	1.5	1.5	2.0	2.0	10.60	9.35	0.00	1.00	0.00	0.00	0.00
TRAFFIC SAFETY WORKER II	ALL	HWY		41.10	42.70	1.5	1.5	2.0	2.0	10.60	9.35	0.00	1.00	0.00	0.00	0.00
TRUCK DRIVER	E	ALL	1	41.75	42.40	1.5	1.5	2.0	2.0	12.80	15.74	0.00	0.15	0.00	0.00	0.00
TRUCK DRIVER	E	ALL	2	42.00	42.40	1.5	1.5	2.0	2.0	12.80	15.74	0.00	0.15	0.00	0.00	0.00
TRUCK DRIVER	E	ALL	3	42.20	42.40	1.5	1.5	2.0	2.0	12.80	15.74	0.00	0.15	0.00	0.00	0.00
TRUCK DRIVER	E	ALL	4	42.40	42.40	1.5	1.5	2.0	2.0	12.80	15.74	0.00	0.15	0.00	0.00	0.00
TRUCK DRIVER	W	ALL	1	42.18	42.73	1.5	1.5	2.0	2.0	11.20	15.46	0.00	0.15	0.00	0.00	0.00
TRUCK DRIVER	W	ALL	2	42.33	42.73	1.5	1.5	2.0	2.0	11.20	15.46	0.00	0.15	0.00	0.00	0.00
TRUCK DRIVER	W	ALL	3	42.53	42.73	1.5	1.5	2.0	2.0	11.20	15.46	0.00	0.15	0.00	0.00	0.00
TRUCK DRIVER	W	ALL	4	42.73	42.73	1.5	1.5	2.0	2.0	11.20	15.46	0.00	0.15	0.00	0.00	0.00
TUCK POINTER	All	BLD		50.53	51.53	1.5	1.5	2.0	2.0	9.55	21.72	0.00	1.11	0.00	0.00	0.00

Legend

Rg Region

Type Trade Type - All,Highway,Building,Floating,Oil & Chip,Rivers

C Class

Base Base Wage Rate

OT M-F Unless otherwise noted, OT pay is required for any hour greater than 8 worked each day, Mon through Fri. The number listed is the multiple of the base wage.

OT Sa Overtime pay required for every hour worked on Saturdays

OT Su Overtime pay required for every hour worked on Sundays

OT Hol Overtime pay required for every hour worked on Holidays

H/W Health/Welfare benefit

Vac Vacation

Trng Training

Other Ins Employer hourly cost for any other type(s) of insurance provided for benefit of worker.

Explanations COOK COUNTY

Cook County Prevailing Wage Rates posted on 12/7/2023

The following list is considered as those days for which holiday rates of wages for work performed apply: New Years Day, Memorial Day, Fourth of July, Labor Day, Thanksgiving Day, Christmas Day and Veterans Day in some classifications/counties. Generally, any of these holidays which fall on a Sunday is celebrated on the following Monday. This then makes work performed on that Monday payable at the appropriate overtime rate for holiday pay. Common practice in a given local may alter certain days of celebration. If in doubt, please check with IDOL.

TRUCK DRIVERS (WEST) - That part of the county West of Barrington Road.

EXPLANATION OF CLASSES

ASBESTOS - GENERAL - removal of asbestos material/mold and hazardous materials from any place in a building, including mechanical systems where those mechanical systems are to be removed. This includes the removal of asbestos materials/mold and hazardous materials from ductwork or pipes in a building when the building is to be demolished at the time or at some close future date. ASBESTOS - MECHANICAL - removal of asbestos material from mechanical systems, such as pipes, ducts, and boilers, where the mechanical systems are to remain.

CERAMIC TILE FINISHER

The grouting, cleaning, and polishing of all classes of tile, whether for interior or exterior purposes, all burned, glazed or unglazed products; all composition materials, granite tiles, warning detectable tiles, cement tiles, epoxy composite materials, pavers, glass, mosaics, fiberglass, and all substitute materials, for tile made in tile-like units; all mixtures in tile like form of cement, metals, and other materials that are for and intended for use as a finished floor surface, stair treads, promenade roofs, walks, walls, ceilings, swimming pools, and all other places where tile is to form a finished interior or exterior. The mixing of all setting mortars including but not limited to thin-set mortars, epoxies, wall mud, and any other sand and cement mixtures or adhesives when used in the preparation, installation, repair, or maintenance of tile and/or similar materials. The handling and unloading of all sand, cement, lime, tile, fixtures, equipment, adhesives, or any other materials to be used in the preparation, installation, repair, or maintenance of tile and/or similar materials. Ceramic Tile Finishers shall fill all joints and voids regardless of method on all tile work, particularly and especially after installation of said tile work. Application of any and all protective coverings to all types of tile installations including, but not be limited to, all soap compounds, paper products, tapes, and all polyethylene coverings, plywood, masonite, cardboard, and any new type of products that may be used to protect tile installations, Blastrac equipment, and all floor scarifying equipment used in preparing floors to receive tile. The clean up and removal of all waste and materials. All demolition of existing tile floors and walls to be re-tiled.

COMMUNICATIONS ELECTRICIAN

Installation, operation, inspection, maintenance, repair and service of radio, television, recording, voice sound vision production and reproduction, telephone and telephone interconnect, facsimile, data apparatus, coaxial, fibre optic and wireless equipment, appliances and systems used for the transmission and reception of signals of any nature, business, domestic, commercial, education, entertainment, and residential purposes, including but not limited to, communication and telephone, electronic and sound equipment, fibre optic and data communication systems, and the performance of any task directly related to such installation or service whether at new or existing sites, such tasks to include the placing of wire and cable and electrical power

Cook County Prevailing Wage Rates posted on 12/7/2023

conduit or other raceway work within the equipment room and pulling wire and/or cable through conduit and the installation of any incidental conduit, such that the employees covered hereby can complete any job in full.

MARBLE FINISHER

Loading and unloading trucks, distribution of all materials (all stone, sand, etc.), stocking of floors with material, performing all rigging for heavy work, the handling of all material that may be needed for the installation of such materials, building of scaffolding, polishing if needed, patching, waxing of material if damaged, pointing up, caulking, grouting and cleaning of marble, holding water on diamond or Carborundum blade or saw for setters cutting, use of tub saw or any other saw needed for preparation of material, drilling of holes for wires that anchor material set by setters, mixing up of molding plaster for installation of material, mixing up thin set for the installation of material, mixing up of sand to cement for the installation of material and such other work as may be required in helping a Marble Setter in the handling of all material in the erection or installation of interior marble, slate, travertine, art marble, serpentine, alberene stone, blue stone, granite and other stones (meaning as to stone any foreign or domestic materials as are specified and used in building interiors and exteriors and customarily known as stone in the trade), carrara, sanionyx, vitrolite and similar opaque glass and the laying of all marble tile, terrazzo tile, slate tile and precast tile, steps, risers treads, base, or any other materials that may be used as substitutes for any of the aforementioned materials and which are used on interior and exterior which are installed in a similar manner.

MATERIAL TESTER I: Hand coring and drilling for testing of materials; field inspection of uncured concrete and asphalt.

MATERIAL TESTER II: Field inspection of welds, structural steel, fireproofing, masonry, soil, facade, reinforcing steel, formwork, cured concrete, and concrete and asphalt batch plants; adjusting proportions of bituminous mixtures.

OPERATING ENGINEER - BUILDING

Class 1. Asphalt Plant; Asphalt Spreader; Autograde; Backhoes with Caisson Attachment; Batch Plant; Benoto (requires Two Engineers); Boiler and Throttle Valve; Caisson Rigs; Central Redi-Mix Plant; Combination Back Hoe Front End-loader Machine; Compressor and Throttle Valve; Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Conveyor (Truck Mounted); Concrete Paver Over 27E cu. ft; Concrete Paver 27E cu. ft. and Under; Concrete Placer; Concrete Placing Boom; Concrete Pump (Truck Mounted); Concrete Tower; Cranes, All; Cranes, Hammerhead; Cranes, (GCI and similar Type); Creter Crane; Spider Crane; Crusher, Stone, etc.; Derricks, All; Derricks, Traveling; Formless Curb and Gutter Machine; Grader, Elevating; Grouting Machines; Heavy Duty Self-Propelled Transporter or Prime Mover; Highlift Shovels or Front Endloader 2-1/4 yd. and over; Hoists, Elevators, outside type rack and pinion and similar machines; Hoists, One, Two and Three Drum; Hoists, Two Tugger One Floor; Hydraulic Backhoes; Hydraulic Boom Trucks; Hydro Vac (and similar equipment); Locomotives, All; Motor Patrol; Lubrication Technician; Manipulators; Pile Drivers and Skid Rig; Post Hole Digger; Pre-Stress Machine; Pump Cretes Dual Ram; Pump Cretes: Squeeze Cretes-Screw Type Pumps; Gypsum Bulker and Pump; Raised and Blind Hole Drill; Roto Mill Grinder; Scoops - Tractor Drawn; Slip-Form Paver; Straddle Buggies; Operation of Tie Back Machine; Tournapull; Tractor with Boom and Side Boom; Trenching Machines.

Class 2. Boilers; Broom, All Power Propelled; Bulldozers; Concrete Mixer (Two Bag and Over); Conveyor, Portable; Forklift Trucks; Highlift Shovels or Front Endloaders under 2-1/4 yd.; Hoists, Automatic; Hoists, Inside Elevators; Hoists, Sewer Dragging Machine; Hoists, Tugger Single Drum; Laser Screed; Rock Drill (Self-Propelled); Rock Drill (Truck Mounted); Rollers, All; Steam Generators;

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Tractors, All; Tractor Drawn Vibratory Roller; Winch Trucks with "A" Frame.

Class 3. Air Compressor; Combination Small Equipment Operator; Generators; Heaters, Mechanical; Hoists, Inside Elevators (remodeling or renovation work); Hydraulic Power Units (Pile Driving, Extracting, and Drilling); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Low Boys; Pumps, Well Points; Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 4. Bobcats and/or other Skid Steer Loaders; Oilers; and Brick Forklift.

Class 5. Assistant Craft Foreman.

Class 6. Gradall.

Class 7. Mechanics; Welders.

OPERATING ENGINEERS - HIGHWAY CONSTRUCTION

Class 1. Asphalt Plant; Asphalt Heater and Planer Combination; Asphalt Heater Scarfire; Asphalt Spreader; Autograder/GOMACO or other similar type machines: ABG Paver; Backhoes with Caisson Attachment; Ballast Regulator; Belt Loader; Caisson Rigs; Car Dumper; Central Redi-Mix Plant; Combination Backhoe Front Endloader Machine, (1 cu. yd. Backhoe Bucket or over or with attachments); Concrete Breaker (Truck Mounted); Concrete Conveyor; Concrete Paver over 27E cu. ft.; Concrete Placer; Concrete Tube Float; Cranes, all attachments; Cranes, Tower Cranes of all types: Creter Crane: Spider Crane; Crusher, Stone, etc.; Derricks, All; Derrick Boats; Derricks, Traveling; Dredges; Elevators, Outside type Rack & Pinion and Similar Machines; Formless Curb and Gutter Machine; Grader, Elevating; Grader, Motor Grader, Motor Patrol, Auto Patrol, Form Grader, Pull Grader, Subgrader; Guard Rail Post Driver Truck Mounted; Hoists, One, Two and Three Drum; Heavy Duty Self-Propelled Transporter or Prime Mover; Hydraulic Backhoes; Backhoes with shear attachments up to 40' of boom reach; Lubrication Technician; Manipulators; Mucking Machine; Pile Drivers and Skid Rig; Pre-Stress Machine; Pump Cretes Dual Ram; Rock Drill - Crawler or Skid Rig; Rock Drill - Truck Mounted; Rock/Track Tamper; Roto Mill Grinder; Slip-Form Paver; Snow Melters; Soil Test Drill Rig (Truck Mounted); Straddle Buggies; Hydraulic Telescoping Form (Tunnel); Operation of Tieback Machine; Tractor Drawn Belt Loader; Tractor Drawn Belt Loader (with attached pusher - two engineers); Tractor with Boom; Tractaire with Attachments; Traffic Barrier Transfer Machine; Trenching; Truck Mounted Concrete Pump with Boom; Raised or Blind Hole Drills (Tunnel Shaft); Underground Boring and/or Mining Machines 5 ft. in diameter and over tunnel, etc; Underground Boring and/or Mining Machines under 5 ft. in diameter; Wheel Excavator; Widener (APSCO).

Class 2. Batch Plant; Bituminous Mixer; Boiler and Throttle Valve; Bulldozers; Car Loader Trailing Conveyors; Combination Backhoe Front Endloader Machine (Less than 1 cu. yd. Backhoe Bucket or over or with attachments); Compressor and Throttle Valve; Compressor, Common Receiver (3); Concrete Breaker or Hydro Hammer; Concrete Grinding Machine; Concrete Mixer or Paver 7S Series to and including 27 cu. ft.; Concrete Spreader; Concrete Curing Machine, Burlap Machine, Belting Machine and Sealing Machine; Concrete Wheel Saw; Conveyor Muck Cars (Haglund or Similar Type); Drills, All; Finishing Machine - Concrete; Highlift Shovels or Front Endloader; Hoist - Sewer Dragging Machine; Hydraulic Boom Trucks (All Attachments); Hydro-Blaster; Hydro Excavating (excluding hose work); Laser Screed; All Locomotives, Dinky; Off-Road Hauling Units (including articulating) Non Self-Loading Ejection Dump; Pump Cretes: Squeeze Cretes - Screw Type Pumps, Gypsum Bulker and Pump; Roller, Asphalt; Rotary Snow Plows; Rototiller, Seaman, etc., self-propelled; Self-Propelled Compactor; Spreader - Chip - Stone, etc.; Scraper - Single/Twin

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Engine/Push and Pull; Scraper - Prime Mover in Tandem (Regardless of Size); Tractors pulling attachments, Sheeps Foot, Disc, Compactor, etc.; Tug Boats.

Class 3. Boilers; Brooms, All Power Propelled; Cement Supply Tender; Compressor, Common Receiver (2); Concrete Mixer (Two Bag and Over); Conveyor, Portable; Farm-Type Tractors Used for Mowing, Seeding, etc.; Forklift Trucks; Grouting Machine; Hoists, Automatic; Hoists, All Elevators; Hoists, Tugger Single Drum; Jeep Diggers; Low Boys; Pipe Jacking Machines; Post-Hole Digger; Power Saw, Concrete Power Driven; Pug Mills; Rollers, other than Asphalt; Seed and Straw Blower; Steam Generators; Stump Machine; Winch Trucks with "A" Frame; Work Boats; Tamper-Form-Motor Driven.

Class 4. Air Compressor; Combination - Small Equipment Operator; Directional Boring Machine; Generators; Heaters, Mechanical; Hydraulic Power Unit (Pile Driving, Extracting, or Drilling); Light Plants, All (1 through 5); Pumps, over 3" (1 to 3 not to exceed a total of 300 ft.); Pumps, Well Points; Vacuum Trucks (excluding hose work); Welding Machines (2 through 5); Winches, 4 Small Electric Drill Winches.

Class 5. SkidSteer Loader (all); Brick Forklifts; Oilers.

Class 6. Field Mechanics and Field Welders

Class 7. Dowell Machine with Air Compressor; Gradall and machines of like nature.

OPERATING ENGINEER - FLOATING

Class 1. Craft Foreman; Master Mechanic; Diver/Wet Tender; Engineer; Engineer (Hydraulic Dredge).

Class 2. Crane/Backhoe Operator; Boat Operator with towing endorsement; Mechanic/Welder; Assistant Engineer (Hydraulic Dredge); Leverman (Hydraulic Dredge); Diver Tender.

Class 3. Deck Equipment Operator, Machineryman, Maintenance of Crane (over 50 ton capacity) or Backhoe (115,000 lbs. or more); Tug/Launch Operator; Loader/Dozer and like equipment on Barge, Breakwater Wall, Slip/Dock, or Scow, Deck Machinery, etc.

Class 4. Deck Equipment Operator, Machineryman/Fireman (4 Equipment Units or More); Off Road Trucks; Deck Hand, Tug Engineer, Crane Maintenance (50 Ton Capacity and Under) or Backhoe Weighing (115,000 pounds or less); Assistant Tug Operator.

Class 5. Friction or Lattice Boom Cranes.

Class 6. ROV Pilot, ROV Tender

TERRAZZO FINISHER

The handling of sand, cement, marble chips, and all other materials that may be used by the Mosaic Terrazzo Mechanic, and the mixing, grinding, grouting, cleaning and sealing of all Marble, Mosaic, and Terrazzo work, floors, base, stairs, and wainscoting by hand or machine, and in addition, assisting and aiding Marble, Masonic, and Terrazzo Mechanics.

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TRAFFIC SAFETY Worker I

Traffic Safety Worker I - work associated with the delivery, installation, pick-up and servicing of safety devices during periods of roadway construction, including such work as set-up and maintenance of barricades, barrier wall reflectors, drums, cones, delineators, signs, crash attenuators, glare screen and other such items, and the layout and application or removal of conflicting and/or temporary roadway markings utilized to control traffic in construction zones, as well as flagging for these operations.

TRAFFIC SAFETY WORKER II

Work associated with the installation and removal of permanent pavement markings and/or pavement markers including both installations performed by hand and installations performed by truck.

TRUCK DRIVER - BUILDING, HEAVY AND HIGHWAY CONSTRUCTION - EAST & WEST

Class 1. Two or three Axle Trucks. A-frame Truck when used for transportation purposes; Air Compressors and Welding Machines, including those pulled by cars, pick-up trucks and tractors; Ambulances; Batch Gate Lockers; Batch Hopperman; Car and Truck Washers; Carry-alls; Fork Lifts and Hoisters; Helpers; Mechanics Helpers and Greasers; Oil Distributors 2-man operation; Pavement Breakers; Pole Trailer, up to 40 feet; Power Mower Tractors; Self-propelled Chip Spreader; Skipman; Slurry Trucks, 2-man operation; Slurry Truck Conveyor Operation, 2 or 3 man; Teamsters; Unskilled Dumpman; and Truck Drivers hauling warning lights, barricades, and portable toilets on the job site.

Class 2. Four axle trucks; Dump Crets and Adgetors under 7 yards; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnapulls or Turnatrailers when pulling other than self-loading equipment or similar equipment under 16 cubic yards; Mixer Trucks under 7 yards; Ready-mix Plant Hopper Operator, and Winch Trucks, 2 Axles.

Class 3. Five axle trucks; Dump Crets and Adgetors 7 yards and over; Dumpsters, Track Trucks, Euclids, Hug Bottom Dump Turnatrailers or turnapulls when pulling other than self-loading equipment or similar equipment over 16 cubic yards; Explosives and/or Fission Material Trucks; Mixer Trucks 7 yards or over; Mobile Cranes while in transit; Oil Distributors, 1-man operation; Pole Trailer, over 40 feet; Pole and Expandable Trailers hauling material over 50 feet long; Slurry trucks, 1-man operation; Winch trucks, 3 axles or more; Mechanic--Truck Welder and Truck Painter.

Class 4. Six axle trucks; Dual-purpose vehicles, such as mounted crane trucks with hoist and accessories; Foreman; Master Mechanic; Self-loading equipment like P.B. and trucks with scoops on the front.

Other Classifications of Work:

For definitions of classifications not otherwise set out, the Department generally has on file such definitions which are available. If a task to be performed is not subject to one of the classifications of pay set out, the Department will upon being contacted state which neighboring county has such a classification and provide such rate, such rate being deemed to exist by reference in this document. If no neighboring county rate applies to the task, the Department shall undertake a special determination, such special determination being then deemed to have existed under this determination. If a project requires these, or any classification not listed, please contact IDOL at 217-782-1710 for wage rates or clarifications.

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LANDSCAPING

Landscaping work falls under the existing classifications for laborer, operating engineer and truck driver. The work performed by landscape plantsman and landscape laborer is covered by the existing classification of laborer. The work performed by landscape operators (regardless of equipment used or its size) is covered by the classifications of operating engineer. The work performed by landscape truck drivers (regardless of size of truck driven) is covered by the classifications of truck driver.

MATERIAL TESTER & MATERIAL TESTER/INSPECTOR I AND II

Notwithstanding the difference in the classification title, the classification entitled "Material Tester I" involves the same job duties as the classification entitled "Material Tester/Inspector I". Likewise, the classification entitled "Material Tester II" involves the same job duties as the classification entitled "Material Tester/Inspector II".

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

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared By



Endorsed By



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STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

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

- Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.
- b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.
 - c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.
 - d. A demand for money or services by a third party is not a Claim.
11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.
13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.
15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
17. *Cost of the Work*—See Paragraph 13.01 for definition.
18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.
21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or

communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.
23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.
 - a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.
 - b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.
 - c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.
25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.
28. *Notice of Award*—The written notice by Owner to a Bidder of Owner’s acceptance of the Bid.
29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor’s plan to accomplish the Work within the Contract Times.

32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.
33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.
34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer’s review of the submittals.
36. *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.
37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.
39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
40. *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.
41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers’ instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.
42. *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 of such Work.

43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.
44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
46. *Technical Data*
 - a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.
 - b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.
 - c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.
47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.
48. *Unit Price Work*—Work to be paid for on the basis of unit prices.
49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.

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

1.02 Terminology

- A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives*: The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day*: The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective*: The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
1. does not conform to the Contract Documents;
 2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 3. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).
- E. *Furnish, Install, Perform, Provide*
1. The word “furnish,” when used in connection with services, materials, or equipment, means 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, means 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, means to furnish and install said services, materials, or equipment complete and ready for intended use.

4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.
- F. *Contract Price or Contract Times*: References to a change in “Contract Price or Contract Times” or “Contract Times or Contract Price” or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term “or both” is not expressed.
- G. 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 Performance and Payment Bonds; Evidence of Insurance*

- A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.
- C. *Evidence of Owner’s Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

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

2.03 *Before Starting Construction*

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

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

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

2.05 *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 the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.
1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.
 4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.
- B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.
- F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will 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.
- G. Nothing in the Contract Documents creates:
 - 1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or
 - 2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 *Reference Standards*

A. *Standards Specifications, Codes, Laws and Regulations*

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

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

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

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take precedence in

resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:

- a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
- b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

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

3.05 *Reuse of Documents*

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

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

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

4.03 *Reference Points*

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

4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption,

and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.

- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
 - 1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
 - 2. Abnormal weather conditions;
 - 3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and
 - 4. Acts of war or terrorism.
- D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:
 - 1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
 - 2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.
 - 3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.
- E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:
 - 1. The circumstances that form the basis for the requested adjustment;
 - 2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;
 - 3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
 - 4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and
 - 5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.

Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.

- F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.
- G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

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

5.02 *Use of Site and Other Areas*

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

- 1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
- 2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b)

promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

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

5.03 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
 - 1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;
 - 2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and
 - 3. Technical Data contained in such reports and drawings.
- B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.
- C. *Reliance by Contractor on Technical Data:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

- D. *Limitations of Other Data and Documents:* Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;
 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;
 3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or
 4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

5.04 *Differing Subsurface or Physical Conditions*

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

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

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

- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- E. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
 - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
 - c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
 2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
 - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;
 - b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
 - c. Contractor failed to give the written notice required by Paragraph 5.04.A.
 3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
 4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

- F. *Underground Facilities; Hazardous Environmental Conditions*: Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 *Underground Facilities*

- A. *Contractor's Responsibilities*: Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:
1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
 2. complying with applicable state and local utility damage prevention Laws and Regulations;
 3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;
 4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
 5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor*: If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.
- C. *Engineer's Review*: Engineer will:
1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;
 2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;
 3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and
 4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.

During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- F. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
 - b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and
 - c. Contractor gave the notice required in Paragraph 5.05.B.
 2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
 3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.
 4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 *Hazardous Environmental Conditions at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;
 2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
 3. Technical Data contained in such reports and drawings.
- B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;
 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely

- obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.
- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
 - G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.
 - H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.
 - I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
 - J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone

for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

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

6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Alternative forms of insurance coverage, including but not limited to self-insurance and “Occupational Accident and Excess Employer’s Indemnity Policies,” are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.
- D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.
- E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.
- F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party’s full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party’s obligation to obtain and maintain such insurance.
- G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner’s option, may purchase and maintain Owner’s own liability insurance. Owner’s liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner’s liability policies for any of Contractor’s obligations to the Owner, Engineer, or third parties.

- H. Contractor shall require:
1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and
 2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.
- I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.
- K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.
- L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.
- M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.
- N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 *Contractor's Insurance*

- A. *Required Insurance:* Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.
- B. *General Provisions:* The policies of insurance required by this Paragraph 6.03 as supplemented must:
1. include at least the specific coverages required;

2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;
 3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;
 4. apply with respect to the performance of the Work, whether such performance is 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; and
 5. include all necessary endorsements to support the stated requirements.
- C. *Additional Insureds*: The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:
1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;
 2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;
 3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);
 4. not seek contribution from insurance maintained by the additional insured; and
 5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other Property Insurance*

- A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.
- B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.

- C. *Property Insurance for Substantially Complete Facilities:* Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.
- D. *Partial Occupancy or Use by Owner:* If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.
- E. *Insurance of Other Property; Additional Insurance:* If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

- A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.
 - 1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.
 - 2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to

Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.

1. 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 all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.
- C. The waivers in this Paragraph 6.05 include the waiver of rights 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 insured peril, risk, or cause of loss.
- D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

6.06 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CONTRACTOR’S RESPONSIBILITIES

7.01 *Contractor’s Means and Methods of Construction*

- A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor’s responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor’s expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor’s determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *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.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *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 maintain good discipline and order at the Site.
- B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor’s employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor’s own acts and omissions.
- C. 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 will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner’s written consent, which will not be unreasonably withheld.

7.04 *Services, Materials, and Equipment*

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

- B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will 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 must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.05 *“Or Equals”*

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

equal” item will be ordered, furnished, installed, or utilized until Engineer’s review is complete and Engineer determines that the proposed item is an “or-equal,” which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.

- D. *Effect of Engineer’s Determination:* Neither approval nor denial of an “or-equal” request will result in any change in Contract Price. The Engineer’s denial of an “or-equal” request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.
- E. *Treatment as a Substitution Request:* If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an “or-equal” item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 *Substitutes*

- A. *Contractor’s Request; Governing Criteria:* Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.
 - 1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.
 - 2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.
 - 3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:
 - a. will certify that the proposed substitute item will:
 - 1) perform adequately the functions and achieve the results called for by the general design;
 - 2) be similar in substance to the item specified; and
 - 3) be suited to the same use as the item specified.
 - b. will state:
 - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;
 - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and

- 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
 - c. will identify:
 - 1) all variations of the proposed substitute item from the item specified; and
 - 2) available engineering, sales, maintenance, repair, and replacement services.
 - d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination:* Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
- C. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
- E. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination:* If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 Concerning Subcontractors and Suppliers

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.

- B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.
- E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.
- F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.
- G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.
- H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.
- J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.
- K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.
- L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.

- M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

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

7.09 *Permits*

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

7.10 *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.

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

7.12 *Record Documents*

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

7.13 *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.
- B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.
- C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
 - 1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
 - E. 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.
 - F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
 - G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.
 - H. 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.
 - I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).
 - J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

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

7.15 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent 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 by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

7.16 *Submittals*

A. *Shop Drawing and Sample Requirements*

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

- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.

1. *Shop Drawings*

- a. Contractor shall submit the number of copies required in the Specifications.

- b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.

2. *Samples*

- a. Contractor shall submit the number of Samples required in the Specifications.
 - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.
3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Engineer's Review of Shop Drawings and Samples*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. 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, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.
3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.
5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.
6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.

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

D. Resubmittal Procedures for Shop Drawings and Samples

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

E. Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:
 - a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.
 - b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.
 - c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.
 - d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.
 2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03, 2.04, and 2.05.
- F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.
- B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:
 - 1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and
 - 2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.
- C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 - 1. abuse, or improper modification, 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.
- D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:
 - 1. Observations by Engineer;
 - 2. Recommendation by Engineer or payment by Owner of any progress or final payment;
 - 3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 - 4. Use or occupancy of the Work or any part thereof by Owner;
 - 5. Any review and approval of a Shop Drawing or Sample submittal;
 - 6. The issuance of a notice of acceptability by Engineer;
 - 7. The end of the correction period established in Paragraph 15.08;
 - 8. Any inspection, test, or approval by others; or
 - 9. Any correction of defective Work by Owner.
- E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (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 from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will 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.

7.19 *Delegation of Professional Design Services*

- A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.
- B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.
- C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.
- D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.

- E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:
 - 1. Checking for conformance with the requirements of this Paragraph 7.19;
 - 2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and
 - 3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.
- F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.
- G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.
- D. 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.
- E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, 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.

- F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 *Coordination*

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

8.03 *Legal Relationships*

- A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.

1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.
 2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.
- C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

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

9.02 *Replacement of Engineer*

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

9.03 *Furnish Data*

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

9.04 *Pay When Due*

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

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

- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.

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

9.06 *Insurance*

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

9.07 *Change Orders*

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

9.08 *Inspections, Tests, and Approvals*

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

9.09 *Limitations on Owner's Responsibilities*

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

9.10 *Undisclosed Hazardous Environmental Condition*

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

9.11 *Evidence of Financial Arrangements*

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

9.12 *Safety Programs*

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

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

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

10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Resident Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.
- B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 *Engineer's Authority*

- A. Engineer has the authority to reject Work in accordance with Article 14.
- B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.
- C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.
- D. Engineer's authority as to changes in the Work is set forth in Article 11.
- E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 *Determinations for Unit Price Work*

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

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

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

10.07 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will 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 Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

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

ARTICLE 11—CHANGES TO THE CONTRACT

11.01 *Amending and Supplementing the Contract*

- A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
- B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.

- C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 *Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
 - 1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
 - 2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
 - 3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and
 - 4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 *Work Change Directives*

- A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.
- B. If Owner has issued a Work Change Directive and:
 - 1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.
 - 2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 *Field Orders*

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

11.05 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.
- B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.
- C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:
 - 1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);
 - 2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or

3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).
- C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit will be determined as follows:
1. A mutually acceptable fixed fee; or
 2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;
 - b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;
 - c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
 - d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
 - e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
 - f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

11.08 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.

- B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 *Change Proposals*

- A. *Purpose and Content:* Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

- B. *Change Proposal Procedures*

1. *Submittal:* Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.
2. *Supporting Data:* The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.
 - a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.
 - b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

3. *Engineer's Initial Review:* Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.
4. *Engineer's Full Review and Action on the Change Proposal:* Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

- 5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.
- D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 *Notification to Surety*

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

ARTICLE 12—CLAIMS

12.01 *Claims*

- A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:
 - 1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
 - 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;
 - 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and
 - 4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.
- B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.
- C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the

exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.

D. *Mediation*

1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.
 2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.
 3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

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

13.01 *Cost of the Work*

- A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or
 2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those

additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.

- B. *Costs Included:* Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will 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 in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will 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 accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will 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, which 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 will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
 4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.
 5. Other costs consisting of 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, 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.

- 1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.
- c. *Construction Equipment Rental*
- 1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.
 - 2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.
 - 3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price (“changed Work”), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed 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 builder’s risk or other property insurance established in accordance with Paragraph 6.04), 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 include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor’s fee.
 - g. The cost of utilities, fuel, and sanitary facilities at the Site.

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

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

1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
2. The cost of purchasing, renting, or furnishing small tools and hand tools.
3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
5. 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.
6. Expenses incurred in preparing and advancing Claims.
7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee*

1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:
 - a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.
 - b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:
 - 1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.
 - 2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.
2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

- E. *Documentation and Audit*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances*: Contractor agrees that:
1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.
- C. *Owner's Contingency Allowance*: Contractor agrees that an Owner's 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 for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual

conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
 - a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
 - b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
3. Adjusted unit prices will apply to all units of that item.

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

14.01 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction 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 with such procedures and programs as applicable.

14.02 *Tests, Inspections, and Approvals*

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;
 2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
 3. by manufacturers of equipment furnished under the Contract Documents;
 4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
 5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

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

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

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

payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

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

14.05 *Uncovering Work*

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

14.06 *Owner May Stop the Work*

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

14.07 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

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

15.01 *Progress Payments*

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments*
 - 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work

completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.

2. 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 must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. Review of Applications

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress,

or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or

- b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work;
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;
 - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
 5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
 6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
 - a. the Work is defective, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
 - e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. Payment Becomes Due

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

E. *Reductions in Payment by Owner*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
 - a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;
 - b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
 - c. Contractor has failed to provide and maintain required bonds or insurance;
 - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
 - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
 - f. The Work is defective, requiring correction or replacement;
 - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
 - h. The Contract Price has been reduced by Change Orders;
 - i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;
 - j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
 - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or
 - l. Other items entitle Owner to a set-off against the amount recommended.
2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.
3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.

- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:
 - 1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.
 - 2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
 - 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
 - 4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

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

15.06 *Final Payment*

A. *Application for Payment*

- 1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.

2. The final Application for Payment must be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents;
 - b. consent of the surety, if any, to final payment;
 - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.
 - d. a list of all duly pending Change Proposals and Claims; and
 - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
 3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.
- B. *Engineer's Review of Final Application and Recommendation of Payment:* If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. 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. *Notice of Acceptability:* In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.
- D. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.
- E. *Final Payment Becomes Due:* Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by

Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

15.07 *Waiver of Claims*

- A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim, appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.
- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. correct the defective repairs to the Site or such adjacent areas;
 - 2. correct such defective Work;
 - 3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.
- B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.
- C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all 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). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under

Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.

- D. 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.
- E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

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

16.02 *Owner May Terminate for Cause*

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
 - 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);
 - 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
 - 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
 - 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:
 - 1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and
 - 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take

possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.

- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.
- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate for Convenience*

- A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
 - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this article:
 - 1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and
 - 2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this article, Owner or Contractor may:
 - 1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;
 - 2. agree with the other party to submit the dispute to another dispute resolution process; or
 - 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18—MISCELLANEOUS

18.01 *Giving Notice*

- A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:
 - 1. in person, by a commercial courier service or otherwise, to the recipient's place of business;
 - 2. by registered or certified mail, postage prepaid, to the recipient's place of business; or
 - 3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 *Computation of Times*

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

18.03 *Cumulative Remedies*

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

18.04 *Limitation of Damages*

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

18.05 *No Waiver*

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

18.06 *Survival of Obligations*

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

18.07 *Controlling Law*

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

18.08 *Assignment of Contract*

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

18.09 *Successors and Assigns*

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

18.10 *Headings*

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

PERFORMANCE BOND

<p>Contractor <i>(Full formal name of Contractor)</i></p> <p>Name: _____</p> <p>Address <i>(principal place of business)</i>: _____</p>	<p>Surety <i>(Full formal name of Surety)</i></p> <p>Name: _____</p> <p>Address <i>(principal place of business)</i>: _____</p>
<p>Owner <i>(Full formal name of Owner)</i></p> <p>Name: _____</p> <p>Mailing address <i>(principal place of business)</i>: _____</p>	<p>Contract <i>(Owner's project name and location)</i></p> <p>Description: _____</p> <p>Contract Price: _____</p> <p>Effective Date of Contract: _____</p>
<p>Bond</p> <p>Bond Amount: _____</p> <p>Date of Bond: _____</p> <p><i>(Date of Bond cannot be earlier than Effective Date of Contract)</i></p> <p>Modifications to this Bond form:</p> <p><input type="checkbox"/> None <input type="checkbox"/> See Paragraph 16</p>	
<p>Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.</p>	
Contractor as Principal	Surety
_____ <i>(Full formal name of Contractor)</i>	_____ <i>(Full formal name of Surety) (corporate seal)</i>
By: _____ <i>(Signature)</i>	By: _____ <i>(Signature)(Attach Power of Attorney)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____ <i>(Signature)</i>	Attest: _____ <i>(Signature)</i>
Name: _____ <i>(Printed or typed)</i>	Name: _____ <i>(Printed or typed)</i>
Title: _____	Title: _____
<p><i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i></p>	

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:
 - 3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;
 - 3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
 - 3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.
4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.
5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
 - 5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;
 - 5.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;
 - 5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or
 - 5.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

- 5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
 - 5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.
- 6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.
- 7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:
 - 7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
 - 7.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and
 - 7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
- 8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.
- 9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price will not be reduced or set off on account of any such unrelated obligations. No right of action will accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.
- 10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
- 11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the 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 periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.
- 12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.
- 13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such

statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

14. Definitions

- 14.1. *Balance of the Contract Price*—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.
 - 14.2. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.
 - 14.3. *Contractor Default*—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.
 - 14.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
 - 14.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
16. Modifications to this Bond are as follows: “None”.

PAYMENT BOND

<p>Contractor <i>(Full formal name of Contractor)</i></p> <p>Name: _____</p> <p>Address <i>(principal place of business):</i> _____</p>	<p>Surety <i>(Full formal name of Surety)</i></p> <p>Name: _____</p> <p>Address <i>(principal place of business):</i> _____</p>
<p>Owner <i>(Full formal name of Owner)</i></p> <p>Name: _____</p> <p>Mailing address <i>(principal place of business):</i> _____</p>	<p>Contract <i>(Owner's project name, and location of the project)</i></p> <p>Description: _____</p> <p>Contract Price: _____</p> <p>Effective Date of Contract: _____</p>
<p>Bond</p> <p>Bond Amount: _____</p> <p>Date of Bond: _____</p> <p><i>(Date of Bond cannot be earlier than Effective Date of Contract)</i></p> <p>Modifications to this Bond form:</p> <p><input type="checkbox"/> None <input type="checkbox"/> See Paragraph 18</p>	
<p>Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.</p>	
Contractor as Principal	Surety
_____	_____
<i>(Full formal name of Contractor)</i>	<i>(Full formal name of Surety) (corporate seal)</i>
By: _____	By: _____
<i>(Signature)</i>	<i>(Signature)(Attach Power of Attorney)</i>
Name: _____	Name: _____
<i>(Printed or typed)</i>	<i>(Printed or typed)</i>
Title: _____	Title: _____
Attest: _____	Attest: _____
<i>(Signature)</i>	<i>(Signature)</i>
Name: _____	Name: _____
<i>(Printed or typed)</i>	<i>(Printed or typed)</i>
Title: _____	Title: _____
<p><i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i></p>	

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond will arise after the following:
 - 5.1. Claimants who do not have a direct contract with the Contractor
 - 5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
 - 5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).
 - 5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
 - 7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
 - 7.2. Pay or arrange for payment of any undisputed amounts.
 - 7.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

8. The Surety's total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
12. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit will be applicable.
13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted here from and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.
16. Definitions
 - 16.1. *Claim*—A written statement by the Claimant including at a minimum:
 - 16.1.1. The name of the Claimant;
 - 16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;
 - 16.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
 - 16.1.4. A brief description of the labor, materials, or equipment furnished;

- 16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
 - 16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
 - 16.1.7. The total amount of previous payments received by the Claimant; and
 - 16.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.
- 16.2. *Claimant*—An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic’s lien or similar statute against the real property upon which the Project is located. The intent of this Bond is to include without limitation in the terms of “labor, materials, or equipment” that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the 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.
- 16.3. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.
- 16.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
- 16.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
18. Modifications to this Bond are as follows: “None”.

SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

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SECTION 00 73 00

SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

These Supplementary Conditions amend or supplement EJCDC® C-700, Standard General Conditions of the Construction Contract (2018). The General Conditions remain in full force and effect except as amended.

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—for example, "Paragraph SC-4.05."

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 -

SC-1.01.A42 Add the following language at the end of the definition of Substantial Completion:

The Work is considered Substantially Complete when the following have been completed:

All paved surfaces, outcrop stones, riprap, fencing, and railing has been installed and accepted by the Owner.

1.02 *Terminology*

SC-1.02 Add the following new paragraph immediately after Paragraph 1.02.G

- H. The Specifications are written in imperative mood and streamlined form. This imperative language is directed to the Contractor, unless specifically noted otherwise. The words "shall be" are included by inference where a colon (:) is used within sentences or phrases.

ARTICLE 2—PRELIMINARY MATTERS

2.02 *Copies of Documents*

SC-2.02 Amend the first sentence of Paragraph 2.02.A. to read as follows:

Owner shall furnish to Contractor **one** printed copies of the Contract Documents (including one fully signed counterpart of the Agreement), and **one** in electronic portable document format (PDF).

SC-2.06 Supplement Paragraph 2.06 of the General Conditions by adding the following paragraph:

- D. *Requests by Contractor for Electronic Documents in Other Formats*
1. Release of any Electronic Document versions of the Project documents in formats other than those identified in the Electronic Documents Protocol (if any) or elsewhere in the Contract will be at the sole discretion of the Owner.

2. To extent determined by Owner, in its sole discretion, to be prudent and necessary, release of Electronic Documents versions of Project documents and other Project information requested by Contractor (“Request”) in formats other than those identified in the Electronic Documents Protocol (if any) or elsewhere in the Contract will be subject to the provisions of the Owner’s response to the Request, and to the following conditions to which Contractor agrees:
 - a. The content included in the Electronic Documents created by Engineer and covered by the Request was prepared by Engineer as an internal working document for Engineer’s purposes solely and is being provided to Contractor on an “AS IS” basis without any warranties of any kind, including, but not limited to any implied warranties of fitness for any purpose. As such, Contractor is advised and acknowledges that the content may not be suitable for Contractor’s application or may require substantial modification and independent verification by Contractor. The content may include limited resolution of models, not-to-scale schematic representations and symbols, use of notes to convey design concepts in lieu of accurate graphics, approximations, graphical simplifications, undocumented intermediate revisions, and other devices that may affect subsequent reuse.
 - b. Electronic Documents containing text, graphics, metadata, or other types of data that are provided by Engineer to Contractor under the request are only for convenience of Contractor. Any conclusion or information obtained or derived from such data will be at the Contractor’s sole risk and the Contractor waives any claims against Engineer or Owner arising from use of data in Electronic Documents covered by the Request.
 - c. Contractor shall indemnify and hold harmless Owner and Engineer and their subconsultants from all claims, damages, losses, and expenses, including attorneys' fees and defense costs arising out of or resulting from Contractor’s use, adaptation, or distribution of any Electronic Documents provided under the Request.
 - d. Contractor agrees not to sell, copy, transfer, forward, give away or otherwise distribute this information (in source or modified file format) to any third party without the direct written authorization of Engineer, unless such distribution is specifically identified in the Request and is limited to Contractor’s subcontractors. Contractor warrants that subsequent use by Contractor’s subcontractors complies with all terms of the Contract Documents and Owner’s response to Request.
3. In the event that Owner elects to provide or directs the Engineer to provide to Contractor any Contractor-requested Electronic Document versions of Project information that is not explicitly identified in the Contract Documents as being available to Contractor, the Owner shall be reimbursed by Contractor on an hourly basis (at \$200 per hour) for any engineering costs necessary to create or otherwise prepare the data in a manner deemed appropriate by Engineer.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

No Supplementary Conditions in this Article

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ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

No Supplementary Conditions in this Article

ARTICLE 5—SITE, SUBSURFACE AND PHYSICAL CONDITIONS, HAZARDOUS ENVIRONMENTAL CONDITIONS

5.03 *Subsurface and Physical Conditions*

SC-5.03 Add the following new paragraphs immediately after Paragraph 5.03.D:

- E. The following report of exploration and test of subsurface conditions at the site are known and included within the Appendix.

Geotechnical Investigation performed by Soil and Material Consultants, Inc., dated April 6, 2010. This investigation captured 8 auger drilled borings to depths of 10- to 15-feet below existing grade. These borings were taken in the northeast portion of the park, with Boring B7 and B8 taken adjacent to the shoreline.

Geotechnical Investigation performed by Soil and Material Consultants, Inc., dated March 18, 2022. This investigation captured 2 auger drilled borings to depths of 15- to 30-feet below existing grade. Boring B-1 was taken just west of Lake Park Marina, north of the turnaround. Boring B-2 taken between the new restaurant and the northern shoreline edge.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

SC-6.01 Add the following paragraphs immediately after Paragraph 6.01.A:

1. *Required Performance Bond Form:* The performance bond that Contractor furnishes will be in the form of EJCDC® C-610, Performance Bond (2018 edition), or a similar bond form if approved by Owner.
2. *Required Payment Bond Form:* The payment bond that Contractor furnishes will be in the form of EJCDC® C-615, Payment Bond (2018 edition), or a similar bond form if approved by Owner.

6.02 *Insurance—General Provisions*

SC-6.02 Add the following paragraph immediately after Paragraph 6.02.B:

1. Contractor may obtain worker's compensation insurance from an insurance company that has not been rated by A.M. Best, provided that such company (a) is domiciled in the state in which the Project is located, (b) is certified or authorized as a worker's compensation insurance provider by the appropriate state agency, and (c) has been accepted to provide worker's compensation insurance for similar projects by the state within the last 12 months.

6.03 *Contractor's Insurance*

SC-6.03 Supplement Paragraph 6.03 with the following provisions after Paragraph 6.03.C:

- D. *Workers' Compensation and Employer's Liability:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance, including, as applicable, United States Longshoreman and Harbor Workers' Compensation Act, Jones Act, stop-gap employer's liability coverage for monopolistic states, and foreign voluntary workers' compensation (from available sources, notwithstanding the jurisdictional requirement of Paragraph 6.02.B of the General Conditions).

Workers' Compensation and Related Policies	Policy limits of not less than:
Workers' Compensation	
State	Statutory
Applicable Federal (e.g., Longshoreman's)	Statutory
Foreign voluntary workers' compensation (employer's responsibility coverage), if applicable	Statutory
Jones Act (if applicable)	
Bodily injury by accident—each accident	Not Applicable
Bodily injury by disease—aggregate	Not Applicable
Employer's Liability	
Each accident	\$1,000,000
Each employee	\$1,000,000
Policy limit	\$1,000,000
Stop-gap Liability Coverage	
For work performed in monopolistic states, stop-gap liability coverage must be endorsed to either the worker's compensation or commercial general liability policy with a minimum limit of:	Not Applicable

- F. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against claims for:
1. damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees,
 2. damages insured by reasonably available personal injury liability coverage, and
 3. damages because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- G. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy must be written on a 1996 (or later) Insurance Services Organization, Inc. (ISO) commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Products and completed operations coverage.
 - a. Such insurance must be maintained for three years after final payment.

- b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
 2. Blanket contractual liability coverage, including but not limited to coverage of Contractor’s contractual indemnity obligations in Paragraph 7.18.
 3. Severability of interests and no insured-versus-insured or cross-liability exclusions.
 4. Underground, explosion, and collapse coverage.
 5. Personal injury coverage.
 6. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together). If Contractor demonstrates to Owner that the specified ISO endorsements are not commercially available, then Contractor may satisfy this requirement by providing equivalent endorsements.
 7. For design professional additional insureds, ISO Endorsement CG 20 32 07 04 “Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured” or its equivalent.
 8. Include Illinois Department of Transportation as an additional insured.
- H. *Commercial General Liability—Excluded Content:* The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, must not include any of the following:
1. Any modification of the standard definition of “insured contract” (except to delete the railroad protective liability exclusion if Contractor is required to indemnify a railroad or others with respect to Work within 50 feet of railroad property).
 2. Any exclusion for water intrusion or water damage.
 3. Any provisions resulting in the erosion of insurance limits by defense costs other than those already incorporated in ISO form CG 00 01.
 4. Any exclusion of coverage relating to earth subsidence or movement.
 5. Any exclusion for the insured’s vicarious liability, strict liability, or statutory liability (other than worker’s compensation).
 6. Any limitation or exclusion based on the nature of Contractor’s work.
 7. Any professional liability exclusion broader in effect than the most recent edition of ISO form CG 22 79.
- I. *Commercial General Liability—Minimum Policy Limits*

Commercial General Liability	Policy limits of not less than:
General Aggregate	\$2,000,000
Products—Completed Operations Aggregate	\$2,000,000
Personal and Advertising Injury	\$1,000,000

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Commercial General Liability	Policy limits of not less than:
Bodily Injury and Property Damage—Each Occurrence	\$2,000,000

- J. *Automobile Liability:* Contractor shall purchase and maintain automobile liability insurance for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy must be written on an occurrence basis.

Automobile Liability	Policy limits of not less than:
Bodily Injury	
Each Person	\$1,000,000
Each Accident	\$1,000,000
Property Damage	
Each Accident	\$1,000,000
[or]	
Combined Single Limit	
Combined Single Limit (Bodily Injury and Property Damage)	\$2,000,000

- K. *Umbrella or Excess Liability:* Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer’s liability, commercial general liability, and automobile liability insurance described in the Paragraphs above. The coverage afforded must be at least as broad as that of each and every one of the underlying policies.

Excess or Umbrella Liability	Policy limits of not less than:
Each Occurrence	\$1,000,000
General Aggregate	\$1,000,000

- M. *Contractor’s Pollution Liability Insurance:* Contractor shall purchase and maintain a policy covering third-party injury and property damage, including cleanup costs, as a result of pollution conditions arising from Contractor’s operations and completed operations. This insurance must be maintained for no less than two years after Substantial completion.

Contractor’s Pollution Liability	Policy limits of not less than:
Each Occurrence/Claim	\$1,000,000
General Aggregate	\$1,000,000

6.04 *Builder’s Risk and Other Property Insurance*

SC-6.04 Delete Paragraph 6.04.A and insert the following in its place:

- A. Owner shall purchase and maintain builder’s risk insurance upon the Work on a completed value basis, in the amount of the Work’s full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by

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Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.

SC-6.04 Supplement Paragraph 6.04 with the following provisions after Paragraph 6.04.E

- F. The Builder's Risk Insurance required herein shall apply to projects involving construction of structures and buildings only. The requirements of this Section shall be waived on projects involving only underground utilities, grading, street improvements, and similar construction work but any damage or loss to property shall be at the sole responsibility of the Contractor and maintain such insurance at least until the Work is complete, as set forth in Paragraph 15.06.D of the General Conditions.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.03 Labor; Working Hours

SC-7.03 Add the following new subparagraphs immediately after Paragraph 7.03.C:

1. Regular working hours will be 7:00 A.M to 7:00 P.M Monday through Friday.
2. Work on Saturdays or federal holidays may be allowed pending approval by the Owner.

7.10 Taxes

SC-7.10 Add a new paragraph immediately after Paragraph 7.10.A:

- A. Owner is exempt from payment of sales and compensating use taxes of the State of Illinois and of cities and counties thereof on all materials to be incorporated into the Work.
 1. Owner will furnish the required certificates of tax exemption to Contractor for use in the purchase of supplies and materials to be incorporated into the Work.
 2. Owner's exemption does not apply to construction tools, machinery, equipment, or other property purchased by or leased by Contractor, or to supplies or materials not incorporated into the Work.

ARTICLE 8—OTHER WORK AT THE SITE

8.02 Coordination

SC-8.02 Add the following new Paragraph 8.02.C immediately after Paragraph 8.02.B:

- C. Owner intends to contract with others for the performance of other work at or adjacent to the Site.
 1. The Contractor shall have authority and responsibility for coordination of the various contractors and work forces at the Site;

ARTICLE 9—OWNER’S RESPONSIBILITIES

9.13 Owner’s Site Representative

SC-9.13 Add the following new paragraph immediately after Paragraph 9.12 of the General Conditions:

9.13 Owner’s Site Representative

- A. Owner will furnish an “Owner’s Site Representative” to represent Owner at the Site and assist Owner in observing the progress and quality of the Work. The Owner’s Site Representative is not Engineer’s consultant, agent, or employee. The Owner’s Site Representative will be Paul Cathey, Deputy Director, Des Plaines Park District. The authority and responsibilities of the Owner’s Site Representative following: Project oversight and monitoring of work, quality control on a daily basis. Lead contact for site questions, coordination and site concerns.

ARTICLE 10—ENGINEER’S STATUS DURING CONSTRUCTION

10.03 Resident Project Representative

SC-10.03 Add the following new subparagraph immediately after Paragraph 10.03.A:

1. On this Project, by agreement with the Owner, the Engineer will not furnish a Resident Project Representative to represent Engineer at the Site or assist Engineer in observing the progress and quality of the Work.

ARTICLE 11—CHANGES TO THE CONTRACT

No Supplementary Conditions in this Article.

ARTICLE 12—CLAIMS

SC-12.01.B Delete Paragraph 12.01.B in its entirety and insert the following in its place:

- B. Submittal of Claim: The party submitting a Claim shall deliver written notice of it to the Engineer and the other party to the Contract promptly (but in no event later than 3 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Written 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 30 days after the start of such event (unless the Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). In the case of a Claim by the Contractor seeking a change in Contract Price or Contract Time, the Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of the Contractor’s knowledge and belief the amount of time

or money requested accurately reflects the full amount to which the Contractor is entitled.
Cost of Work; Allowances, Unit Price Work

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

13.01 *Cost of the Work*

SC-13.01 Supplement Paragraph 13.01.B.5.c.(2) by adding the following sentence:

The equipment rental rate book that governs the included costs for the rental of machinery and equipment owned by Contractor (or a related entity) under the Cost of the Work provisions of this Contract is the most current edition of Rental Rate Blue Book for Construction Equipment. Costs will include the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, shall cease to accrue when the use thereof is no longer necessary for the changed Work.

SC-13.01 Supplement Paragraph 13.01.C.2 by adding the following definition of small tools and hand tools:

- a. For purposes of this paragraph, “small tools and hand tools” means any tool or equipment whose current price if it were purchased new at retail would be less than \$1000.

13.03 *Unit Price Work*

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

E. *Adjustments in Unit Price*

1. Payment for the Bid Items on a Unit Price basis under this Contract shall be on the basis of quantities actually used in the construction, regardless of the estimated quantities shown in the Bid Form. No revision to the Contract Unit Prices for the Bid Items shall be considered or allowed due to variations of the actual quantities from the estimated amounts.

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

No suggested Supplementary Conditions in this Article.

ARTICLE 15—PAYMENTS TO CONTRACTOR, SET OFFS; COMPLETIONS; CORRECTION PERIOD

15.01 *Progress Payments*

SC-15.01 Delete Paragraph 15.01.C.6.a in its entirety and insert the following in its place:

- a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;

SC-15.01 Add the following new Paragraph immediately after Paragraph 15.01.C.6.e

- f. Contractor's failure to make acceptable submittals in accordance with the accepted schedules.

15.01 *Progress Payments*

SC-15.01 Add the following new Paragraph 15.01.F:

- F. For contracts in which the Contract Price is based on the Cost of Work, if Owner determines that progress payments made to date substantially exceed the actual progress of the Work (as measured by reference to the Schedule of Values), or present a potential conflict with the Guaranteed Maximum Price, then Owner may require that Contractor prepare and submit a plan for the remaining anticipated Applications for Payment that will bring payments and progress into closer alignment and take into account the Guaranteed Maximum Price (if any), through reductions in billings, increases in retainage, or other equitable measures. Owner will review the plan, discuss any necessary modifications, and implement the plan as modified for all remaining Applications for Payment.

15.03 *Substantial Completion*

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

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

15.08 *Correction Period*

SC-15.08 Add the following new Paragraph 15.08.G:

- G. The correction period specified as one year after the date of Substantial Completion in Paragraph 15.08.A of the General Conditions is hereby revised to be the number of years set forth in SC-6.01.B.1; or if no such revision has been made in SC-6.01.B, then the correction period is hereby specified to be 2 years after Substantial Completion.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

No suggested Supplementary Conditions in this Article.

ARTICLE 17—FINAL RESOLUTIONS OF DISPUTES

17.02 *Arbitration*

SC-17.02 Add the following new paragraph immediately after Paragraph 17.01.

17.02 *Arbitration*

- A. All matters subject to final resolution under this Article will be settled by arbitration administered by the American Arbitration Association in accordance with its Construction

Industry Arbitration Rules (subject to the conditions and limitations of this Paragraph SC-17.02). Any controversy or claim in the amount of \$100,000 or less will be settled in accordance with the American Arbitration Association's supplemental rules for Fixed Time and Cost Construction Arbitration. This agreement to arbitrate will be specifically enforceable under the prevailing law of any court having jurisdiction.

- B. The demand for arbitration will be filed in writing with the other party to the Contract and with the selected arbitration administrator, and a copy will be sent to Engineer for information. The demand for arbitration will be made within the specific time required in Article 17, or if no specified time is applicable within a reasonable time after the matter in question has arisen, and in no event will any such demand be made after the date when institution of legal or equitable proceedings based on such matter in question would be barred by the applicable statute of limitations.
- C. The arbitrator(s) must be licensed engineers, contractors, attorneys, or construction managers. Hearings will take place pursuant to the standard procedures of the Construction Arbitration Rules that contemplate in-person hearings. The arbitrators will have no authority to award punitive or other damages not measured by the prevailing party's actual damages, except as may be required by statute or the Contract. Any award in an arbitration initiated under this clause will be limited to monetary damages and include no injunction or direction to any party other than the direction to pay a monetary amount.
- D. The Arbitrators will have the authority to allocate the costs of the arbitration process among the parties but will only have the authority to allocate attorneys' fees if a specific Law or Regulation or this Contract permits them to do so.
- E. The award of the arbitrators must be accompanied by a reasoned written opinion and a concise breakdown of the award. The written opinion will cite the Contract provisions deemed applicable and relied on in making the award.
- F. The parties agree that failure or refusal of a party to pay its required share of the deposits for arbitrator compensation or administrative charges will constitute a waiver by that party to present evidence or cross-examine witness. In such event, the other party shall be required to present evidence and legal argument as the arbitrator(s) may require for the making of an award. Such waiver will not allow for a default judgment against the non-paying party in the absence of evidence presented as provided for above.
- G. No arbitration arising out of or relating to the Contract will include by consolidation, joinder, or in any other manner any other individual or entity (including Engineer, and Engineer's consultants and the officers, directors, partners, agents, employees or consultants of any of them) who is not a party to this Contract unless:
 - 1. the inclusion of such other individual or entity will allow complete relief to be afforded among those who are already parties to the arbitration;
 - 2. such other individual or entity is substantially involved in a question of law or fact which is common to those who are already parties to the arbitration, and which will arise in such proceedings;
 - 3. such other individual or entity is subject to arbitration under a contract with either Owner or Contractor, or consents to being joined in the arbitration; and

4. the consolidation or joinder is in compliance with the arbitration administrator's procedural rules.
- H. The award will be final. Judgment may be entered upon it in any court having jurisdiction thereof, and it will not be subject to modification or appeal, subject to provisions of the Laws and Regulations relating to vacating or modifying an arbitral award.
- I. Except as may be required by Laws or Regulations, neither party nor an arbitrator may disclose the existence, content, or results of any arbitration hereunder without the prior written consent of both parties, with the exception of any disclosure required by Laws and Regulations or the Contract. To the extent any disclosure is allowed pursuant to the exception, the disclosure must be strictly and narrowly limited to maintain confidentiality to the extent possible.

17.03 *Attorneys' Fees*

SC-17.03 Add the following new paragraph immediately after Paragraph 17.02.

17.03 *Attorneys' Fees*

- A. For any matter subject to final resolution under this Article, the prevailing party shall be entitled to an award of its attorneys' fees incurred in the final resolution proceedings, in an equitable amount to be determined in the discretion of the court, arbitrator, arbitration panel, or other arbiter of the matter subject to final resolution, taking into account the parties' initial demand or defense positions in comparison with the final result.

ARTICLE 18—MISCELLANEOUS

No suggested supplementary conditions in this Article

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SECTION 011000

SUMMARY OF WORK

PART 1 -- GENERAL

1.01 THE REQUIREMENT

- A. The WORK to be performed under this Contract shall consist of furnishing, tools, equipment, materials, supplies, and manufactured articles, and furnishing all labor, transportation, and services, including fuel, power, water, and essential communications, and performing all work or other operations required for the fulfillment of the Contract in strict accordance with the Contract Documents. The WORK shall be complete, and all work, materials, and services not expressly indicated or called for in the Contract Documents which may be necessary for the complete and proper construction of the WORK in good faith shall be provided by the CONTRACTOR as though originally so indicated, at no increase in cost to the OWNER.
- B. It is the policy of the Park District and other governing agencies to set standards for the performance of road and bridge construction. This contract shall expressly adhere to the 'Standard Specifications for Road and Bridge Construction (SSRBC)', latest edition, and the 'Standard Specifications for Water and Sewer Main Construction in Illinois,' latest edition, unless otherwise specified herein.
- C. WORK shall be scheduled, sequenced, and performed in a manner which minimizes disruption to the public and to the operation and maintenance of the existing facilities.
- D. The CONTRACTOR shall incorporate the construction and schedule constraints of Section 011400 – Construction and Schedule Constraints in preparing its construction schedules.

1.02 WORK COVERED BY CONTRACT DOCUMENTS

- A. General: The Project is located at the OWNER's facilities: Lake Park Golf Course and Marina, 1015 Howard Avenue, Des Plaines, Illinois 60018.
- B. Existing Condition: The existing shoreline has varying materiality and in general, the concrete edges are in poor condition. In most areas, the concrete surfaces are rough and show significant cracking with some voids beneath the surface. Some of the steeper slopes, particularly along the northern edge, are showing signs of erosion.
- C. Proposed Work: The following description provides a summary overview of suggested sequencing of the WORK. The WORK of this Contract consists of the following:
 - 1. Permitting, Mobilization, Site Control, Temporary Construction
 - a. See Contract Drawings G0.02 through C2.05; and L8.01.
 - b. Includes site preparation and site clearing of the WORK areas.
 - c. Mobilization of construction support facilities.
 - d. Provide protection for existing utilities and Park features.

- e. Tree Protection as shown on the Contract Documents and/or trees indicated by the OWNER in the Field.
 - f. Provide soil erosion and sediment control measures.
 - g. Clearing, grubbing, and disposal of shrubs and trimming and disposal of tree branches along the west banks.
 - h. The removal and disposal existing fencing.
2. Shoreline Restoration
- a. See Contract Drawings C3.01 to C7.08; L8.01, and L8.02.
 - b. Rubblize existing grouted shoreline edge and removal of existing fish outcroppings as noted on the Contract Drawings.
 - c. Earth excavation associated with installation of new riprap edge and the handling, storage, and disposal of all excavated materials. This includes but is not limited to the following:
 - 1) Legal offsite disposal of surplus soil generated from the work from this contract as indicated in the contract documents in accordance with all local, state and federal laws and regulations.
 - 2) See Section 31 00 00 Earthwork for the removal and handling of non-contaminated soils.
 - d. Final site grading.
 - e. Supply, delivery, handling, construction, and installation of all materials necessary to complete the Work from landside/waterside including:
 - 1) Riprap.
 - 2) Steel sheet pile wall, fishing nodes, fishing wall and fishing plaza.
 - 3) Backfill material.
 - 4) Hardscape improvements:
 - a) Trail pavement (bituminous, bonded limestone, and concrete), edging (where applicable), and striping.
 - b) Concrete pads and stairs.
 - c) Replacement chain link fencing.
 - d) Limestone seating.
 - e) Railings.
 - f. Removal of temporary utilities and demobilization of construction support facilities.

3. Site Restoration and Landscaping (To be performed under separate Contract)

a. See Contract Drawings L1.01 to L1.08.

b. Supply, delivery, handling, construction, and installation of all Landscaping materials necessary to complete the Work.

1.03 CONTRACT METHOD

A. The WORK hereunder will be constructed under a unit price contract.

1.04 WORK BY OTHERS

A. Where two (2) or more contracts are being performed at one time on the same Site or adjacent land in such manner that work under one contract may interfere with work under another, the OWNER will determine the sequence and order of the Work in either or both contracts. When the Site of one contract is the necessary or convenient means of access for performance of work under another, the OWNER may grant privilege of access or other reasonable privilege to the contractor so desiring, to the extent, amount, and in manner and at time that the OWNER may determine. No OWNER determination of method or time or sequence or order of the work or access privilege shall be the basis for a claim for delay or damage except under provisions of the General Conditions for temporary suspensions of the work. The CONTRACTOR shall conduct its operations so as to cause a minimum of interference with the work of such other contractors and shall cooperate fully with such contractors to allow continued safe access to their respective portions of the Site, as required to perform work under their respective contracts.

B. Interference With Work on Utilities: The CONTRACTOR shall cooperate fully with all utility forces of the OWNER or forces of other public or private agencies engaged in the relocation, altering, or otherwise rearranging of any facilities which interfere with the progress of the WORK, and shall schedule the WORK so as to minimize interference with said relocation, altering, or other rearranging of facilities.

The CONTRACTOR shall call the Joint Utility Locating Information for Excavators (JULIE) (1-800-892-0123 or 811), a minimum of forty-eight (48) hours in advance of work being done in the area in accordance with the Illinois Department of Transportation (IDOT), Standard Specifications for Road and Bridge Construction (SSRBC), with Article 107.39.

For utilities which are not members, excluding homeowners, the CONTRACTOR shall contact the owners directly. The Contractor will be required to cooperate with all utility companies and municipal agencies involved in connection with the removal, temporary relocation, reconstruction, or abandonment by these agencies of any and all services.

No additional compensation will be allowed the Contractor for any expense incurred by complying with these requirements, or because of delays, inconvenience or interruptions in his work resulting from the failure of the municipal agencies or utility company to remove, relocate, reconstruct, or abandon their services.

1.05 CONTRACTOR USE OF SITE

A. The CONTRACTOR's use of the Site shall be limited to its construction operations, including on-Site storage of materials, and field offices.

- B. The CONTRACTOR shall not use the portion of the Site outside of the construction limits.
- C. The indiscriminate use of fire hydrants is strictly prohibited. The Contractor will be responsible for obtaining and transporting any water required to complete the work as specified herein.
- D. The CONTRACTOR will ensure that all industry standards regarding safety and equipment operation are followed at the jobsite. CONTRACTOR will be equipped with proper PPE. Secure work area from public access. CONTRACTOR vehicles shall access and park in areas as designated by the OWNER.
- E. On occasion, the CONTRACTOR's employees may be contacted in some manner by residents/users of the park. The employees shall be instructed to politely inform the citizens to direct their comments and/or questions to the OWNER.

1.06 OWNER USE OF THE SITE

- A. The OWNER may utilize all or part of the existing facilities during the entire period of construction for the conduct of the OWNER's normal operations. The CONTRACTOR shall cooperate and coordinate with the OWNER to facilitate the OWNER's operations and to minimize interference with the CONTRACTOR's operations at the same time. In any event, the OWNER shall be allowed access to the Site during the period of construction.
- B. The CONTRACTOR shall take necessary precautions to ensure that no damage occurs to the facilities, including utilities, roads, trees, and structures, that are to remain and are not to be modified or replaced. Tree/shrub trimming shall be coordinated by the CONTRACTOR with the OWNER, as needed.

1.07 TRAFFIC CONTROL PLAN

- A. Traffic Control shall be according to the applicable sections of the Standard Specifications, the Supplemental Specifications, the "Illinois Manual on Uniform Traffic Control Devices for Streets and Highways", and the Special Provisions contained herein.
- B. Special attention is called to Article 107.09 of the Standard Specifications and the following Highway Standards, Details, Quality Standard for Work Zone Traffic Control Devices, Recurring Special Provisions and Special Provisions contained herein, relating to traffic control.
- C. The Contractor shall contact the District One Bureau of Traffic at least 72 hours in advance of beginning work.
- D. Standards: 701006, 701011, 701301, 701311, 701501, and 701901.
- E. Details:
 - 1. TC-10 Traffic Control and Protection for Side Roads, Intersections, and Driveways.
- F. Special Provisions
 - 1. Traffic Control Plan.
 - 2. Maintenance of Roadways.

3. LRS 3 – Work Zone Traffic Control Surveillance.
 4. LRS 4 – Flaggers in Work Zones.
 5. BDE – Equipment Parking and Storage.
 6. BDE – Traffic Control Devices – Cones.
- G. At a minimum, the Contractor will provide lighted barricades where any hazardous conditions are created. Additionally, where traffic lanes are restricted on major arterial roads, a flashing arrow board is required. Any Work damaged due to lack of adequate barricades shall be replaced by the Contractor at the Contractor's expense. The contractor shall coordinate with the Park District to assure access to Lake Park is always maintained. The contractor shall ensure that one lane traffic is maintained at all times during construction and shall have no overnight closures.
- H. This work will be measured in place and paid for at the contract unit price per lump sum for TRAFFIC CONTROL AND PROTECTION, which shall include all labor, equipment, and materials required to complete the work as specified herein.

1.08 MAINTENANCE OF ROADWAYS

- A. Beginning on the date that the CONTRACTOR begins work, they shall assume responsibility for normal maintenance of all existing roadways within the limits of the improvement. This normal maintenance shall include all repair work deemed necessary by the ENGINEER but shall not include snow removal operations. Traffic control and protection for maintenance of roadways will be provided by the CONTRACTOR as required by the ENGINEER.
- B. If items of work have not been provided for in the contract, or otherwise specified for payment, such items, including the accompanying traffic control and protection required by the ENGINEER, will be paid for in accordance with Article 109.04 of the SSRBC.
- C. The CONTRACTOR will be responsible for maintaining and correcting any damage due to construction operations on the streets and alleyway surrounding the park.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

END OF SECTION

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SECTION 011400

CONSTRUCTION AND SCHEDULE CONSTRAINTS

PART 1 -- GENERAL

1.01 THE REQUIREMENT

- A. WORK shall be scheduled, sequenced, and performed in a manner which minimizes disruption to the operation and maintenance of existing facilities.
- B. Work shall be prosecuted in such a manner and with such a supply of materials, equipment, and labor as considered necessary to ensure its substantial completion and final completion as specified in this Section.
- C. The CONTRACTOR shall complete all WORK in the contract by the completion milestones, including punchlist items, as defined in Article 108.04 of the Standard Specifications for Road and Bridge Construction (SSRBC).
- D. The CONTRACTOR shall incorporate the construction and schedule constraints of this Section in preparing the construction schedules.

1.02 EXISTING FACILITIES

- A. The construction constraints in this Section do not include every item affecting the completion of the WORK but are intended to describe the sequence of critical events necessary to minimize disruption to Park District facilities. It shall be understood and agreed by the CONTRACTOR that the critical events described are not inclusive and that additional items of WORK not included may be required to minimize disruption and ensure compliance. Deviation from or modification of these suggested sequences is permitted if techniques and methods known to the CONTRACTOR will result in reducing disruption to the Park District's operations and if deviation is approved in advance by the ENGINEER.

1.03 OPERATION OF FACILITY EQUIPMENT

- A. The Park District personnel will cooperate in every way that is practical in order to facilitate CONTRACTOR's operation. However, operational modifications may only be permissible at times other than normal working hours such as nights or weekends. No additional payment will be made to the CONTRACTOR for any night, weekend, or holiday premium or overtime payments.

1.04 CONSTRUCTION SEQUENCING

- A. The CONTRACTOR shall notify the Park District and the Engineer at least 72 hours of beginning work and 48 hours prior to construction commencement. Construction operations shall be conducted in a manner that the Park District facilities will remain open to park users.
- B. All WORK shall be confined to the period beginning at 7:30 AM and ending at 7:00 PM on weekdays. No WORK shall be done on Saturdays without prior approval from the Park District. No work shall be done on Sundays or legal holiday periods as defined in Article 107.09 of the SSRBC.

Additionally, the respective time limits apply to the start-up of construction equipment including idling and maintenance. To minimize the effect of construction noise on the

CONSTRUCTION AND SCHEDULE CONSTRAINTS

area surrounding the improvement, the CONTRACTOR shall comply with the following requirements: all engines and engine driven equipment for hauling or construction shall be equipped with and adequate muffler in constant operation and properly maintained to prevent excessive or unusual noise.

- C. Construction activities shall be scheduled and sequenced to ensure continuous operation of the existing facilities. The CONTRACTOR's scheduling shall develop construction sequencing so that the WORK will not adversely impact operation of the facilities. The CONTRACTOR shall be responsible for development of the construction sequencing.
 - 1. Safe working conditions for personnel shall be maintained during the completion of the WORK.

1.05 PERMITS

- A. The CONTRACTOR shall abide by the conditions of permits and shall obtain proof of satisfaction of conditions from issuers of permits prior to acceptance of the WORK by the OWNER.
- B. Conditions affecting the CONTRACTOR are found in the following permits.
 - 1. City of Des Plaines.
 - 2. NPDES Stormwater Construction Permit.

1.06 SCHEDULE CONSTRAINTS

- A. General: It is the CONTRACTOR's responsibility to coordinate and plan the construction activities to integrate each schedule constraint into performance of the overall WORK.
- B. The listing of schedule constraints below does not mean that every constraint or special condition has been identified. The list does not substitute for the CONTRACTOR's coordination and planning for completion of the WORK within the Contract Times.
- C. Work shall be phased such that Park District operations and major events are not interrupted. Schedule constraints are as follows:
 - 1. Limit heavy earthwork activities along northern shoreline between June 1 to September 16.
 - 2. Work along northern and eastern shoreline, north of the bandshell cannot occur between September 8 to September 16.
 - 3. Work along western shoreline cannot occur between April 1 and September 30.
 - 4. Final schedule is subject to approval by OWNER.
- A. CONTRACTOR shall complete all work activities in this contract as defined in the General Conditions to the Agreement between Owner and Contractor. In case of failure to complete the WORK on time and/or deficient punch list items, the following liquidated damages will apply:
 - 1. Refer to the Proposal and Bid Quotation Form for the Time of Completion

CONSTRUCTION AND SCHEDULE CONSTRAINTS

2. Liquidated Damages Table

Milestone	Liquidated Damages per Calendar Day
Final Completion	\$500

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

END OF SECTION

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SECTION 01200

MEASUREMENT AND PAYMENT

PART 1 -- GENERAL

1.01 SUMMARY

- A. Payment for the various Items of the Bid, as further specified herein, shall include all compensation to be received by the CONTRACTOR for providing all tools, equipment, supplies, and manufactured articles, and for all labor, operations, and incidentals appurtenant to the items of work being described, as necessary to complete the various items of the WORK all in accordance with the requirements of the Contract Documents. Work also includes all costs of permits and cost of compliance with the regulations of public agencies having jurisdiction, including Safety and Health Administration of the U.S. Department of Labor (OSHA). No separate payment will be made for any item that is not specifically set forth in the Bid, and all costs therefore shall be included in the prices named in the Bid for the various Items of work.

Payment for each respective item shall include such general costs for the providing of drawings, submittals, samples, tools, and appliances necessary to complete the work as specified and shown on the Contract Drawings.

1.02 SUBMITTALS

A. Formats and Contents

1. CONTRACTOR shall submit Application for Payment in accordance with General Terms and Conditions, Progress Payments, and as specified in Section 01 21 00 – Price and Payment Procedures.
2. Application for Payment shall be made electronically on forms and spreadsheets provided by the OWNER.

1.03 SURVEY AND CONSTRUCTION STAKING

- A. All layout and offset staking shall be the responsibility of the CONTRACTOR and included in the appropriate bid item.
- B. The CONTRACTOR shall coordinate with the ENGINEER for existing benchmarks and control point established within the site.

1.04 DELIVERY, STORAGE AND HANDLING

- A. The CONTRACTOR shall make his own arrangements for delivery and handling of equipment and materials as it may require for the prosecution of the WORK. The location of all temporary roadways and similar facilities shall be subject to the approval of the OWNER and these shall be located and operated so as not to interfere with other work carried on by the OWNER, by other contractors, or by municipalities.
- B. The OWNER shall be provided each day with itemized delivery lists of the materials and equipment delivered to the site which are intended to be incorporated into the WORK. Any materials or equipment delivered to the site without prior approval of the OWNER will be at the sole risk of the CONTRACTOR and will be subject to rejection and removal. No WORK shall be done or material or equipment installed until such is fully approved, and no unapproved work, materials or equipment will be included in any estimate for payment, the CONTRACTOR must provide the OWNER an invoice or statement as to the cost of such.

MEASUREMENT AND PAYMENT

- C. The CONTRACTOR shall make all necessary arrangements and provisions for the storage of materials and equipment to be used on the Contract. All excavated materials, construction equipment, and materials and equipment to be incorporated into the WORK shall be placed so as not to injure any part of the WORK or existing facilities and so that free access can be had at all times to all parts of the WORK and to all public utility installations in the vicinity of the WORK. Materials and equipment shall be kept neatly piled and compactly stored in such locations as will cause the minimum of inconvenience to public travel and adjoining property. Site area available on the construction site for storage of material and equipment shall be as shown on the Drawings.
- D. Material which are to become the property of the OWNER shall be so stored as to facilitate their inspection and ensure preservation of their quality and fitness, including proper protection against damage by freezing and wet weather; and they shall be placed under cover on wooden platforms or other hard, clean surfaces, and not on the ground.
- E. Equipment shall be stored in strict accordance with the manufacturer's recommendations and shall be stored in a climate-controlled building or enclosure if so recommended.
- F. Lawns and/or other private property shall not be used for storage purposes without written permission of the OWNER, its agent or other person in possession or control of such premises.
- G. When a pay estimate is allowed on account of material delivered to the site or in the vicinity thereof or under the possession and control of the CONTRACTOR but not yet incorporated therein, such materials shall become the property of the OWNER. If such material is stolen, destroyed or damaged by casualty before being used, the CONTRACTOR will be required to replace it at its own expense without further cost to the OWNER.

1.05 PAYMENT ITEMS

A. BID ITEM NO.1, Mobilization & Demobilization

1. MEASUREMENT

- a. The LUMP SUM price allocated in the Bid Item No.1: Mobilization & Demobilization shall consist of the preparatory work and operations necessary for the movement of personnel, equipment, supplies, and incidentals to the project site for establishment of temporary office facilities, sanitary facilities, and any other facilities, as required by the specifications and special requirements of the contract, as well as by local or state law and regulation, including all permits required for the project.

2. PAYMENT

- a. Partial payment of the LUMP SUM item for Mobilization and Demobilization will be made using a percentage based on the following categories:

When	Contract Unit Price for Mobilization is less than or equal to 5 percent of the total contract amount, pay	Contract Unit Price for Mobilization exceeds 5 percent of the total contract amount, pay
Percent of Original Contract Amount Completed*	Percent of Mobilization	Percent of Original Contract Amount*
First Partial Payment	50	2.5
25	70	3.5
50	90	4.5
95	100	5
100	100	--
*The percent of Original Contract Amount = the amount earned by the Contractor, excluding money earned for mobilization and material on hand, divided by the total value of the original contract (all contract items). If the contract unit price for mobilization exceeds 5 percent of the total original contract amount, the OWNER may withhold (on any partial estimate) the portion in excess of 5 percent until the CONTRACTOR earns 100 percent of the original contract amount.		

B. BID ITEM NO.2, Traffic Control

1. MEASUREMENT

- a. The LUMP SUM price allocated for Bid Item No. 2: Traffic Control will not be measured for payment but will be paid for on a lump sum basis.

2. PAYMENT

- a. Payment for this item shall be a lump sum price and shall be full compensation for furnishing all tools, labor equipment, and materials necessary to develop an acceptable maintenance of traffic plan, maintain existing roadways in a safe condition for public use, removal of conflicting pavement markings, furnish, maintain in an acceptable condition, and subsequently remove all temporary traffic control devices.

C. BID ITEM NO.3, Maintenance and Repair of Haul Roads

1. MEASUREMENT

- a. The LUMP SUM price allocated for Bid Item No. 3: Maintenance and Repair of Haul Roads within Des Plaines Park District property will not be measured for payment but will be paid for on a lump sum basis.

2. PAYMENT

- a. The lump sum price shall be full compensation for all supervision, labor, equipment, fuels, maintenance, and incidentals to perform restoration to the three construction entrances shown on the access plans as shown in the Contract Drawings. Partial payment of the LUMP SUM will be made based on the actual Haul Road(s) repaired/restored and is subject to OWNER and CONTRACTOR agreement.

D. BID ITEM NO.4, Temporary Facilities

1. MEASUREMENT

- a. The LUMP SUM price allocated for Bid Item No. 4: Temporary Facilities will not be measured for payment but will be paid for on a lump sum basis. Temporary facilities to be provided will be an Engineer's Field Office Type B as defined in the Illinois Department of Transportation (IDOT), Standard Specifications for Road and Bridge Construction (SSRBC), Section 670.

2. PAYMENT

- a. Payment will be full compensation for labor, equipment, material, and all other related items to establish temporary facilities necessary to perform the work.

E. BID ITEM NO.5, Erosion and Sedimentation Control

1. MEASUREMENT

- a. The LUMP SUM price allocated for Bid Item No. 5: Erosion and Sedimentation Control will not be measured for payment but will be paid for on a lump sum basis.

2. PAYMENT

- a. Payment will be full compensation for labor, equipment, material, and all other related items required to implement sediment and erosion controls as required by the approved Stormwater Pollution Prevention Plan (SWPPP) during construction. This is anticipated to include the installation, maintenance, and removal of Best Management Practices (BMPs) in the approved SWPPP.

F. BID ITEM NO.6, Tree Protection Fencing

1. MEASUREMENT

- a. The per lineal foot price stipulated for Bid Item No. 6: Tree Protection Fencing. Measurement for tree protection fencing will consist of actual lineal feet of tree protection fencing used as approved by the Owner.

2. PAYMENT

- a. Payment will be full compensation for labor, equipment, material, and all other related items including the installation and maintenance of the protective fencing, removal and replacement of trees damaged by the CONTRACTOR's activities, pruning, disposal of waste material shall be included in the unit price.

G. BID ITEM NO.7, Strip, Stockpile, and Place Topsoil

1. MEASUREMENT

- a. The per square yard price stipulated for Bid Item No. 7: Strip, Stockpile and Place Topsoil. Measurement for stripping, stockpiling, and placement of topsoil will be measured for payment based on the number of acceptably placed and restored square yards of topsoil material completed as approved by the OWNER. The quantity measured for payment will equal the actual number of square yards of area topsoiled to the depth specified within the limits of construction designated in the Contract Drawings as the ENGINEER and OWNER directs.

2. PAYMENT

Payment for the stripped, stockpiled, and placed topsoil will be made at the contract unit price per square yard, multiplied by the total number of square yards of topsoil acceptably placed to the satisfaction of the OWNER. Payment will be full compensation for labor, equipment, and all other related items required for removing, stockpiling, reclaiming, hauling, and placing this material; and for undercutting excavations, or underfilling embankments necessary to receive this material. Required fertilizers and amendments shall not be measured separately but shall be incidental to the cost of the topsoil.

H. BID ITEM NO.8, Remove Synthetic Turf Tee Boxes

1. MEASUREMENT

- a. The per each price stipulated for Bid Item No. 8: Remove Synthetic Turf Tee Boxes. Measurement for the removal of the synthetic tee boxes will consist of actual number of turf tee boxes removed as approved by the OWNER.

2. PAYMENT

- a. Payment will be full compensation for labor, equipment, material, and all other related items required for the removal of the synthetic turf tee boxes and shall be included in the unit price.

I. BID ITEM NO. 9, Tree Removal

1. MEASUREMENT

- a. The per each price stipulated for Bid Item No. 9: Tree Removal. Measurement for tree removal will be based on the total number of inches DBH of trees removed and approved by the Owner.

2. PAYMENT

- a. Payment will be full compensation for labor, equipment, and all other related items required for tree removal shall be included in the unit price.

J. BID ITEM NO.10, Demolish Bituminous Trail

1. MEASUREMENT

- a. The per square foot price stipulated for Bid Item No. 10: Demolish Bituminous Trail. Measurement for Bituminous Trail removal will be based on the actual bituminous pavement removed without regard to thickness including integral bituminous curb as approved by the Owner.

2. PAYMENT

- a. Payment for the demolition of existing bituminous trail will be made at the contract price per square foot and shall be full compensation for furnishing all labor, materials, equipment, tools, and incidentals necessary to complete the work.

K. BID ITEM NO.11, Demolish Existing Shoreline

1. MEASUREMENT

- a. The per square foot price stipulated for Bid Item No. 11: Demolish Existing Shoreline. Measurement for the shoreline demolition will be based on actual shoreline removed. All areas of proposed demolition and structures to be removed shall be delineated by the CONTRACTOR and approved by the OWNER in advance.

2. PAYMENT

- a. Payment for the demolition of the existing shoreline will be made at the contract price per square foot and shall be full compensation for furnishing all labor, materials, equipment, tools, and incidentals including the removal and disposal of existing reinforced and unreinforced concrete, precast concrete structures, stones, existing fill concrete on grade, rubble, miscellaneous steel, and other materials necessary to complete the work. Payment for this work shall include reworking existing fill and other material to densify the material and minimize voids in the subgrade and backfill material.

L. BID ITEM NO.12, Demolish Existing Concrete Outcroppings & Walls

1. MEASUREMENT

- a. The per cubic yard price stipulated for Bid Item No. 12: Existing Concrete Outcroppings & Walls. Measurement for the demolition of existing concrete outcroppings and walls will be based on actual concrete structures removed. All areas of proposed demolition and structures to be removed shall be delineated by the CONTRACTOR and approved the OWNER in advance.

2. PAYMENT

- a. Payment for the demolition of existing concrete outcroppings and walls will be made at the contract price per cubic yard and shall be full compensation for furnishing all labor, materials, equipment, tools, and incidentals including removal and disposal of existing reinforced and unreinforced concrete, precast concrete structures, stones, existing fill concrete on grade, rubble, miscellaneous steel, and other materials necessary to complete the work. Payment for this work shall include reworking existing fill and other material to densify the material and minimize voids in the subgrade and backfill material.

M. BID ITEM NO.13, Common Excavation/Prep Shoreline

1. MEASUREMENT

- a. The per cubic yard price stipulated for Bid Item No. 13: Common Excavation/Prep Shoreline. The excavated earth fill soil material will be measured for payment by the cubic yard, as determined from pre- and post-excavation surveys every 25 feet or as directed by the OWNER. Excavation of stone, asphalt, and concrete is incidental to other construction work items. No separate measurement for payment will be made for this work.
- b. Grading of Adjacent Ruts, Depressions and Ties to Existing Grade Lines. All excavation and filling outside and adjacent to the construction work area and features, for ties to existing grade lines and restoration to achieve smooth grades, are incidental to other construction work items. No separate measurement for payment will be made for this work.

2. PAYMENT

- a. Payment for common excavation and shoreline preparation will be made at the contract price per cubic yard and shall be full compensation for testing, excavating, loading, hauling, placing, and compaction and for furnishing all labor, materials, equipment, tools, and incidentals necessary to complete the work.
- b. Grading of Adjacent Ruts, Depressions and Ties to Existing Grade Lines. No separate payment will be made for excavation and filling outside and adjacent to the construction work area and features, for ties to existing grade

MEASUREMENT AND PAYMENT

lines and restoration to achieve smooth grades. This work shall be considered incidental to construction.

N. BID ITEM NO.14, Geotextile

1. MEASUREMENT

- a. The per square yard price stipulated for Bid Item No. 14: Geotextile. Measurement for Geotextile placed between the earth fill and the stone fill will be based on the total number of square yards of as-built surface area of geotextile placed within the limits shown on the Contract Drawings and approved by the OWNER. No allowance will be made for seams, overlaps, or waste. Geotextile placed elsewhere will not be measured for payment but will be considered incidental to those items most closely related to the work.

2. PAYMENT

- a. Payment for the geotextile placed between the earth fill and stone fill will be made at the contract price per square yard, multiplied by the total area of geotextile satisfactorily installed, subject to the provisions of this section. Such payment shall cover all cost of furnishing, handling, storing, and installing geotextile including placing, seaming, repairs, and other materials and work incident thereto.

O. BID ITEM NO.15, Furnish and Place Riprap (RR4 and Recycled Stone)

1. MEASUREMENT

- a. The per cubic yard price stipulated for Bid Item No. 15: Furnish and Place Riprap. Measurement of riprap material (RR-4 and Recycled Stone) acceptably placed in the work area will be made as determined by carrier displacement, certified scale weight tickets or by volume calculations performed by the OWNER. Material for payment shall be determined by the volume of material incorporated into the work as calculated by the ENGINEER using average-end-area method.
- b. Determination of Stone Weight. A weighing record will accompany each delivery, and shall include the name of the shipper, date, trailer number, gross, tare, and net weights. The weigher shall sign each weigh record. The CONTRACTOR shall propose a method of determining weight of new materials to be delivered. The proposed method shall be submitted to the OWNER for review and approval.
- c. Processing and recycling the excavated and/or demolished material will be incidental to the rubble fill or stone materials. Recycled materials cannot be placed without approval by OWNER and ENGINEER.
- d. Lake bottom clearing for preparation will not be measured for payment but shall be considered incidental to Bid Item No. 13.

2. PAYMENT

- a. Payment for the furnishing and placement of Riprap (RR-4 and Recycled Stone) will be made at the contract price per in-place cubic yard. Such payment shall cover all cost for material, necessary processing, transportation, labor, equipment, testing, surveying, quality control, and incidentals required for furnishing, handling, storing, and placement to complete the work specified on the Contract Drawings.

P. BID ITEM NO.16, Furnish and Place Riprap Bedding Stone & Drainage Backfill (CA-7)

1. MEASUREMENT

- a. The per ton price stipulated for Bid Item No. 16: Furnish and Place Riprap Bedding Stone & Drainage Backfill (CA-7) of material acceptably placed in the work as determined by carrier displacement, certified scale weight tickets or by volume calculations performed by the OWNER. If volume calculations are used, the weight of material for payment shall be determined by the volume of material incorporated into the work as calculated by the ENGINEER using average-end-area method.
- b. Determination of Stone Weight. A weighing record will accompany each delivery, and shall include the name of the shipper, date, trailer number, gross, tare, and net weights. The weigher shall sign each weigh record. The CONTRACTOR shall propose a method of determining weight of new materials to be delivered. The proposed method shall be submitted to the OWNER for review and approval.

2. PAYMENT

- a. Payment for the furnishing and placement of riprap bedding stone and drainage backfill (CA-7) will be made at the contract price per ton, multiplied by the total tonnage of actual CA-7 installed. Such payment shall cover all cost for material, necessary processing, transportation, labor, equipment, testing, surveying, quality control, and incidentals required for furnishing, handling, storing, and placement to complete the work specified on the Contract Drawings.

Q. BID ITEM NO.17, Furnish and Place Seeded Riprap

1. MEASUREMENT

- a. The per cubic yard price stipulated for Bid Item No. 17: Furnish and Place Seeded Riprap Measurement includes actual cubic yardage of riprap material and topsoil acceptably installed and approved by the OWNER.

2. PAYMENT

- a. Payment for the furnishing and placement of seeded riprap will be made at the contract price per cubic yard, multiplied by the total cubic yard of actual riprap material and topsoil installed. Such payment shall cover all cost for material, necessary processing, transportation, labor, equipment, testing, surveying, quality control, and incidentals required for furnishing, handling, storing, and placement to complete the work specified on the Contract Drawings.

R. BID ITEM NO.18, Furnish and Place Aquatic Planting Shelf Fill

1. MEASUREMENT

- a. The per cubic yard price stipulated for Bid Item No. 18: Furnish and Place Aquatic Planting Shelf Fill. Measurement for fill material placement will consist of actual cubic yardage of fill acceptably installed and approved by the Owner.

2. PAYMENT

- a. Payment for the furnishing and placement of aquatic shelf fill will be made at the contract price per cubic yard, multiplied by the total cubic yard of actual fill material placed. Such payment shall cover all cost for material, necessary processing, transportation, labor, equipment, testing, surveying, quality

MEASUREMENT AND PAYMENT

control, and incidentals required for furnishing, handling, storing, and placement to complete the work specified on the Contract Drawings.

S. BID ITEM NO.19, Furnish and Install Steel Sheet Piling and necessary Waler or Caps (LZ-3 or Approved Equal)

1. MEASUREMENT

The per square foot price stipulated for Bid Item No. 19: Furnish and Install Steel Sheet Piling and necessary Waler and Caps (LZ-3 or Approved Equal). Steel sheet pile shall be measured for payment by using the area of 2-dimensional projection of the wall area. Projected wall area shall be computed by multiplying the horizontal length of wall measured along the top of the pile centerline multiplied by the length of piles, measured from the tip elevation to the cut-off elevation. This will equal the square footage of sheet pile.

2. PAYMENT

- a. Payment shall cover all costs of furnishing, handling, storing, and installing the steel sheet piling and walers including clearing the drive line, placing, driving, cutting holes, connections and other appurtenant materials and work incident thereto. Payment for walers, concrete cap, weldments, drilling, cutting, and installing bolts shall be incidental to the cost of the steel sheet pile.
- b. Payment for Furnish and Install Appurtenant Metal Materials shall cover all costs of furnishing, handling, storing, and installing the appurtenant metals including all necessary appurtenant materials, welding, bolting, and work and backfilling that are incident thereto.

T. BID ITEM NO.20, Furnish and Place (CA-6)

1. MEASUREMENT

- a. The per ton price stipulated for Bid Item No. 20: Furnish and Place (CA-6). Measurement for the furnish and place (CA-6) will consist of actual tonnage of material acceptably placed in the work as determined by carrier displacement, certified scale weight tickets or by volume calculations performed by the OWNER. If volume calculations are used, the weight of material for payment shall be determined by the volume of material incorporated into the work as calculated by the ENGINEER using average-end-area method.
- b. Determination of Stone Weight. A weighing record will accompany each delivery, and shall include the name of the shipper, date, trailer number, gross, tare, and net weights. The weigher shall sign each weigh record. The CONTRACTOR shall propose a method of determining weight of new materials to be delivered. The proposed method shall be submitted to the OWNER for review and approval.

2. PAYMENT

- a. Payment for the furnishing and placement of (CA-6) will be made at the contract price per ton, multiplied by the total tonnage of actual CA-6 installed. Such payment shall cover all cost for material, necessary processing, transportation, labor, equipment, testing, surveying, quality control, and incidentals required for furnishing, handling, storing, and placement to complete the work specified on the Contract Drawings.

U. BID ITEM NO.21, Salvage, Handling, Temporary Storage, and Placement of Existing 24-inch Storm Sewer

1. MEASUREMENT

- a. The per lineal foot price stipulated for Bid Item No. 21: Salvage, Handling, Temporary Storage, and Placement of Existing 24-inch Storm Sewer. Measurement for the salvaging, handling, temporary storage, and placement of the 24-inch storm sewer will consist of actual lineal foot of pipe removed as approved by the OWNER. Measurements will be taken from center of junction fittings, catch basins or manholes, and will include the length of any aprons.

2. PAYMENT

- a. Payment for the salvaged 24-inch storm sewer will be made at the contract unit price per lineal foot of pipe removed, multiplied by the total number of actual 24-inch pipes acceptably placed. Such payment will be full compensation for labor, equipment, material, and all other related items required for the salvaging, handling, storing, and placement of the 24-inch storm sewer.

V. BID ITEM NO.22, Bituminous Trail

1. MEASUREMENT

- a. The per square foot price stipulated for Bid Item No. 22: Bituminous Trail. Measurement for the bituminous trail as shown on the Contract Drawings will consist of actual linear footage of bituminous trail installed and approved by the OWNER.

2. PAYMENT

- a. Payment for the installed bituminous trail will be made at the contract price per square foot, multiplied by the total square feet of actual bituminous trail installed. Such payment will be full compensation for labor, equipment, material, and all other related items including sub-surface preparation, stone base courses, bituminous binder course and surface courses, striping, walking surfaces and edge structures on both sides of the existing Asphalt Trails, and all other incidental work required for the installation of the bituminous trail.

W. BID ITEM NO.23, Bonded Limestone Aggregate Trail

1. MEASUREMENT

- a. The per square foot price stipulated for Bid Item No. 23: Bonded Limestone Aggregate Trail. Measurement for bonded limestone aggregate trail as shown on the Contract Drawings will consist of actual square footage of bonded limestone aggregate trail installed and approved by the OWNER.

2. PAYMENT

- a. Payment for the installed bonded limestone aggregate trail will be made at the contract price per square foot, multiplied by the total square feet of actual bonded limestone aggregate trail installed. Such payment will be full compensation for labor, equipment, material, and all other related items including excavation, stone base course, limestone placement, and all other incidental work required for the installation of the bonded limestone aggregate trail.

MEASUREMENT AND PAYMENT

X. BID ITEM NO.24, Metal Edging

1. MEASUREMENT

- a. The per linear foot price stipulated for Bid Item No. 24: Metal Edging. Measurement for metal edging along new bonded limestone aggregate trails will consist of actual linear feet of permanent metal edging installed and approved by the OWNER.

2. PAYMENT

- a. Payment for metal edging will be made at the contract price per liner foot, multiplied by the total linear feet of actual steel edging installed. Such payment will be full compensation for labor, equipment, material, and all other related items required to furnish, handle, store, and install the metal edging the as shown in the Contract Drawings.

Y. BID ITEM NO.25, Turf Tee Boxes

1. MEASUREMENT

- a. The per each price stipulated for Bid Item No. 25: Turf Tee Boxes. Measurements for turf tee boxes will consist of the actual tee boxes installed and approved by the OWNER.

2. PAYMENT

- a. Payment will be full compensation for labor, equipment, material, and all other related items required to furnish, handle, store, and install the turf tee boxes and shall be included in the unit price.

Z. BID ITEM NO.26, Portland Cement Concrete

1. MEASUREMENT

- a. The per square foot price stipulated for Bid Item No. 26: Portland Cement Concrete. Measurement for Portland Cement Concrete paving for the new fishing plaza, fishing access wall, stairs, and site furnishing concrete pads as shown on the Contract Drawings and will consist of the actual square footage of Portland Cement Concrete installed and approved by the OWNER. Stairs shall be measured by plan view square footage.

2. PAYMENT

- a. Payment for install concrete will be made at the contract price per square foot, multiplied by the total square feet of actual concrete installed. Such payment will be full compensation for labor, equipment, material, and all other related items including sub-grade preparation, formwork, reinforcement, expansion control, sand and granular base, concrete paving, surface finish, color admixture, curing, and seal paving required to install Portland Cement Concrete structures.

AA. BID ITEM NO.27, Limestone Seating

1. MEASUREMENT

- a. The LUMP SUM price for Bid Item No. 27: Limestone Seating. Measurement for limestone seating along northern shoreline will consist of LUMP SUM of permanent limestone seating installed and approved by the OWNER.

2. PAYMENT

- a. Payment for the limestone seating will be made at the LUMP SUM contract price. Such payment will be full compensation for labor, equipment, material,

MEASUREMENT AND PAYMENT

and all other related items required to furnish, handle, store, and install the limestone seating along the northern shoreline.

BB. BID ITEM NO. 28, Railing

1. MEASUREMENT

- a. The per linear foot price stipulated for Bid Item No. 28: Railing. Measurement for railing along the northern fishing plaza, a portion of the eastern shoreline fishing access nodes, and adjacent to the sediment forebay will consist of actual linear feet of permanent railing installed and approved by the OWNER.

2. PAYMENT

- a. Payment for the railing will be made at the contract price per linear foot, multiplied by the total linear feet of actual railing installed. Such payment will be full compensation for labor, equipment, material, and all other related items required to furnish, handle, store, and install the permanent railings as shown on the Contract Drawings.

CC. BID ITEM NO. 29, Chain Link Fence

1. MEASUREMENT

- a. The per linear foot price stipulated for Bid Item No. 29: Chain Link Fence. Measurement for chain link fencing will consist of actual linear feet of permanent chain link fencing installed and approved by the OWNER.

2. PAYMENT

- a. Payment for the permanent chain link fencing will be made at the contract price per linear foot, multiplied by the total linear feet of actual fence installed. Such payment will be full compensation for labor, equipment, material, and all other related items required to furnish, handle, store, and install the permanent chain link fencing.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

END OF SECTION

MEASUREMENT AND PAYMENT

SECTION 01 21 00 – PRICE AND PAYMENT PROCEDURES

PART 1 -- GENERAL

1.01 SUMMARY

A. Section Includes

1. Administrative and procedural requirements for allowances, Alternates, pricing of Work, and request for payment procedures.

1.02 PRICE AND PAYMENT PROCEDURES

A. Measurement and Payment

1. All Work and costs of this Section shall be incidental to the Project and included in the Total Base Bid.

1.03 INVOICES AND PAYMENTS

- ##### A. The CONTRACTOR shall submit separate invoices, progress or final waivers and certified payroll reports detailing the services provided directly. Invoices shall be submitted to the following for review and approval:

Des Plaines Park District
2222 Birch Street
Des Plaines, IL 60018
Attn: Paul Cathey
paulc@ddparks.org

- ##### B. Pay Requests shall be received by the Park District by the 15th of the month. No requests will be approved without complete waivers and certified payroll reports from the CONTRACTOR and all applicable subcontractor(s).
- ##### C. The Park District will require actual copies of the certified payroll for approval of payment. The Park District will not be retrieving them from the Prevailing Wage Portal.

1.04 BID UNIT PRICES

- ##### A. Provide access and assist Engineer in determining actual quantities of Bid Unit Price work.
- ##### B. Provide documentation to substantiate Bid Unit Price work.
- ##### C. If the Contractor delivers and places more of any material that is paid for on a Bid Unit Price basis than is required to perform the Work and thereby causes the materials to be wasted, the quantity wasted will be deducted from the final measurement for that Bid Item.

1.05 INCREASED/DECREASED QUANTITIES

- ##### A. No claim or adjustment in unit price compensation due to increased or decreased quantities is allowed.

- B. Certain proposal work items are included in anticipation of the possibility that conditions may be encountered which require this work. The estimates of quantities for these proposal items are based upon general experience in the area. They are included in the work to establish a bid unit price in the event that such work is necessary to complete the project. The quantity is not guaranteed and the extent of the work required will be dependent upon prevailing conditions. As such, no unit price adjustments for any magnitude of increased or decreased quantities is allowed for such work.

1.06 PAYMENT PROCEDURES

- A. Engineer will provide initial Application for Payment Form at the Preconstruction Conference.
- B. Submit 1 preliminary copy of progress payment application for review, consistent with Article 14 of the General Conditions. Submit 4 signed copies of Application for Payment to Engineer prior to the dates identified at the Preconstruction Conference.
- C. Attach the following supporting documentation, in addition to the requirements of General Conditions Article 14:
 - 1. Documentation to substantiate Bid Unit Price work.
 - 2. Updated construction schedule consistent with Section 01 33 00.
 - 3. Wage reports, etc. required for State of Wisconsin funded projects.

PART 2 -- PRODUCTS

Not Used.

PART 3 -- EXECUTION

Not Used.

END OF SECTION

SECTION 013115

PROJECT COORDINATION AND MEETINGS

PART 1 -- GENERAL

1.01 SECTION INCLUDES

- A. The Contract requirements for Preconstruction Conference and Project Progress Meetings.

1.02 PRECONSTRUCTION CONFERENCE

- A. Within fourteen (14) calendar days after the receipt of the CONTRACTOR's bond and certificate of insurance, but before CONTRACTOR starts Work at the site, the Park District will schedule a Preconstruction Conference.
- B. Location: TBD.
- C. Attendance:
 - 1. CONTRACTOR's Project Manager.
 - 2. CONTRACTOR's Superintendent.
 - 3. CONTRACTOR's "hands-on" person designated by CONTRACTOR to submit Shop Drawings and Contract Submittals to ENGINEER.
 - 4. Subcontractor's or Suppliers' representatives that CONTRACTOR may desire to invite or ENGINEER may request to be present.
 - 5. ENGINEER's representative.
 - 6. Park District's representative.
 - 7. Local utility representatives, if applicable.
 - 8. CONTRACTOR's Safety Professional or Safety Representative.
- D. Agenda shall be prepared by the Park District or ENGINEER and shall include, but not be limited to the following:
 - 1. Project safety procedures and requirements. Provide 24-hour emergency contact information, name and phone number, of assigned Contractor's superintendent, or Coordinator responsible for site safety. Provide 24-hour emergency contact information, name and phone number, of assigned personnel for administering Site Traffic Control and Protection.
 - 2. Submission of executed bonds and insurance certificates.
 - 3. Submission of list of Subcontractors, including but not limited to name, phone number, and email address, and include quantity and type of work to be sublet to each respective Subcontractor in accordance with the Illinois Department of Transportation (IDOT), Standard Specifications for Road and Bridge Construction (SSRBC), Article 108.01.

4. Designation of personnel representing the parties in the Contract and the ENGINEER.
5. Use of premises by Park District and CONTRACTOR.
6. Park District's requirements.
7. Survey.
8. Security and housekeeping procedures.
9. Acknowledgement of details within technical specifications including required contractor submittal process in accordance with Section 013300 – Contractor Submittals.
10. Presentation of a preliminary progress schedule, preliminary schedule of Shop Drawings, schedule of values, and sample submissions in accordance with Section 013300 – Contractor Submittals.
11. Liquidated damages.
 - a. Refer to Section 011400 – Construction and Schedule Constraints.
12. Direction of correspondence and coordinating responsibility.
13. Weekly and monthly progress meetings.
14. Equal opportunity requirements.
15. Application for progress payment, and progress payment procedures.
16. Change Order procedures.

1.03 PROJECT PROGRESS MEETINGS

- A. Schedule meetings in two-week intervals.
- B. Location: CONTRACTOR's field office.
- C. Attendance:
 1. CONTRACTOR's Project Manager.
 2. CONTRACTOR's Superintendent.
 3. CONTRACTOR's Safety Representative.
 4. Park District's Representative.
 5. ENGINEER's Representative.
 6. Other affected SUBCONTRACTORS.
 7. Others as appropriate to address and resolve agenda topics for each meeting.

D. CONTRACTOR shall make arrangements for meetings, prepare agenda with copies for participants, preside at meetings, record minutes, and distribute copies within two business days to Park District, ENGINEER, participants, and those affected by decisions made.

E. Suggested Agenda:

1. Review minutes of previous meeting.
2. Review Work progress since previous meeting.
3. Project safety concerns.
4. Field observations, problems, and conflicts.
5. Problems impeding Construction Schedule.
6. Review of off-site fabrication, delivery schedule.
7. Corrective measures and procedures to regain conformance with projected Construction Schedule.
8. Revisions to Construction Schedule.
9. Issues raised by Park District and ENGINEER.
10. Progress and schedule for succeeding Work period.
11. Coordination of schedules.
12. Review and update submittal schedule.
13. Maintenance of quality standards.
14. Pending changes and substitutions.
15. Review proposed changes for:
 - a. Effect on Construction Schedule and completion date.
 - b. Effect on other contracts of Project.
16. Other business.

F. Agenda containing specific subjects to be discussed shall be provided to each attendee and to Park District and ENGINEER at least 2 workdays before meeting.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

END OF SECTION

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SECTION 013233

PHOTOGRAPHIC DOCUMENTATION

PART 1 -- GENERAL

1.01 SECTION INCLUDES

- A. Contract requirements for photographs and/or digital video recording with audio description to be provided prior to, during, and after construction.
- B. The CONTRACTOR, as a minimum, shall note pre- and post-construction conditions of the following:
 - 1. All WORK areas, including, but not limited to, access corridors, disposal areas, and staging areas;
 - 2. Access roads, ramps, and other areas used to transport material or equipment to and from the Project Site;
 - 3. Condition of roadways, drives, walks, structures, and other features; and
 - 4. Any work completed by other contractors at the Site that will be impacted or otherwise affected by the CONTRACTOR's WORK.

1.02 RELATED SECTIONS:

- A. The WORK of the following Sections is related to the WORK of this Section. Other Sections, not referenced below, may also be related to the proper performance of this WORK. It is the CONTRACTOR's responsibility to perform all WORK required by the Contract Documents.
 - 1. Section 013300 – Submittals.

1.03 SUBMITTALS

- A. Procedures: Section 013300 – Submittals.
- B. Submit for Information Only:
 - 1. All photographs and video recordings shall be submitted to the Park District for record purposes prior to, but not more than three weeks before, commencement of any construction activity.
 - 2. All photographs and video recordings of the post-construction conditions shall be completed and submitted to the Park District prior to the final Project inspection by the Park District.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION

3.01 GENERAL

- A. Coverage shall be continuous to the extent possible (avoid shutting off the camera once recording has started).

- B. The area to be recorded shall include existing visible features such as the existing storm pipes and outfalls, pavements, curbs, roads, sidewalks, trees and tree canopies, retaining walls, fences, visible utilities, and the exterior of buildings and structures that may be affected by construction. Of particular interest are any existing fractures, defects, imperfections, or signs of deterioration apparent on surface features.
- C. Record conditions during times of good visibility. Perform no outside recording during periods of visible precipitation or fog, or when the ground is covered with leaves, debris, standing water, or snow.
- D. Use auxiliary lighting to produce proper detail and perspective in shadow areas, and in other conditions requiring artificial illumination.
- E. Inspection coverage deemed unacceptable by the Park District due to poor photo or video detail, shaky image, unintelligible audio, poor organization, or other quality issues, will be cause for rejection of the record. If quality is deficient, as determined by the Park District, repeat the survey using alternative equipment or methods as necessary to correct the deficiency, at no additional cost to the Park District.

3.02 VIDEO RECORDING

A. Performance Requirements

1. Produce a color video record, with audio description, of surface features within the entire project area, including staging areas off the alignment, and access routes where vehicles and equipment will pass.
2. Perform audio-video recording of conditions to provide a reliable basis for restoring surface features affected by the WORK, with minimum controversy.
3. Pan the camera slowly from side to side across the area to provide direct center-screen viewing of features. Control panning rates and zoom-in zoom-out rates such that objects can be viewed clearly on playback.
4. Audio description shall be made simultaneously with and shall support the video coverage. Identify, visually and audibly, local landmarks or other recognizable features, at frequent intervals to indicate camera location.
5. The camera operator shall provide precise and concise explanatory notes, reproduced on the audio portion with proper volume, clarity, and absence of distortion.
6. Video recording shall be time stamped and narrated giving locations of items being shown.
7. Narration shall include date, location, and other pertinent details such as existing conditions or description of activity.

END OF SECTION

SECTION 013300

CONTRACTOR SUBMITTALS

PART 1 -- GENERAL

1.01 GENERAL

- A. Wherever submittals are required by the Contract Documents, submit them to directly to the OWNER and ENGINEER using the OWNER's SharePoint website.
- B. Within 14 Days after the date of commencement as stated in the Notice to Proceed, submit the following items for review:
 - 1. Submittal Schedule
 - a. Submit a preliminary schedule of Shop Drawings, Samples, and proposed Substitutes ("or equal") submittals listed in the Bid.
 - b. Base the schedule of submittals on CONTRACTOR's priority, planned construction sequence and schedule, long-lead items, and size of submittal package.
 - c. Allow time for resubmittals.
 - 2. Submit a list of permits and licenses the CONTRACTOR shall obtain, indicating the agency required to grant the permit and the expected date of submittal for the permit and required date for receipt of the permit.

1.02 PRECONSTRUCTION CONFERENCE SUBMITTALS

- A. At the preconstruction conference of Section 011000 – Summary of Work, submit the following items to the ENGINEER for review:
 - 1. List of permits and licenses the CONTRACTOR shall obtain, indicating the agency required to grant the permit, the expected date of submittal for the permit, and required date for receipt of the permit.
 - 2. Preliminary list of Contractor Submittals as defined within the Technical Specifications.
 - 3. Preliminary schedule of values in accordance with Section 012000 – Measurement and Payment.
 - 4. Project progress schedule in accordance with the Illinois Department of Transportation (IDOT), Standard Specifications for Road and Bridge Construction (SSRBC), Article 108.02.

1.03 SHOP DRAWINGS

- A. Wherever called for in the Contract Documents or where required by the OWNER and ENGINEER, the CONTRACTOR shall furnish to the OWNER and ENGINEER for review, electronic submittals through the OWNER's SharePoint website as described in Part 3 of this Section. If the CONTRACTOR determines there is a submittal(s) that cannot be delivered electronically, the CONTRACTOR shall obtain approval to submit

CONTRACTOR SUBMITTALS

as a hard copy from the OWNER and/or the ENGINEER. If approval is obtained, the CONTRACTOR shall furnish three copies of each Shop Drawing submittal package.

- B. Shop Drawings may include detail design calculations, shop-prepared drawings, fabrication and installation drawings, erection drawings, lists, graphs, catalog sheets, data sheets, and similar items.
- C. Whenever the CONTRACTOR is required to submit design calculations as part of a submittal, such calculations shall bear the signature and seal of an engineer registered in the appropriate engineering or professional discipline and in the state wherein the Project is located, unless otherwise indicated.
- D. Transmittal Form
 - 1. Shop Drawing submittals shall be accompanied by the ENGINEER's standard submittal transmittal form, a reproducible copy of which is available from the ENGINEER.
 - 2. A submittal without the form, or where applicable items on the form have not been completed, will be returned for resubmittal.
- E. Organization
 - 1. Use a single submittal transmittal form for each technical specification Section or item or class of material or equipment for which a submittal is required.
 - 2. A single submittal covering multiple Sections will not be accepted, unless the primary specification references other Sections for components: For example, if a pump Section references other Sections for the motor, shop-applied protective coating, anchor bolts, local control panel, and variable frequency drive, a single submittal would be accepted, whereas a single submittal covering vertical turbine pumps and horizontal split-case pumps would not be accepted.
 - 3. On the transmittal form, index the components of the submittal and insert tabs in the submittal to match the components.
 - 4. Relate the submittal components to specification paragraph and subparagraph, Drawing number, detail number, schedule title, as applicable.
 - 5. Unless otherwise indicated, match terminology, names and numbers used in the submittals with those used in the Contract Documents.
- F. Format
 - 1. Minimum sheet size shall be 8-1/2 inches by 11 inches, and maximum sheet size shall be 24 inches by 36 inches.
 - 2. Number every page in a submittal in sequence.
 - 3. Collate and staple or bind, as appropriate, each copy of a submittal; the ENGINEER will not collate sheets or copies.
 - 4. Electronic copies shall be submitted in Adobe Acrobat portable document format (PDF) and shall be fully bookmarked so that the reviewer may quickly find specific information located within the submittal.

5. Where product data from a manufacturer is submitted, clearly mark which model is proposed, with complete pertinent data capacities, dimensions, clearances, diagrams, controls, connections, anchorage, and supports.
6. Present a sufficient level of detail for assessment of compliance with the Contract Documents.
7. Numbering
 - a. Assign to each submittal a unique number.
 - b. Number the submittals sequentially, with the submittal numbers clearly noted on the transmittal.
 - c. Assign original submittals a numeric submittal number followed by a decimal point and a numeric digit in order to distinguish between the original submittal and each resubmittal: For example, if submittal "25.1" requires a resubmittal, the first resubmittal will bear the designation "25.2" and the second resubmittal will bear the designation "25.3," and so on.
- G. Disorganized submittals that do not meet the requirements of the Contract Documents will be returned without review.
- H. ENGINEER's Review
 1. Except as otherwise indicated, the ENGINEER will return prints of each submittal to the CONTRACTOR with comments noted thereon, within 21 Days following receipt by the ENGINEER.
 2. It is considered reasonable that the CONTRACTOR shall make a complete and acceptable submittal to the ENGINEER by the first resubmittal on an item.
 3. The OWNER reserves the right to withhold monies due to the CONTRACTOR to cover additional costs of the ENGINEER's review beyond the first resubmittal.
 4. The ENGINEER'S maximum review period for each submittal or resubmittal will be 21 Days; thus, for a submittal that requires 2 resubmittals before it is complete, the maximum review period could be 63 Days.
- I. If a submittal is returned to the CONTRACTOR marked "NO EXCEPTIONS TAKEN," formal revision and resubmission will not be required.
- J. If a submittal is returned marked "MAKE CORRECTIONS NOTED," the CONTRACTOR shall make the corrections on the submittal, but formal revision and resubmission will not be required.
- K. Resubmittals
 1. If a submittal is returned marked "REVISE AND SUBMIT," the CONTRACTOR shall revise the submittal and resubmit the required number of copies.
 2. Resubmittal of portions of multi-page or multi-drawing submittals will not be accepted: For example, if a Shop Drawing submittal consisting of 10 drawings contains one drawing noted as "REVISE AND SUBMIT," the submittal as a whole is deemed "REVISE AND SUBMIT," and 10 drawings are required to be resubmitted.

CONTRACTOR SUBMITTALS

3. Every change from a submittal to a resubmittal or from a resubmittal to a subsequent resubmittal shall be identified and flagged on the resubmittal.

L. Rejected Submittals

1. If a submittal is returned marked "REJECTED-RESUBMIT," it shall mean either that the proposed material or product does not satisfy the specification, the submittal is so incomplete that it cannot be reviewed or is a substitution request not submitted in accordance with the Specifications.
 - a. In the first 2 cases, the CONTRACTOR shall prepare a new submittal and shall submit the required number of copies.
 - b. In the latter case, the CONTRACTOR shall submit the substitution request according to the requirements of the Specifications.
2. The resubmittal of rejected portions of a previous submittal will not be accepted.

M. The fabrication of an item may commence only after the ENGINEER has reviewed the pertinent submittals and returned copies to the CONTRACTOR marked either "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED."

N. Corrections indicated on submittals shall be considered as changes necessary to meet the requirements of the Contract Documents and shall not be taken as changes to the contract requirements.

O. Review by CONTRACTOR

1. Submittals shall be carefully reviewed by an authorized representative of the CONTRACTOR prior to submission to the ENGINEER.
2. Each submittal shall be dated and signed by the CONTRACTOR as being correct and in strict conformance with the Contract Documents.
3. In the case of Shop Drawings, each sheet shall be so dated and signed.
4. Any deviations from the Contract Documents shall be noted on the transmittal sheet.
5. The ENGINEER will only review submittals that have been so verified by the CONTRACTOR.
6. Non-verified submittals will be returned to the CONTRACTOR without action taken by the ENGINEER, and any delays caused thereby shall be the total responsibility of the CONTRACTOR.

P. Conformance

1. Corrections or comments made on the CONTRACTOR's Shop Drawings during review shall not relieve the CONTRACTOR from compliance with Contract Drawings and Specifications.
2. Review is for conformance to the design concept and general compliance with the Contract Documents only.

3. The CONTRACTOR shall be responsible for confirming and correlating quantities and dimensions, fabrication processes and techniques, coordinating WORK with the trades, and satisfactory and safe performance of the WORK.

1.04 RECORD DRAWINGS

A. On-Site Drawings Set

1. Maintain one set of Drawings at the Site for the purpose of the ENGINEER to prepare record drawings.
2. On this set, mark every project condition, location, configuration, and any other change or deviation which may differ from the Contract Drawings at the time of award, including buried or concealed construction and utility features that are revealed during the course of construction.
3. Give special attention to recording the horizontal and vertical location of buried utilities that differ from the locations indicated, or that were not indicated on the Contract Drawings.
4. Supplement the record drawings by any detailed sketches as necessary or as directed, in order to fully indicate the WORK as actually constructed.
5. The record drawings are the CONTRACTOR's representation of record conditions, shall include revisions made by addenda and change orders, and shall be maintained up-to-date during the progress of the WORK.
6. Use red ink for alterations and notes.
7. Notes shall identify relevant Change Orders by number and date.
8. CONTRACTOR must keep all records current. All record entries must be made within 24 hours after receipt of the information that a change in Work has been performed.
9. On-Site Drawing set shall be accessible to the ENGINEER during the construction period.

B. Record CAD Drawings

1. CONTRACTOR to provide On-Site Drawings Set with project notes and redlines for the ENGINEER to produce Record CAD Drawings.
2. Immediately before inspection for Certificate of Substantial Completion, the CONTRACTOR shall review marked-up Record Prints with ENGINEER.

C. Final Payment

1. Final walk-through of the specified Work with the Park District Staff in accordance with Section 017700 – Project Closeout.

- D. Information submitted by the CONTRACTOR will be assumed to be correct, and the CONTRACTOR shall be responsible for the accuracy of such information.

1.05 QUALITY CONTROL (QC) SUBMITTALS

- A. Quality control submittals are defined as those required by the Specifications to present documentary evidence to the ENGINEER that the CONTRACTOR has satisfied certain requirements of the Contract Documents.
- B. Unless otherwise indicated, QC submittals shall be submitted:
 - 1. Before delivery and unloading, for the following types of submittals:
 - a. Manufacturers' installation instructions;
 - b. Manufacturers' and Installers' experience qualifications;
 - c. Ready mix concrete delivery tickets;
 - d. Design calculations;
 - e. Affidavits and manufacturers' certification of compliance with indicated product requirements;
 - f. Laboratory analysis results; and,
 - g. Factory test reports.
 - 2. Within 30 Days of the event documented for the following types of submittals:
 - a. Manufacturers' field representative certification of proper installation;
 - b. Field measurement; and,
 - c. Field test reports.
- C. The ENGINEER will record the date that a QC submittal was received and review it for compliance with submittal requirements, but the review procedures above for Shop Drawings and samples will not apply.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION

3.01 ACCESS AND USE OF THE OWNER'S SHAREPOINT WEBSITE

- A. The CONTRACTOR shall utilize the OWNER's SharePoint website for all written CONTRACTOR correspondence, submittals, transmittals, or other communication where feasible.
- B. The CONTRACTOR shall request access to the OWNER's SharePoint website, by providing name, employer, and email address of each individual for which access is requested.
- C. CONTRACTOR is required to have access to computer hardware and software that is compatible with the OWNER's SharePoint system.
- D. CONTRACTOR shall verify current system requirements at the start of the contract and may need to adjust requirements during the contract period to accommodate

CONTRACTOR SUBMITTALS

updates or changes to the OWNER's system. The OWNER's system is configured to work with any open internet connection, however specific firewall or security setting limiting internet content on the CONTRACTOR's system could impact performance. Adjustments to these settings or work around processes can be implemented to mitigate the issues.

END OF SECTION

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SECTION 013550

ENVIRONMENTAL PROTECTION

PART 1 -- GENERAL

1.01 SUMMARY

- A. The Contract requirements for environmental controls needed to be maintained during construction.
- B. The CONTRACTOR shall minimize environmental pollution and damage that may occur as the result of construction operations. The environmental resources within the project boundaries and those affected outside the limits of permanent WORK shall be protected during the entire duration of this contract. The CONTRACTOR shall comply with all applicable environmental Federal, State, Regional, and local laws and regulations. The CONTRACTOR shall be responsible for any delays resulting from failure to comply with environmental laws and regulations.
- C. The CONTRACTOR shall ensure compliance with this section by subcontractors.

1.02 RELATED DOCUMENTS

- A. Plans and general provisions of the Contract, including General Conditions, General Specifications, Divisions 1, 2, 3, 31, 32, 33, and 35 of the Specifications, apply to this Section.

1.03 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referred in the text by basic designation only.
 - 1. U.S. ARMY CORPS OF ENGINEERS (USACE), WETLAND MANUAL, Corps of Engineers Wetlands Delineation Manual Technical Report. Y-87-1
 - 2. Association of Illinois Soil and Water Conservation Districts, ILLINOIS URBAN MANUAL (IUM) <http://aiswcd.org/IUM/index/html>
 - 3. U.S. NATIONAL ARCHIVES AND RECORDS ADMINISTRATION (NARA)
 - a. 33 CFR 328 Definitions of Waters of the United States.
 - b. 40 CFR 261 Identification and Listing of Hazardous Waste.
 - c. 40 CFR 262 Standards Applicable to Generators of Hazardous Waste.
 - d. 40 CFR 279 Standards for the Management of Used Oil.
 - e. 40 CFR 302 Designation, Reportable Quantities, and Notification.
 - f. 40 CFR 355 Emergency Planning and Notification.
 - g. 40 CFR 68 Chemical Accident Prevention Provisions.
 - h. 49 CFR 171 - 178 Hazardous Materials Regulations.

1.04 SUBMITTALS

A. Environmental Protection Plan

1. Prior to commencing construction site activities or delivery of materials to the site, the CONTRACTOR shall submit an Environmental Protection Plan for review and approval by the ENGINEER. The purpose of the Environmental Protection Plan is to present a comprehensive overview of known or potential environmental issues that the CONTRACTOR must address during construction. Issues of concern shall be defined within the Environmental Protection Plan as outlined in this section. The CONTRACTOR shall address each topic at a level of detail commensurate with the environmental issue and required construction task(s). Topics or issues that are not identified in this section, but that the CONTRACTOR considers necessary, shall be identified and discussed after those items formally identified in this section. Prior to submittal of the Environmental Protection Plan, the CONTRACTOR shall meet with the ENGINEER for the purpose of discussing the implementation of the initial Environmental Protection Plan; possible subsequent additions and revisions to the plan including any reporting requirements; and methods for administration of the CONTRACTOR's Environmental Plan. The Environmental Protection Plan shall be current and maintained onsite by the CONTRACTOR. The Environmental Protection Plan shall include a Stormwater Pollution Prevention Plan. The CONTRACTOR shall review the Environmental Protection Plan, including the Stormwater Pollution Prevention Plan, and then shall submit the Notice of Intent (NOI) to the Illinois Environmental Protection Agency after the plan has been approved. No construction shall take place before the submission of the NOI; approval of the National Pollutant Discharge Elimination System (NPDES) permit requires 30 days after the submission of the NOI. The CONTRACTOR shall NOT begin WORK activities until 30 days after the submission of the NOI. Approval of the CONTRACTOR's plan will not relieve the CONTRACTOR of his responsibility for adequate and continuing control of pollutants and other environmental protection measures
2. Compliance: No requirement in this Section shall be construed as relieving the CONTRACTOR of any applicable Federal, State, Regional, and local environmental protection laws and regulations. During Construction, the CONTRACTOR shall be responsible for identifying, implementing, and submitting for approval any additional requirements to be included in the Environmental Protection Plan.
3. Contents: The Environmental Protection Plan shall include, but shall not be limited to, the following items. If any of the following items are deemed to not be applicable to this project, the CONTRACTOR shall include the item header and a brief description of why it is not applicable:
 - a. Name(s) of person(s) within the CONTRACTOR's organization who is (are) responsible for ensuring adherence to the Environmental Protection Plan.
 - b. Name(s) and qualifications of person(s) responsible for manifesting hazardous and special waste to be removed from the site, if applicable.
 - c. Name(s) and qualifications of person(s) responsible for training the CONTRACTOR's environmental protection personnel.
 - d. Description of the CONTRACTOR's environmental protection personnel training program, including training for subcontractors.

- e. A Stormwater Pollution Prevention Plan that identifies the type and location of the erosion and sediment controls to be provided. The plan must meet the requirements of the Illinois NPDES Permit No. ILR10. The management practices, controls, and other provisions contained in the plan must be at least as protective as the requirements in the Illinois Environmental Protection Agency's Illinois Urban Manual, 2013. The Contents of the plan shall include all items listed in Part IV of the permit, including but not limited to:
 - 1) Site description, controls, maintenance, inspections, and non-stormwater discharges.
 - 2) A map of the final site conditions.
 - 3) A site construction plan that includes the locations and dimensions of land disturbing activities, locations of soil stockpiles, locations and dimensions of erosion control measures, and a schedule with the start and finish dates of each land disturbing activity, including the installation of erosion control measures. Provisions and a schedule for maintenance of the erosion control measures during construction shall also be included in the plan.
 - 4) The plan shall contain the certification statement contained in Part IV (F) of the NPDES Permit No. ILR10.
- f. Plans showing locations of proposed temporary excavations or embankments for haul roads, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil materials including methods to control runoff and to contain materials on the site.
- g. Traffic control plans including measures to reduce erosion of temporary roadbeds by construction traffic, especially during wet weather. The plan shall include measures to minimize the amount of mud transported onto paved public roads by vehicles or runoff.
- h. Work area plan showing the proposed activity in each portion of the area and identifying the areas of limited use or non-use. The plan shall include measures for marking the limits of use areas including methods for protection of features to be preserved within authorized work areas.
- i. The Spill Control Plan shall include the procedures, instructions, and reports to be used in the event of an unforeseen spill of a substance regulated by 40 CFR 68, 40 CFR 302, 40 CFR 355, and/or regulated under State or Local laws and regulations. This plan shall include as a minimum:
 - 1) The name of the individual who will report any spills or hazardous substance releases and who will follow up with complete documentation. This individual shall immediately notify the ENGINEER and the local fire department or emergency response agency in addition to the legally required Federal, State, Regional, and local reporting channels (including the National Response Center 1-800-424-8802) if a reportable quantity is released to the environment. The plan shall contain a list of the required reporting channels and telephone numbers.
 - 2) The name and qualifications of the individual who will be responsible for implementing and supervising the containment and cleanup.

- 3) Training requirements for CONTRACTOR's personnel and any subcontractors, and methods of accomplishing the training.
 - 4) A list of materials and equipment to be immediately available at the job site, tailored to cleanup WORK of the potential hazard(s) identified.
 - 5) The names and locations of suppliers of containment materials and locations of additional fuel oil recovery, cleanup, restoration, and material-placement equipment available in case of an unforeseen spill emergency.
 - 6) The methods and procedures to be used for expeditious contaminant cleanup.
- j. A non-hazardous solid waste disposal plan identifying methods and locations for solid waste disposal, including clearing debris. Specific information shall be provided on the proposed disposal of solid waste, clearing debris, and demolition debris. The plan shall include schedules for disposal. The CONTRACTOR shall identify any subcontractors responsible for the transportation and disposal of waste. Licenses or permits shall be submitted for solid waste disposal sites that are not a commercial operating facility. Evidence of the disposal facility's acceptance of the waste shall be attached to this plan during the construction.
 - k. An air pollution control plan detailing provisions to assure that dust, debris, materials, trash, etc., do not become air borne and travel off the project site. The air pollution control plan shall include a dust control plan.
 - l. A contaminant prevention plan that: identifies potentially hazardous substances to be used on the job site; identifies the intended actions to prevent introduction of such materials into the air, water, or ground; and details provisions for compliance with Federal, State, Regional, and local laws and regulations for storage and handling of these materials. A copy of the Material Safety Data Sheets (MSDS) and the maximum quantity of each hazardous material to be on site at any given time shall be included in the contaminant prevention plan. As new hazardous materials are brought on site or removed from the site, the plan shall be updated.
 - m. A wastewater management plan that identifies the methods and procedures for management and/or discharge of waste waters which are directly derived from construction activities.
4. Appendix: Copies of all environmental permits, permit application packages, approvals to construct, notifications, certifications, reports, and termination documents shall be attached, as an appendix, to the Environmental Protection Plan.

1.05 DEFINITIONS

- A. Environmental Pollution and Damage: Environmental pollution and damage is the presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade the environment aesthetically, culturally and/or historically.

- B. Environmental Protection: Environmental protection is the prevention/control of pollution and habitat disruption that may occur to the environment during construction. The control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.
- C. CONTRACTOR Generated Hazardous Waste: CONTRACTOR generated hazardous waste means materials that, if abandoned or disposed of, may meet the definition of a hazardous waste. These waste streams would typically consist of material brought on site by the CONTRACTOR to execute WORK, but are not fully consumed during the course of construction. Examples include, but are not limited to, excess paint thinners (i.e. methyl ethyl ketone, toluene etc.), waste thinners, excess paints, excess solvents, waste solvents, and excess pesticides, and contaminated pesticide equipment rinse water.
- D. Land Application for Discharge Water: The term "Land Application" for discharge water implies that the CONTRACTOR shall discharge water at a rate which allows the water to percolate into the soil. No sheeting action, soil erosion, discharge into storm sewers, discharge into defined drainage areas, or discharge into the "waters of the United States" shall occur. Land Application shall be in compliance with all applicable Federal, State, Regional, and local laws and regulations.
- E. Surface Discharge: The term "Surface Discharge" implies that the water is discharged with possible sheeting action and subsequent soil erosion may occur. Waters that are surface discharged may terminate in drainage ditches, storm sewers, creeks, and/or "waters of the United States" and would require a permit to discharge water from the governing agency. All projects with land disturbances greater than or equal to one acre in total area must have a National Pollution Discharge Elimination System (NPDES) Construction Site Activity Storm Water Permit, issued by the Illinois Environmental Protection Agency. All projects with discharge to waters of the United States must have a Section 401 Water Quality Permit issued by the Illinois Environmental Protection Agency.
- F. Waters of the United States: All waters that are under the jurisdiction of the Clean Water Act, as defined in 33 CFR 328. The CONTRACTOR shall comply with all provisions of the (Clean Water Act) Section 401 Water Quality permit or waiver for this project.
- G. Wetlands: Wetlands means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, and bogs. Official determination of whether or not an area is classified as a wetland must be done in accordance with the USACE WETLAND MANUAL.

1.06 MEASUREMENT AND PAYMENT

- A. No separate payment will be made for WORK covered under this section. The CONTRACTOR shall be responsible for payment of fees associated with environmental permits, application, and/or notices obtained by the CONTRACTOR. All costs associated with this section shall be included in the contract price. The CONTRACTOR shall be responsible for payment of all fines/fees for violation or non-compliance with Federal, State, Regional and local laws and regulations.

1.07 PROTECTION FEATURES

- A. Prior to the start of any onsite construction activities, the CONTRACTOR and the ENGINEER shall make a joint condition survey. Immediately following the survey, the CONTRACTOR shall prepare a brief report including a plan describing the features requiring protection under the provisions of the Contract Clauses, which are not specifically identified on the plans as environmental features requiring protection along with the condition of trees, shrubs and grassed areas immediately adjacent to the site of WORK and adjacent to the CONTRACTOR's assigned storage area and access route(s), as applicable. This survey report shall be signed by both the CONTRACTOR and the ENGINEER upon mutual agreement as to its accuracy and completeness. The CONTRACTOR shall protect those environmental features included in the survey report and any indicated on the plans, regardless of interference which their preservation may cause to the CONTRACTOR's WORK under the contract.

1.08 SPECIAL ENVIRONMENTAL REQUIREMENTS (NOT USED).

1.09 ENVIRONMENTAL ASSESSMENT OF CONTRACT DEVIATIONS

- A. Any deviations, requested by the CONTRACTOR, from the plans, plans and specifications that may have an environmental impact will be subject to approval by the ENGINEER and may require an extended review, processing, and approval time. The ENGINEER reserves the right to disapprove alternate methods, even if they are more cost effective, if the ENGINEER determines that the proposed alternate method will have an adverse environmental impact.

1.10 NOTIFICATION

- A. The ENGINEER will notify the CONTRACTOR in writing of any observed noncompliance with Federal, State Regional, or local environmental laws or regulations, permits, and other elements of the CONTRACTOR's Environmental Protection plan. The CONTRACTOR shall, after receipt of such notice, inform the ENGINEER of the proposed corrective action and take such action when approved by the ENGINEER. The Contracting Officer may issue an order stopping all or part of the WORK until satisfactory corrective action has been taken. No time extensions shall be granted or equitable adjustments allowed to the CONTRACTOR for any such suspensions. This is in addition to any other actions the Contracting Officer may take under the contract, or in accordance with the Federal Acquisition Regulation or Federal Law.

1.11 RIGHTS-OF-WAY

- A. The CONTRACTOR shall not do any WORK that would affect any oil, gas, sewer, or water pipeline; any telephone, or electric transmission line; any fence; or any other structure, nor shall the CONTRACTOR enter upon the rights-of-way involved until notified that the Park District has secured authority therefore from the proper party. The CONTRACTOR shall implement actions required by those agreements.
- B. After authority has been obtained, the CONTRACTOR shall give said party due notice of its intention to begin WORK, if required by said party, and shall remove, shore, support, or otherwise protect such pipeline, transmission line, ditch, fence, or structure, or replace the same.

1.12 PROTECTION OF STREET OR ROADWAY MARKERS

A. The CONTRACTOR shall not destroy, remove, or otherwise disturb any existing survey markers or other existing street or roadway markers without proper authorization. No pavement breaking or excavation shall be started until all survey or other permanent marker points that will be disturbed by the construction operations have been properly referenced. Survey markers or points disturbed by the CONTRACTOR shall be accurately restored after street or roadway resurfacing has been completed.

1.13 EXISTING UTILITIES AND IMPROVEMENTS

A. General: The CONTRACTOR shall protect underground utilities and other improvements which may be impaired during construction operations, regardless of whether or not the utilities are indicated on the Plans. The CONTRACTOR shall take all possible precautions for the protection of unforeseen utility lines to provide for uninterrupted service and to provide such special protection as may be necessary.

B. Exploratory Excavation: Except where the Plans indicate utilities have been field located during design or certain utility locations shall be exposed as part of the WORK, the CONTRACTOR shall be responsible for exploratory excavations as it deems necessary to determine the exact locations and depths of utilities that may interfere with its work.

- 1. All such exploratory excavations shall be performed as soon as practicable after Notice to Proceed and, in any event, a sufficient time in advance of construction to avoid possible delays to the CONTRACTOR's progress.
- 2. When such exploratory excavations show the utility location as shown on the Plans to be in error, the CONTRACTOR shall so notify the Park District.
- 3. The number of exploratory excavations required shall be that number that is sufficient to determine the alignment and grade of the utility.

C. Utilities to be Moved: In case it shall be necessary to move the property of any public utility or franchise holder, such utility company or franchise holder will, upon request of the CONTRACTOR, be notified by the Park District to move such property within a specified reasonable time. When utility lines that are to be removed are encountered within the area of operations, the CONTRACTOR shall notify the Park District a sufficient time in advance for the necessary measures to be taken to prevent interruption of service.

D. Utilities to be Removed: Where the proper completion of the WORK requires the temporary or permanent removal and/or relocation of an existing utility or other improvement that is indicated, the CONTRACTOR shall remove and, without unnecessary delay, temporarily replace or relocate such utility or improvement in a manner satisfactory to the Park District and the utility. In all cases of such temporary removal or relocation, restoration to the former location shall be accomplished by the CONTRACTOR in a manner that will restore or replace the utility or improvement as nearly as possible to its former locations and to as good or better condition than found prior to removal.

E. Park District's Right of Access: The right is reserved to the Park District and to the owners of public utilities and franchises to enter at any time upon any public street,

alley, right-of-way, or easement for the purpose of making changes in their property made necessary by the WORK of this Contract.

- F. Maintaining in Service: Unless indicated otherwise, oil and gasoline pipelines, power, and telephone or the communication cable ducts, gas and water mains, irrigation lines, sewer lines, storm drain lines, poles, and overhead power and communication wires and cables encountered along the line of the WORK shall remain continuously in service during all the operations under the Contract, unless other arrangements satisfactory to the Park District are made with the owner of said pipelines, duct, main, irrigation line, sewer, storm drain, pole, or wire or cable. The CONTRACTOR shall be responsible for and shall repair all damage due to its operations, and the provisions of this Section shall not be abated even in the event such damage occurs after backfilling or is not discovered until after completion of the backfilling.

1.14 TREES OR SHRUBS WITHIN STREET RIGHTS-OF-WAY AND PROJECT LIMITS

- A. General: Except where trees or shrubs are indicated to be removed, the CONTRACTOR shall exercise all necessary precautions so as not to damage or destroy any trees or shrubs, including those lying within street rights-of-way and project limits, and shall not trim or remove any trees unless such trees have been approved for trimming or removal by the Park District. Existing trees and shrubs that are damaged during construction shall be trimmed or replaced by the CONTRACTOR. Tree trimming and replacement shall be accomplished in accordance with the following paragraphs.
- B. Trimming: Symmetry of the tree shall be preserved; no stubs or splits or torn branches left; clean cuts shall be made close to the trunk or large branch. Spikes shall not be used for climbing live trees. Cuts over 1-1/2 inches in diameter shall be coated with a tree paint product that is waterproof, adhesive, and elastic, and free from kerosene, coal tar, creosote, or other material injurious to the life of the tree.
- C. Replacement: The CONTRACTOR shall immediately notify the Park District if any tree or shrub is damaged by the CONTRACTOR's operations. If, in the opinion of the Park District, the damage is such that replacement is necessary, the CONTRACTOR shall replace the tree or shrub at its own expense. The tree or shrub shall be of a like size and variety as the one damaged, or, if of a smaller size, the CONTRACTOR shall pay to the Park District of said tree a compensatory payment acceptable to the Park District. Planting of replacement trees and shrubs shall be in accordance with the Specifications. Unless otherwise indicated, the CONTRACTOR shall water and maintain the replacement trees and shrubs for 6 months after planting.

1.15 LAWN AREAS

- A. Lawn or landscaped areas damaged during construction shall be repaired to match the pre-construction condition to the satisfaction of the Park District.

1.16 NOTIFICATION BY THE CONTRACTOR

- A. Prior to any excavation in the vicinity of any existing underground facilities, including all water, sewer, storm drain, gas, petroleum products, or other pipelines; all buried electric power, communications, or television cables; all traffic signal and street lighting facilities; and all roadway and state highway rights-of-way, the CONTRACTOR shall notify the respective authorities representing the owners or agencies responsible for such facilities not less than 3 days nor more than 7 days prior to excavation so that a representative of said owners or agencies can be present during such work if they so

desire. The CONTRACTOR shall also notify the regional notification center at 1-800-892-0123 at least 2 days, but no more than 14 days, prior to such excavation.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION

3.01 ENVIRONMENTAL PERMITS AND COMMITMENTS

- A. The CONTRACTOR shall be responsible for obtaining and complying with all environmental permits and commitments required by Federal, State, Regional, and local environmental laws and regulations.
- B. The CONTRACTOR shall perform work in compliance with the approved Environmental Protection Plan. In case of conflict, 3.01.A supersedes the Environmental Protection Plan.

3.02 PREVIOUSLY USED EQUIPMENT

- A. The CONTRACTOR shall clean all previously used construction equipment prior to bringing it onto the project site. The CONTRACTOR shall ensure that the equipment is free from soil residuals, egg deposits from plant pests, noxious weeds, and plant seeds. The CONTRACTOR shall consult with the USDA jurisdictional office for additional cleaning requirements.

3.03 TRAINING OF CONTRACTOR PERSONNEL

- A. The CONTRACTOR's personnel and subcontractor personnel shall be trained in all phases of environmental protection and pollution control.

END OF SECTION

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SECTION 013553

SITE SECURITY

PART 1 -- GENERAL

1.01 SECURITY PROGRAM

A. The CONTRACTOR shall:

- a. Protect WORK, existing premises, and OWNER'S operations from theft, vandalism, and unauthorized entry.
- b. Initiate program in coordination with OWNER'S existing security system at mobilization.

1.02 ENTRY CONTROL

A. The CONTRACTOR shall:

- a. Restrict entry of persons and vehicles into Site and existing facilities.
- b. Allow entry only to authorized persons with proper identification.
- c. Maintain log of workmen and visitors and make log available to OWNER on request.
- d. Coordinate access of OWNER'S personnel to Site.

B. The CONTRACTOR shall control the entrance of persons and vehicles to those related to the OWNER'S operations.

1.03 JOBSITE ACCESS AND STORAGE

- ###### A. CONTRACTOR will not be provided with a lockable storage area for overnight storage of equipment and tools. The Park District is not responsible for unsecured storage of equipment, tools and materials. CONTRACTOR will have regular access to the jobsite Monday-Friday 7:30am-7:00pm. Weekend working hours can be arranged in advance.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION

3.01 GENERAL

- A. CONTRACTOR shall install temporary chain link fencing to encompass Staging Areas as indicated on Sheets G0.06 to G0.08 in the Contract Drawings prior to mobilization of equipment, materials, or supplies to the project site.
- B. CONTRACTOR shall maintain the integrity of the chain link fence and all gates and appurtenances throughout the duration of Contract in accordance with this Specification.
- C. CONTRACTOR shall remove the chain link fence and all gates and appurtenances from areas that have achieved substantial completion as approved by the Park District, as indicated on the Contract Drawings.

END OF SECTION

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SECTION 014500

CONTRACTOR QUALITY CONTROL

PART 1 -- GENERAL

1.01 DEFINITION

- A. Specific quality control requirements for the WORK are indicated throughout the Contract Documents. The requirements of this Section are primarily related to performance of the WORK beyond furnishing of manufactured products. The term "Quality Control" includes inspection, sampling and testing, and associated requirements.

1.02 INSPECTION AT PLACE OF MANUFACTURE

- A. Unless otherwise indicated, all products, materials, and equipment shall be subject to inspection by the ENGINEER at the place of manufacture.
- B. The presence of the ENGINEER at the place of manufacturer, however, shall not relieve the CONTRACTOR of the responsibility for providing products, materials, and equipment which comply with all requirements of the Contract Documents. Compliance is a duty of the CONTRACTOR and said duty shall not be avoided by any act or omission on the part of the ENGINEER.

1.03 SAMPLING AND TESTING

- A. Unless otherwise indicated, all sampling and testing will be in accordance with the methods prescribed in the current standards of the ASTM, as applicable to the class and nature of the article or materials considered; however, the OWNER reserves the right to use any generally-accepted system of sampling and testing which, in the opinion of the ENGINEER will assure the OWNER that the quality of the workmanship is in full accord with the Contract Documents.
- B. Any waiver by the OWNER of any specific testing or other quality assurance measures, whether or not such waiver is accompanied by a guarantee of substantial performance as a relief from the testing or other quality assurance requirements originally indicated, and whether or not such guarantee is accompanied by a performance bond to assure execution of any necessary corrective or remedial WORK, shall not be construed as a waiver of any requirements of the Contract Documents.
- C. Notwithstanding the existence of such waiver, the ENGINEER reserves the right to make independent investigations and tests, and failure of any portion of the WORK to meet any of the requirements of the Contract Documents, shall be reasonable cause for the ENGINEER to require the removal or correction and reconstruction of any such WORK in accordance with the General Conditions.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION

3.01 INSTALLATION

- A. **Inspection:** The CONTRACTOR shall inspect materials or equipment upon the arrival on the job site and immediately prior to installation and reject damaged and defective items.
- B. **Measurements:** The CONTRACTOR shall verify measurements and dimensions of the WORK, as an integral step of starting each installation.
- C. **Manufacturer's Instructions:** Where installations include manufactured products, the CONTRACTOR shall comply with manufacturer's applicable instructions and recommendations for installation, to whatever extent these are more explicit or more stringent than applicable requirements indicated in Contract Documents.

END OF SECTION

SECTION 017700

PROJECT CLOSEOUT

PART 1 -- GENERAL

1.01 FINAL CLEANUP

- A. The CONTRACTOR shall promptly remove from the vicinity of the completed WORK, all rubbish, unused materials, concrete forms, construction equipment, and temporary structures and facilities used during construction. Final acceptance of the WORK by the OWNER will be withheld until the CONTRACTOR has satisfactorily performed the final cleanup of the Site.
- B. The CONTRACTOR will schedule a final walk-through of the specified Work with Park District and ENGINEER to ensure proper application before final payment is authorized.

1.02 FINAL SUBMITTALS

- A. The CONTRACTOR, prior to requesting final payment, shall obtain and submit the below required items in accordance with Section 013300 – Contractor Submittals to the ENGINEER for transmittal to the OWNER:
 - 1. Written guarantees, where required.
 - 2. Bonds for maintenance, etc., as required.
 - 3. Certificates of inspection and acceptance by local governing agencies having jurisdiction.
 - 4. Releases from all parties who are entitled to claims against the subject project, property, or improvement pursuant to the provisions of law.

1.03 MAINTENANCE AND GUARANTEE

- A. The CONTRACTOR shall comply with the maintenance and guarantee requirements contained in the General Conditions.
- B. Replacement of earth fill or backfill, where it has settled below the required finish elevations, shall be considered as a part of such required repair work, and any repair or resurfacing constructed by the CONTRACTOR which becomes necessary by reason of such settlement shall likewise be considered as a part of such required repair work unless the CONTRACTOR shall have obtained a statement in writing from the affected private owner or public agency releasing the OWNER from further responsibility in connection with such repair or resurfacing.
- C. The CONTRACTOR shall make all repairs and replacements promptly upon receipt of written order from the OWNER. If the CONTRACTOR fails to make such repairs or replacements promptly, the OWNER reserves the right to do the WORK and the CONTRACTOR and its surety shall be liable to the OWNER for the cost thereof.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

END OF SECTION

SECTION 024000

SITE PREPARATION AND DEMOLITION

PART 1 -- GENERAL

1.01 SECTION INCLUDES

- A. Measures required during the CONTRACTOR's initial move onto the Site as follows:
1. Protecting existing fences, structures, concrete, headwalls, trees and vegetation to remain, streets, pavements and utilities at or near the construction site from damage due to buried debris, boulders, trees or other objects dislodged during the construction process.
 2. Installation of construction fencing as indicated on the Drawings.
 3. Clearing and grubbing in designated areas as indicated on the Drawings.
 4. Stripping and stockpiling of topsoil and ground cover materials.
 5. Removal of above and below grade site improvements as indicated on the Drawings.
 6. Removal of existing concrete pieces from lake bed and shoreline.
 7. Installation of steel sheetpile walls and fishing access nodes.
 8. Site grading.

1.02 RELATED SECTIONS

- A. The work of the following Sections is related to the work of this Section. Other Sections, not referenced below, may also be related to the proper performance of this work. It is the CONTRACTOR's responsibility to perform all the work required by the Contract Documents.
1. Section 310000 – Earthwork.
 2. Section 312500 – Erosion and Sediment Controls.

1.03 REFERENCES

- A. State of Illinois Department of Transportation. (IDOT)
1. Standard Specifications for Road and Bridge Construction, Current Edition.
<http://www.dot.state.il.us/desenv/stdspecs07.html>.

1.04 QUALITY ASSURANCE

- A. Not Used.

1.05 SUBMITTALS

- A. Procedures: Section 013250 – Project Management System.

B. Submit for information only:

1. Plan for stripping and stockpiling of top soil and ground cover materials.

1.06 DEFINITIONS

- A. Topsoil: Material as defined in Section 310000 – Earthwork as type K (topsoil)..

1.07 SITE CONDITIONS

A. Existing Conditions:

1. Inspect and determine the actual conditions of the Site as it affects this portion of work.
2. Delineate the Park District's easements and right-of-way lines adjacent to Lake Opeka.

B. Traffic:

1. Minimize interference with adjoining roads, streets, walks, parking lots, and other adjacent occupied or used facilities during site-clearing operations.
 - a. Do not close or obstruct streets, walks, parking lots or other occupied or used facilities adjacent to Lake Opeka without permission from the Park District and authorities having jurisdiction.
 - b. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.

C. Protection:

1. Do not damage structures, fences, landscaping, or vegetation adjacent to the Site.
2. Repair or replace property damaged by CONTRACTOR's activities at no additional cost to the Park District.
3. Do not commence site clearing operations until temporary erosion and sedimentation control measures are in place.

D. Utility Locator Service:

1. Notify utility locator service for area where Project is located before site clearing.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION

3.01 PREPARATION

- A. Protect and maintain benchmarks and survey monuments and control points from disturbance during construction.

- B. Protect existing site improvements, trees, and vegetation to remain from damage during construction, except as noted on Drawings.
 - 1. Restore damaged improvements, trees, and vegetation to their original condition, as acceptable to the Park District.

3.02 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- A. Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways in accordance with Section 312500 – Erosion and Sediment Control.
- B. Inspect, repair, and maintain erosion and sedimentation control measures during construction until permanent vegetation has been established.
- C. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.
- D. Remove and dispose of sediments, debris and material accumulated adjacent to the silt fences and other erosion control measures.

3.03 PRIMARY SITE ACCESS

- A. The CONTRACTOR shall develop access to the Site as shown on the Drawings.

3.04 UTILITIES

- A. Where existing utilities interfere with the WORK, notify the utility owner and the Park District before proceeding in accordance with the General Conditions.
- B. Locate, identify, disconnect, and seal or cap off utilities indicated to be removed.
- C. Arrange with utility companies to shut off indicated utilities.
- D. Existing Utilities: Do not interrupt utilities serving facilities occupied by the Park District or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated.
 - 1. Do not proceed with utility interruptions without the Park District's written permission.
 - 2. Notify the Park District not less than 2 business days in advance of proposed utility interruptions.

3.05 CLEARING, GRUBBING, AND STRIPPING

- A. Construction areas shall be cleared of grass and weeds to at least a depth of 6 inches if topsoil ground cover and vegetation exists; and cleared of structures, pavement, sidewalks, concrete or masonry debris, trees, logs, upturned stumps, stormwater pipe sections, flared end sections, boulders, and any other material of any kind which would interfere with the performance or completion of the WORK, create a hazard to safety, or impair the subsequent usefulness of the WORK, or obstruct its operation. All existing concrete pieces located within lake shore and area of work shall be removed. Trees, shrubs, and other natural vegetation outside the actual lines of construction or required to remain in place inside of the actual lines of construction shall be protected from damage during construction, as directed by the Park District.

SITE PREPARATION AND DEMOLITION

- B. Within the limits of clearing, the areas shall be grubbed to a depth of 2 feet below the final grade contour. The CONTRACTOR shall remove all stumps, roots, buried logs, and all other objectionable material. All objectionable material from the clearing and grubbing process shall be removed from the Site and disposed of per the Specifications.
- C. Gravel and crushed stone covered work areas shall be left as-is except for grading for surface drainage and run-off.
- D. Fill depressions caused by clearing and grubbing operations with satisfactory soil material unless further excavation or earthwork is indicated.

3.06 UNLESS OTHERWISE INDICATED, NATIVE TREES LARGER THAN 3 INCHES IN DIAMETER AT THE BASE SHALL NOT BE REMOVED WITHOUT THE PARK DISTRICT'S APPROVAL EXCEPT AS INDICATED ON THE DRAWINGS. THE REMOVAL OF ANY TREES, SHRUBS, FENCES, OR OTHER IMPROVEMENTS OUTSIDE OR INSIDE CONSTRUCTION LIMITS, IF NECESSARY FOR THE CONTRACTOR'S CHOICE OF MEANS AND METHODS, SHALL BE ARRANGED WITH THE PARK DISTRICT OR OWNER OF THE PROPERTY, AND SHALL BE REMOVED AND REPLACED, AT NO ADDITIONAL COST TO THE PARK DISTRICT.

3.07 LAKESHORE ACCESS:

- A. Existing grouted riprap edge lining the lake shore bed shall be excavated, rubblized, and preserved during the course of the WORK. The CONTRACTOR shall remove and stockpile the existing riprap stone and boulders, providing and maintaining proper erosion control measures for the stockpiles. When equipment access to a section of the lake shore is no longer required, the CONTRACTOR shall haul off the stockpiled riprap stone and boulders or reuse the stone as shore protection if the stone meets the specifications of riprap RR-4 as approved by the ENGINEER. The CONTRACTOR's operation shall comply with State, Federal and local Laws and Regulations.

3.08 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and as necessary to facilitate new construction.
- B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.
 - 1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut length of existing pavement to remain before removing existing pavement. Saw-cut faces vertically.
 - 2. Paint cut ends of steel reinforcement in concrete to remain to prevent corrosion.
- C. All materials that are temporarily removed shall be reassembled and installed back to the original condition as part of the WORK at no additional cost to the Park District.

3.09 OVEREXCAVATION, REGRADING, AND BACKFILL UNDER FILL AREAS

- A. Site preparation for the steel sheetpile walls and fishing access nodes, including excavation and earthwork, is addressed in Specification Section 310000-Earthwork.

3.10 DISPOSAL

- A. Disposal: Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials and waste materials including trash, debris, trees and vegetation and legally dispose of them off site in accordance with Federal, State and Local regulations.

END OF SECTION

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SECTION 024113

SELECTIVE SITE DEMOLITION

PART 1 -- GENERAL

1.01 SECTION INCLUDES

- A. The contract requirements for complete or partial removal and disposal or salvage of at grade, above grade, and below grade structures and miscellaneous items.

1.02 RELATED SECTIONS

- A. The work of the following Sections is related to the work of this Section. Other Sections, not referenced below, may also be related to the proper performance of this WORK. It is the CONTRACTOR's responsibility to perform all the WORK required by the Contract Documents.

- 1. Section 310000 – Earthwork.

1.03 REFERENCES

- A. Illinois Department of Transportation "Standard Specifications for Road and Bridge Construction," 2022 Edition (IDOT Spec.).

1.04 DEFINITIONS

- A. Remove: To take away or eliminate from the Site by any method selected by the CONTRACTOR, including disposal of material.
- B. Salvage: To dismantle, disassemble, or remove carefully without damage so the item can be re-assembled, replaced, or reused in a workable condition equal to that existing before removal.
- C. Abandon: To fill, bulkhead, or close off pipes and structures so that no settlement or flow can occur.

1.05 SCHEDULING

- A. Prior to starting Work, submit for review by the ENGINEER and approval by the OWNER, a schedule showing the commencement, order, and completion dates of the various parts of this Work.
- B. Fill holes or depressions resulting from removal or salvage immediately.
- C. Provide temporary surface restoration for traffic continuity where removal or salvage operations are completed within streets, driveways, or parking lots.

PART 2 -- PRODUCTS

Not Used.

PART 3 -- EXECUTION

3.01 GENERAL

- A. Dispose of all items removed, except for those items identified to be salvaged or recycled. Said disposal shall be in accordance with all laws, regulations, statutes, etc.
- B. Perform removal work without damage to adjacent retained work. Where such Work is damaged, the CONTRACTOR shall patch, repair, or otherwise restore same to its original condition at no expense to the OWNER.
- C. Remove debris from the work area as often as necessary, but not less than at least once at the end of each workday. Debris shall be placed in approved containers to prevent the spread of dust and dirt.
- D. Execute the Work in a careful and orderly manner with the least possible disturbance to the public and occupants of buildings.

3.02 EXAMINATION

- A. Meet with owners of signs to determine requirements for salvage, storage, and replacement.

3.03 PROTECTION

- A. Take all necessary precautions to adequately protect personnel and public and private property in the areas of Work. All Site fencing shall be in place prior to the start of any removal work.
- B. All street signs, traffic control signs, guy wires, mailboxes, posts, wood fence, etc. which may interfere with construction shall be removed, stored safely, and replaced.
- C. Approved barriers or warning signs shall be provided as necessary.
- D. Provide and maintain temporary protection of existing structures designated to remain where removal work is being done, connections made, materials handled, or equipment moved.
- E. Do not close or obstruct walkways or roadways. Do not store or place materials in passageways or other means of egress. Conduct operations with minimum traffic interference.
- F. Take reasonable precautions to limit damage to existing turf.
- G. Holes or depressions created by removals shall not be left open for more than 1 day. Any hole within 10 feet of sidewalks shall be filled, suitably marked, or covered immediately.
- H. Avoid disturbance to any material beyond the limits required for new construction.

3.04 SAWING PAVEMENT

- A. Concrete Pavement: Saw along the removal line to a depth of 1/3 of the thickness of the concrete prior to breaking off the pavement.

- B. Bituminous Pavement: Saw along the removal line to a minimum depth of 3 inches prior to breaking off the pavement.

3.05 REMOVE CONCRETE PAVEMENT

- A. Remove in accordance with IDOT Spec Section 440, except as modified below:
 - 1. Saw cut concrete pavement and concrete base prior to mechanical pavement removal equipment. Remove concrete in such a manner that the remaining pavement is not damaged.
 - 2. Prior to restoring trench areas, the edges of the trench shall be trimmed back to a vertical face on a straight line which is parallel with the centerline of the trench.

3.06 REMOVE BITUMINOUS PAVEMENT, PATH, DRIVEWAY

- A. Remove in accordance with IDOT Spec Section 440, except as modified below:
 - 1. Saw cut bituminous pavement at the removal limits prior to that removal, unless otherwise approved by the ENGINEER.
 - 2. Prior to restoring trench areas, the edges of the trench shall be trimmed back to a vertical face on a straight line which is parallel with the centerline of the trench.

3.07 REMOVE CONCRETE SURFACING

- A. Work includes sidewalks, pedestrian ramps, medians, and driveways.
- B. Saw cut concrete surfacing prior to removal.
- C. Remove concrete in such a manner that the remaining surfacing is not damaged.
- D. When removing existing sidewalks, the CONTRACTOR shall not disturb any material beyond the limits required for new construction (assumed as 6-inches maximum beyond and 8-inches maximum below existing grade).
- E. When removing existing driveways, the CONTRACTOR shall not disturb any material beyond the limits required to form for new construction (assumed 12-inches maximum from the back of new Work and 6-inches beyond the edge of new driveways).
- F. Prior to restoring trench areas, the edges of the trench shall be trimmed back to a vertical face on a straight line which is parallel with the centerline of the trench.

3.08 REMOVE BITUMINOUS SURFACING

- A. Work includes pathways and driveways.
- B. Saw cut bituminous surfacing to full depth at the limits of partial removal prior to that removal, unless otherwise approved by the ENGINEER.
- C. Remove bituminous in such a manner that the remaining surfacing is not damaged.
- D. Prior to restoring trench areas, the edges of the trench shall be trimmed back to a vertical face on a straight line which is parallel with the centerline of the trench.

- E. When removing existing pathways and driveways, the CONTRACTOR shall not disturb any material beyond the limits required to form for new construction (assumed 12-inches maximum from the back of new work and 6 inches beyond the edge of new driveways).

3.09 REMOVE SECTIONS OF EXISTING PIPE

- A. Pipes to be abandoned shall be bulkheaded with brick, non-shrink concrete grout, or concrete block masonry 8 inches thick at the upstream ends, at the downstream ends that connect to catch basins, manholes, and at locations as determined by the ENGINEER.
- B. Pipe to be abandoned shall be filled with suitable material as directed by the ENGINEER.
- C. Pipe to be abandoned shall be removed if the top of pipe is within 3-feet of final surface elevation.

3.10 SALVAGE AND REINSTALL

- A. Salvage operations conform to IDOT Spec Section 440.
- B. Signs
 - 1. In no case shall a traffic sign or street sign be removed or disturbed by CONTRACTOR without prior notification being given to ENGINEER and then only after satisfactory arrangements have been made for a temporary installation or its disposition
 - a. Street identification signage shall be maintained at all times due to its importance to the 911 Emergency Response System.
 - b. Remove and salvage all posts, A-frame angle brackets, stringers, as well as the nuts, bolts, and washers.
 - c. Exercise reasonable care against damage to in-place signs during storage and installation.
 - d. Remove signs damaged during construction and replace with new signs.

C. Fences

- 1. Salvage and store fence and post material where they are in conflict with the Work.
- 2. After completion of Work, reinstall fence to the condition existing prior to removal.
- 3. Install temporary snow fence or similar barrier at the end of the working day while the permanent fence is removed.

3.11 FIELD QUALITY CONTROL

- A. Salvaged items to be reinstalled shall be of the same shape, dimension, location, and quality of the original item prior to construction.
- B. Items damaged during removal or salvaging operations shall be replaced with new material of equal type and quality of the damaged item when it was new.

SELECTIVE SITE DEMOLITION

3.12 DISPOSING OF MATERIAL

- A. Conform to IDOT Spec Section 440.
- B. Conform to paragraph 3.05 of Section 01 35 50 – Environmental Protection
- C. Dispose of all materials outside of the Site at disposal location selected by CONTRACTOR in compliance with state and local regulations. Burying of material and debris is not allowed within the Site.

END OF SECTION

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SECTION 310000

EARTHWORK

PART 1 -- GENERAL

1.01 SECTION INCLUDES

- A. The Contract requirements for earthwork, which consists of soil excavations, excavations for rip rap and aquatic shelf installation, sediment forebays, and materials, backfilling, compacting, and grading.

1.02 RELATED SECTIONS

- A. The work of the following Sections is related to the work of this Section. Other Sections, not referenced below, may also be related to the proper performance of this WORK. It is the CONTRACTOR's responsibility to perform all the WORK required by the Contract Documents.
1. Section 311313 – Selective Tree and Shrub Removal.
 2. Section 313219 – Geotextile Fabric.
 3. Section 329113 – Soil Preparation.
 4. Section 312500 – Erosion and Sediment Control.

1.03 QUALITY ASSURANCE

- A. Referenced Standards: This Section incorporates by reference the latest revision of the following documents. These references are a part of this Section as specified and modified. In case of conflict between the requirements of this Section and those of a listed document, the requirements of this Section shall prevail.

Reference	Title
ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM D422	Standard Test Method for Particle-Size Analysis of Soils
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D1557	Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft ³ (2,700 kN-m/m ³))
ASTM D2216	Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
ASTM D2487	Standard Test Method for Classification of Soils for Engineering Purposes
ASTM D2922	Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)
ASTM D2937	Standard Test Method for Density of Soil in Place by the Drive-Cylinder Method

EARTHWORK

ASTM D3017	Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth)
ASTM D4253	Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table
ASTM D4254	Standard Test Methods for Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density
ASTM E329	Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction
29CFR1926	OSHA Safety and Health Standards for Construction (29CFR1926)
SSRBC	IDOT's Standard Specification for Road and Bridge Construction (the latest version)

B. Qualifications:

1. Tests shall be conducted by a materials testing laboratory that is accredited for compliance with ASTM E329.
2. Qualifications for CONTRACTOR's independent laboratory to collect and perform preconstruction and quality control testing as specified.

1.04 SUBMITTALS

A. Furnish submittals in accordance with the requirements of Section 013250 – Project Management System.

B. Submit for Park District approval the following documents 30 calendar days prior to excavations unless other noted otherwise.

1. Material Data Sheets and supplier certification for materials to be used, including gradation test data.
2. Certification of CONTRACTOR's independent material testing laboratory accredited for compliance with ASTM E329.

C. Submit for information only the following documents 30 calendar days prior to start the WORK unless other noted otherwise.

1. Laboratory test reports of samples of on-site native or imported materials.
2. Date, location, elevation, and results of all on-site density measurements when requested by the Park District during construction.
3. Excavation and Backfill Plan for riprap,, aquatic shelf, and sediment forebay installation.
 - a. The CONTRACTOR shall submit a work plan that describes the proposed methods and general sequence of work, including associated activities, as described below:
 - 1) Description of method of excavation, sequence, equipment, handling, and disposal of material from the lakebed and shoreline.

- 2) Description of backfill handling procedures and equipment from the construction staging areas adjacent to Lake Opeka.
- 3) Proposed methods and sequence of backfilling in areas adjacent to Lake Opeka. Include sequence of placement and compaction of backfill behind the steel sheetpile walls, riprap, aquatic shelf, and sediment forebay installations and compaction equipment to be used to complete the WORK.
- 4) Processed Rubble Fill Material: Submit the method of processing existing slurry mix adjacent to Lake Opeka to riprap fill material conforming with IDOT RR-4 gradation, method of placement of processed material and compaction requirement, in conformance with all applicable specification requirements.
- 5) Description of equipment and procedures.
- 6) Description of methods, procedures and equipment for control and removal of groundwater, surface runoff water, lake water, construction water, and any other water that may be encountered during the course of the WORK.
- 7) Description of transportation procedures for personnel and materials from the construction staging areas adjacent to Lake Opeka.
- 8) Description of temporary excavations, sumps, erection areas or over-excavation for the CONTRACTOR's convenience.

1.05 DEFINITIONS

- A. Compaction: The degree of compaction is specified as percent of maximum dry density. Maximum densities refer to dry soil densities obtainable at optimum moisture content.
- B. Excavation slope: Defined as an inclined surface formed by removing material from below existing grade. Slope is defined as a ratio of H:V.
- C. Backfill slope: Defined as an inclined surface formed by placement of material above existing grade. Slope is defined as a ratio of H:V.
- D. Imported backfill: Defined as granular material which meets the backfill Class specified and is obtained from a supplier regularly engaged in the business of supplying soil/backfill material. It is not material which is obtained from any excavation.
- E. Rubble Fill Material: Rubble Fill Materials are the processed or segregated material from the existing slurry mix adjacent to Lake Opeka that may be placed as riprap material for both below and above water level placement. The Rubble Fill materials shall, at least, comply with the following requirements:
 1. Free of contaminants and organic contents
 2. Rubble Fill to conform with IDOT RR4 material gradation.
 3. Free of cobbles and boulders and particles larger than 3-inch dimension.
 4. Free of any rebars and any other deleterious material.

F. Unsuitable materials: as defined in Paragraph - 2.1 H of this Section.

1.06 TOLERANCES

A. Finish Grading for Soil Excavations

1. Finished surfaces shall be smooth, compacted, and free from irregularities. The degree of finish shall be that normally obtainable with a blade grader.
2. Finished grade shall be as specified by the contours +/- 0.20-foot, except where a local change in elevation is required to match sidewalks, curbs, manholes, and catch basins, or to ensure proper drainage.
3. When the work is an intermediate stage of completion, the lines and grades shall be as specified +/- 0.5-foot to provide adequate drainage.

1.07 TESTS

- A. The CONTRACTOR shall be responsible to hire and reimburse an independent and qualified material laboratory approved by the Park District to collect and perform the preconstruction testing and quality control testing of the material specified in this Specification, unless otherwise directed by the Park District.
- B. The Park District will arrange to conduct and pay for any additional quality assurance testing if it decides to do so.
- C. Laboratory testing of proposed materials to be used on the project.
- D. Laboratory testing results of on-site native or imported materials to verify compliance with the specifications. The CONTRACTOR's approved independent laboratory shall collect the number of samples that is one test per 50 cubic yards of on-site materials and 200 cubic yards of imported soil materials for laboratory testing. Laboratory testing shall include maximum dry density (ASTM D1557) and grain size distribution (ASTM C136 and D422).
- E. On-site density measurements: the CONTRACTOR's independent laboratory shall conduct 5 site visits of a minimum of four hours per site visit, or as required, to measure soil material density with a nuclear densometer. Density test shall be performed for each layer or lift of backfill and per 100 cubic yards of backfill material or at every 50 linear feet along the Limestone Walls and Outcroppings, whichever is greater.
- F. Remove surface material at locations designated by the Park District and provide such assistance as necessary for sampling and testing.
- G. Park District may request that the CONTRACTOR construct trenches for inspection in compacted or consolidated backfill to determine CONTRACTOR compliance with Specifications per ASTM D2922. CONTRACTOR shall assume that a minimum of 3 trenches will be required.
- H. Testing by the CONTRACTOR does not preclude the Park District from determining to its own satisfaction when and if the WORK meets the requirements of the Specifications.

- I. Tests will be made in accordance with the following:

Test	Standard Procedure
Moisture content	ASTM D3017, ASTM D2216
Gradation	ASTM C136, ASTM D422
Density in-place	ASTM D2937, ASTM D1556, ASTM D2922
Moisture-density relationships	ASTM D1557

PART 2 -- PRODUCTS

2.01 BACKFILL MATERIALS

- A. General: Backfill shall be free of oil, rubbish, construction debris, organic material, and other foreign materials.
- B. Suitable Materials: Materials not defined as unsuitable below are suitable materials and may be used in backfilling construction subject to the indicated requirements. In addition, if acceptable to the Park District, some of the material listed as unsuitable may be used when thoroughly mixed with suitable material to form a stable composite. Such mixing or blending of materials to obtain a suitable composite is the CONTRACTOR's option but is subject to the approval of the Park District.
- C. Suitable materials may be obtained from on-site excavations, may be processed from on-site materials, or may be imported. If imported materials are required by this Section or to meet the quantity requirements of the WORK, the CONTRACTOR shall provide the imported materials as part of the WORK.
- D. Select Material: Select Material is suitable material and refers to on-site or imported off-site clean suitable material that is non-organic, non-decayable and non-rubble material for fill. It shall contain no rock, or stones, greater than two (2) inches in the largest dimension. The Select Material shall meet the following requirements or be approved by the Park District:
1. Grain Size: 40% or more passing No. 200 sieve.
 2. Plasticity Index: A plasticity index between 11% and 25%.
 3. Liquid Limit: A liquid limit between 25% and 50%.
- E. The following types of material are defined:
1. Type A: The Type A material shall meet the IDOT CA 7 material and gradation requirements.

2. Type B (Riprap): Type B material shall conform to the IDOT requirement for type RR4 as follows:

Rock Size (lb)	Percentage Passing
150	100
40	50±20
1	8±8

- a. Stones shall be graded in size to produce a reasonably dense mass. Riprap shall consist of dense, natural rock fragments. Stones shall be resistant to weathering and to water action and shall be free from overburden, spoil, shale, and organic material. Shale and stones with shale seams are not acceptable.
- b. The greatest dimension of 50 percent of the stones shall be at least two-thirds but not more than 1-1/2 times the diameter of the average size. Neither the breadth nor thickness of any piece of riprap shall be less than one-third its length. Material shall be of shapes which will form a stable protection structure of required depth. Rounded boulders or cobbles shall not be used.
- c. Stones shall consist of durable, sound, hard, angular rock free from detrimental cracks, blast fractures, seams and other defects, which tend to increase deterioration from natural causes or cause breakage during handling and placing. The stone material shall meet the following requirements for durability absorption ratio:

Durability Absorption Ratio	Acceptability
Greater than 23	Passes
10 to 23	Passes only if Durability Index is 52 or greater
Less than 10	Fails
Durability Absorption Ratio	<u>Durability Index (Coarse)</u> % absorption + 1

- d. The durability index and percent absorption shall be determined by AASHTO T 210 and AASHTO T 85, respectively. The minimum apparent specific gravity of the stones shall be 2.5 as determined by AASHTO T 85.
- e. Stones shall have less than 10 percent loss of weight after five cycles, when tested per ASTM C 88.
- f. Stones shall have a wear not greater than 40 percent, when tested per ASTM C 535.
- g. Control of gradation shall be by visual inspection. The CONTRACTOR shall furnish a sample of the proposed gradation of at least 5 tons or 10 percent of the total riprap weight, whichever is less. If approved, the sample may be incorporated into the finished riprap at a location where it can be used as a frequent reference for judging the gradation of the remainder of riprap.

- h. The acceptability of the stones will be determined by the Park District prior to placement. Any difference of opinion between the Park District and the CONTRACTOR shall be resolved by dumping and checking the gradation of two random truckloads of stones. Arranging for and the costs of mechanical equipment, a sorting site, and labor needed in checking gradation shall be the CONTRACTOR's responsibility.
- 3. Type G (aggregate base): Crushed rock aggregate base material of such nature that it can be compacted readily by watering and rolling to form a firm, stable base for pavements. The Type G material shall meet the IDOT CA 6 material and gradation requirements.
- 4. Type K (topsoil and planting soil): Topsoil and Planting Soil shall be in accordance with Section 329113 – Soil Preparation.
- F. Submit laboratory tests and supplier's certification of material for Park District's review and approval prior to use on project site.
- G. Unsuitable Material: Soils which, when classified under ASTM D 2487 - Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System), fall in the classifications of Pt, OH, CH, MH, or OL shall be classified as unsuitable.
- H. Schedule A: Materials shall be used as indicated below:

Structure	Type
<ul style="list-style-type: none"> - Backfill behind proposed Limestone Wall and Outcroppings - Unit core fill - Riprap Bedding - Trench Zone 	A, or the excavated materials which meet the requirements
<ul style="list-style-type: none"> - Backfill in front of proposed Limestone Wall and Outcroppings 	B
<ul style="list-style-type: none"> - Temporary Access Road and Ramps 	G
<ul style="list-style-type: none"> - Seed/Planting areas 	K
<ul style="list-style-type: none"> - Trench Pipe Zone Backfill 	A

PART 3 -- EXECUTION

3.01 GENERAL

A. Preparation

- 1. Protect new sheet pile walls and fishing access nodes, structures, fences, utilities, pavements, trees and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations and retaining wall installation.
- 2. Prepare subgrade for earthwork operations including removal of vegetation, topsoil, debris, trees, obstructions, weathered rock, and deleterious materials from ground surface as specified in Section 024000 – Site Preparation and Demolition.

3. Provide protective insulating materials to protect subgrades and foundation soils against freezing temperatures or frost.
4. Verify site conditions and inform the Park District of any irregularities that might affect the work of this Section prior to commencing. The start of work means acceptance of the existing conditions.

B. Control of Water

1. Prevent surface water (including runoff and lake water) and groundwater from entering excavations and backfilling areas, from ponding on prepared subgrades, and from flooding Project site and surrounding area.
2. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.
 - a. Reroute surface water runoff away from excavation and backfilling areas. Do not allow water to accumulate in excavations and backfilling areas. Do not use excavated trenches as temporary drainage ditches.

C. Over excavation in Soil Excavations

1. Where the undisturbed condition of natural soils is inadequate for support of the planned construction, over excavate to adequate supporting soils.
2. Backfill the excavated space to the specified elevation with class backfill indicated on the Drawings or per Schedule in this Section if not shown.
3. Unless otherwise indicated, the over excavated space under footings and structures shall be backfilled with Type G material.

D. Stockpile of Material

1. Use construction staging area to stockpile imported material for backfill.
2. Dispose of unsuitable excavated materials offsite.
3. Material shall not be stockpiled behind active excavation areas or along open trenches.
4. Use construction methods that preserve the stability of the soil adjacent to the excavation activities.
5. Protect materials stockpiled for use from wind or rain erosion by covering with tarps or other effective methods.

E. Control of Erosion

1. Maintain earthwork surfaces true and smooth, and protected from erosion per Section 312500 - Erosion and Sediment Controls. Where erosion occurs, provide backfill or excavate as necessary to return earthwork surfaces to the grade and finish specified.

F. Dust Control

1. Provide dust control including sweeping daily and regular spray of water on hauling roads and according to the CONTRACTOR's WORK Plan to be provided per Section 011400 – Construction and Schedule Constraints.

3.02 EXCAVATION AND BACKFILLING – GENERAL

A. General

1. Except when specifically provided direction to the contrary, excavation shall include the removal of materials, including obstructions that would interfere with the proper execution and completion of the WORK. The removal of such materials shall conform to the lines and grades indicated or ordered. Unless otherwise indicated, the entire Site shall be stripped of vegetation and debris and shall be grubbed, and such material shall be removed from the Site prior to performing any excavation or placing any backfill. Excavations shall be sloped or otherwise supported in a safe manner in accordance with applicable State safety requirements and the requirements of OSHA Safety and Health Standards for Construction (29CFR1926).

3.03 OVER-EXCAVATION

- A. Indicated: Where areas are indicated to be over-excavated, excavation shall be to the depth indicated, and backfill shall be installed to the grade indicated.
- B. Not Indicated: When ordered to over-excavate areas deeper and/or wider than required by the Contract Documents, the CONTRACTOR shall over-excavate to the dimensions ordered and backfill to the indicate grade.
- C. Neither Indicated nor Ordered: Any over-excavation carried below the grade neither indicated nor ordered shall be backfilled and compacted to the required grade with the indicated material as part of the WORK with no additional cost to the Park District.

3.04 EXCAVATION IN LAWN AREAS

- A. Where excavation occurs in lawn areas, the sod shall be carefully removed and replaced in-kind.
- B. Tolerances
 1. Excavate grades and dimensions that are consistent with the tolerances specified in Paragraph 1.6 of this Section.

3.05 EXCAVATION IN VICINITY OF TREES

- A. Unless otherwise indicated on the Drawings, all trees shall be protected from injury during construction operations per Section 311313 – Selective Tree and Shrub Removal. Trees shall be supported during excavation by any means previously reviewed and accepted by the Park District.
- B. Tolerances
 1. Excavate grades and dimensions that are consistent with the tolerances specified in Paragraph 1.6 of this Section.

3.06 BACKFILL BEHIND SHEET PILE

- A. Backfill shall be placed after water, organic, frozen, and all other extraneous materials are removed from the backfill area unless noted otherwise.
- B. Immediately prior to placement of backfill materials, any sloughing or caving soil and rock materials shall be removed.
- C. Backfill materials shall be placed and spread evenly in 9-in thick layers not leaving voids. Compact material to the indicated density using light weight, hand operated compactor.
- D. Topsoil shall be mechanically compacted to the indicated percentage of density using light weight walk-behind, push type equipment.
- E. Where the backfill material moisture content is below the optimum moisture content, water shall be added before or during spreading until the proper moisture content is achieved. Where the backfill material moisture content is too high to permit the indicated degree of compaction, the material shall be dried until the moisture content is satisfactory.

3.07 STRUCTURE EXCAVATION AND BACKFILL

- A. Excavation Beneath Structures: Except where otherwise indicated for a particular structure or where ordered by the Park District, excavation shall be carried to an elevation 6-inches below the bottom of footings, slabs, and other structural elements, and brought back to grade with compacted materials acceptable for placement beneath structures. The area where a backfill is to be constructed shall be cleared of vegetation, roots, and foreign material. Where indicated or ordered by the Park District, areas beneath structures or fills shall be over-excavated. When such over-excavation is indicated, both over-excavation and subsequent backfill to the required grade shall be performed by the CONTRACTOR. After the required excavation or over-excavation for backfills has been completed, the exposed surface shall be scarified to a depth of 6-inches, brought to optimum moisture content, and rolled with heavy compaction equipment to obtain 95 percent of maximum density.
- B. Notification of Park District: The Contactor shall notify the Park District at least 3 work days in advance of completion of any structure excavation and shall allow the Park District a review period of at least one work day before the exposed foundation is scarified and compacted or is covered with backfill or with any construction materials.
- C. Compaction of Backfill Materials
 - 1. Each layer of backfill material shall be mechanically compacted to the indicated percentage of density. Equipment that is consistently capable of achieving the required degree of compaction shall be used and each layer shall be compacted over its entire area while the material is at the required moisture content.
 - 2. Backfill material shall be placed and spread evenly in approximately horizontal layers. Each layer shall be moistened or aerated as necessary. Unless otherwise approved by the Park District, no layer shall exceed 12-inches of compacted thickness.

D. Compaction Requirements

1. The following compaction requirements shall be in accordance with ASTM D 1557 - Test Method for Laboratory Compaction Characteristics of Soils Using Modified Effort (56,000 ft - lbf/ft³) (2,700 kN-m/m³) where the material is graded such that 10 percent or more passes a No. 4 sieve; and in accordance with ASTM D4253 and ASTM D4254 where the material is coarse granular backfill material with less than 10 percent passing the No. 4 sieve.

E. Schedule B

Location or Use of Backfill	Percentage of Maximum Dry Density	Percentage of Relative Density
Backfills not identified otherwise	95	80
Backfills beneath or within 18 inches of paved areas or structures	98	85
Backfill over access road	95	80
Backfill beneath structures and hydraulic structures	98	85
Topsoil	80	NA
Aggregate base or Subbase	95	NA
Riprap	No compaction required	

3.08 FIELD TESTING

- A. General: Field soils testing for quality assurance, and in addition to the CONTRACTOR's quality control testing, shall be done by an Independent Testing Laboratory (ITL) at the CONTRACTOR's expense.
- B. Where soil material is required to be compacted to a percentage of maximum density, the maximum density at optimum moisture content will be determined in accordance with Method C of ASTM D 1557. Where cohesion less, free draining soil material is required to be compacted to a percentage of relative density, the calculation of relative density will be determined in accordance with ASTM D 4253 and D 4254. Field density in-place tests will be performed in accordance with ASTM D2937 - Standard Test Method for Density of Soil in Place by the Drive-Cylinder Method, ASTM D 1556 - Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method, ASTM D 2922 - Standard Test Methods for Density of Soil and Soil-Aggregate in Place By Nuclear Methods (Shallow Depth), or by such other means acceptable to the Park District.
- C. In case the test of the backfill shows non-compliance with the required density, the CONTRACTOR shall accomplish such remedy as may be required to ensure compliance. Subsequent testing to show compliance shall be by the ITL and paid by the CONTRACTOR.

3.09 FINISH

- A. Areas covered by the WORK, including excavated and backfilled sections and transition areas, shall be graded uniformly to the elevations indicated.
- B. The finished surface shall be reasonably smooth, compacted, and free from irregular surface changes.
- C. The degree of finish shall be that ordinarily obtainable from a blade grader operation.
- D. The finish surface shall be not more than 0.2 feet above or below the established grade.
- E. The surface of the backfill behind the sheet pile walls and fish outcroppings shall be finished to drain readily toward Lake Opeka.
- F. Ditches shall be finished to drain readily.
- G. The surface of areas to be paved on which a base course is to be placed shall not vary more than 0.05 foot from established grade and cross-section.

END OF SECTION

SECTION 311313

SELECTIVE TREE AND SHRUB REMOVAL

PART 1 -- GENERAL

1.01 SECTION INCLUDES

- A. The Contract requirements for the selective removal and/or trimming of existing woody plant materials that interfere with, or are affected by, execution of the WORK.

1.02 RELATED SECTIONS

- A. The work of the following Sections is related to the work of this Section. Other Sections, not referenced below, may also be related to the proper performance of this work. It is the CONTRACTOR's responsibility to perform all the WORK required by the Contract Documents.
 - 1. Section 024000 – Site Preparation and Demolition.
 - 2. Section 024113 – Selective Site Demolition.

1.03 QUALITY ASSURANCE

- A. Trees to be removed or trimmed shall be identified by the CONTRACTOR with surveyor's flagging tape placed around the tree trunks at eye level and approved by the ENGINEER prior to the start of construction operations. The color of the surveyor's tape shall be different and easily distinguished from that used to mark the trees and shrubs to remain. Conversely, with the approval of the ENGINEER, the CONTRACTOR may flag trees to remain instead of flagging trees to be removed.
- B. Tree Service Qualifications: Provide an experienced tree service firm acceptable to the ENGINEER that has successfully completed tree protection and trimming work similar to that required for this Project and that will assign an experienced, qualified arborist to Project site during execution of the WORK.
- C. Arborist Qualifications: Provide an arborist acceptable to the ENGINEER that is certified by the International Society of Arboriculture or licensed in the jurisdiction where Project is located.

1.04 SUBMITTALS

- A. Furnish submittals in accordance with the requirements of Section 013300: Contractor Submittals.
 - 1. Detailed Work Schedule and Work Plan: at least 10 working days prior to start of intended work.
 - 2. Qualification Data: Submit qualification data for firms and persons specified in the "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses; names, address, and current contact information of architects and owners; and other information specified.
 - 3. Signed copy of the Illinois Department of Agriculture (IDA) Emerald Ash Borer (EAB) Compliance Agreement as specified herein.

SELECTIVE TREE AND SHRUB REMOVAL

1.05 PRE-INSTALLATION MEETING

A. Pre-installation conference: Conduct conference at project site.

- 1. Before starting woody plant removal, meet with representatives of authorities having jurisdiction, ENGINEER, qualified arborist, consultants, and other concerned entities. Review tree removal procedures and responsibilities in addition to temporary tree and plant protection procedures and responsibilities. Notify participants at least three working days before convening conference. Record discussions and agreements and furnish a copy to each participant.

PART 2 -- PRODUCTS

2.01 MATERIALS

- A. General: Materials for the purpose of removing existing woody plant material may be new or used, adequate for the required purpose and must not violate applicable codes and regulations.

PART 3 -- EXECUTION

3.01 TREE REMOVALS AND TRIMMING

- A. Impacts to existing trees shall be limited to the extent practical. Remove only those trees or branches which substantially interfere with the WORK, or which are damaged during construction and access.
- B. All trees to be removed or trimmed from within the project limits shall be removed by a tree service firm approved by the ENGINEER.
- C. Trees to be removed shall be cut near ground level. A licensed applicator shall apply concentrated herbicide to the stumps immediately after the cut is made and should cover the plant's cambial tissue around the rim of the stem and down the sides of the root crown. Marking dye shall be added to the herbicide to indicate which stems have been treated. Herbicide may be applied with a sponge paintbrush, spray bottles, foam applicators, and mechanized applicators mounted on brush saws.
 - 1. Only properly licensed applicators shall handle, mix, and apply herbicides/pesticides. Obtain ENGINEER's approval for all pesticide/herbicide applications.
 - 2. Record and submit detailed pesticide/herbicide applicator's log for verification after each application of approved pesticide/herbicide.
- D. Trees to be removed from project areas must be felled and removed in such a way as to avoid damage to other trees, site elements noted as to remain, and nearby facilities.
 - 1. Trees to be removed which have branches extending into the canopy of trees to remain must be removed in a manner that causes no damage to the branches, limbs, trunk, or bark of trees and understory vegetation to remain.
 - 2. Trees to be removed shall be felled so as to fall away from tree protection zones and to avoid pulling and breaking of roots of trees to remain. If roots are intertwined, the ENGINEER may require first severing the major woody root mass before extracting the trees. This may be accomplished by cutting through the roots

by hand, with a vibrating knife, rock saw, narrow trencher with sharp blades, or other root-pruning equipment as approved by the arborist.

3. Extraction of downed trees within protection areas shall occur by lifting the material out either by hand or with equipment staged outside the tree protection zone. Dragging or skidding the material across the ground will not be permitted.
- E. The CONTRACTOR shall employ best arboriculture practices when trimming tree branches to ensure that trimming does not negatively impact the health of trees to remain.
- F. Emerald Ash Borer Compliance Agreement (Illinois Department of Agriculture): Any ash debris disposal must adhere to all regulations set forth by the Illinois Department of Agriculture (IDA) and under the Emerald Ash Borer Compliance Agreement; applicable to State or Federal Cooperative Domestic Quarantines for the Emerald Ash Borer (*Agilus planipennis*) pursuant to the Insect Pest and Plant Disease Act (505 Illinois Compiled Statutes 90/1 et seq.).
- G. The CONTRACTOR shall furnish a signed copy of the Illinois Department of Agriculture (IDA) EAB Compliance Agreement to the ENGINEER, following all provisions pertaining to the proper disposal of ash debris and movement of IDA defined, regulated articles within quarantine zones. The CONTRACTOR shall abide by any modifications to IDA EAB regulations, including the Compliance Agreement and quarantine zones.
- H. All EAB infested ash wood and debris shall be removed from the project site and shall become the CONTRACTOR's responsibility to ensure destruction of the infested wood in accordance with the State statutes and local ordinances. Each ash tree shall be considered infested and disposed of accordingly. Under **NO CIRCUMSTANCES** shall logs from ash trees be left for owners.

3.02 BRUSH/SHRUB REMOVAL

- A. Any brush clearing required within tree protection zones shall be accomplished with hand-operated equipment.
- B. Removal of all downed brush within protection areas shall occur by lifting the material out either by hand or with equipment staged outside the tree protection zone. Dragging or skidding the material across the ground will not be permitted.

3.03 CLEARING, GRUBBING, AND STRIPPING

- A. Clearing, Grubbing and Stripping associated with tree and brush removal should be performed in accordance with Section 024000 – Site Preparation and Demolition.

3.04 FIELD QUALITY CONTROL

- A. Engage a qualified arborist to direct plant removal measures.

3.05 PROTECTION, RESTORATION, AND CLEAN-UP

Protection, restoration, and clean-up shall be in accordance with the Specifications.

END OF SECTION

SELECTIVE TREE AND SHRUB REMOVAL

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SECTION 311413

TOPSOIL STRIPPING AND STOCKPILING

PART 1 -- GENERAL

1.01 SECTION INCLUDES

- A. The Contract requirements for the salvaging and stockpiling of topsoil and for the excavating of suitable topsoil from stockpiles to place on designated areas in accordance with the Contract Documents.

1.02 RELATED SECTIONS

- A. The work of the following Sections is related to the WORK of this Section. Other Sections, not referenced below, may also be related to the proper performance of this WORK. It is the CONTRACTOR's responsibility to perform all the WORK required by the Contract Documents.

1. Section 024000 – Site Preparation and Demolition
2. Section 312500 – Erosion and Sediment Control
3. Section 329113 – Soil Preparation

1.03 PRODUCT DELIVERY, STORAGE, AND HANDLING – IMPORTED TOPSOIL

- A. Coordinate and deliver soil to pre-approved staging areas. Inform the Park District of all delivery schedules, twenty-four (24) hours in advance of delivery.
- B. All deliveries of topsoil which in any way fail to meet the requirements of these Specifications will be rejected, and the CONTRACTOR shall immediately remove such rejected topsoil from the premises and supply suitable topsoil in its place.
- C. No deliveries will be permitted when weather conditions are unsatisfactory, or if the approved staging area is not in a satisfactory condition to receive topsoil. No frozen topsoil will be accepted. Do not deliver or handle soil in wet, muddy, or frozen conditions.

1.04 JOB CONDITIONS

A. General

1. Prior beginning work, the CONTRACTOR shall examine and verify the acceptability of the job site and notify the Park District of unsatisfactory conditions. The CONTRACTOR shall not proceed with the work until unsatisfactory conditions have been corrected or resolved.
2. Where topsoil preparation occurs in close proximity to other site improvements, adequate protection shall be given to all features prior to commencing WORK. Any items damaged during soil preparation operations shall be promptly repaired to their original condition at no additional cost to the Park District.

B. Utilities

1. Have all underground utilities located by servicing agencies. In the vicinity of utilities, hand excavate to minimize the possibility of damage to underground utilities.

C. Excavation

1. When conditions detrimental to plant growth are encountered such as limestone, rubble fill, adverse drainage conditions, or obstruction, notify the Park District prior to placement of any topsoil.

PART 2 -- PRODUCTS

2.01 2.1 TOPSOIL

- A. Topsoil shall consist of natural onsite ground cover and/or hauled material from approved offsite sources. Topsoil shall meet the requirements of Section 329113 – Soil Preparation.

PART 3 -- EXECUTION

3.01 TOPSOIL

- A. Topsoil within the limits of the project shall be salvaged prior to beginning excavating, fill, or hauling operations by excavating topsoil and stockpiling the material at designated locations on the drawings or as designated by the ENGINEER in a manner that will facilitate measurement, minimize sediment damage, and not obstruct natural drainage.
- B. CONTRACTOR shall strip available topsoil to its full depth from within the Contract limits, excluding areas in close proximity to trees designated to remain, unless otherwise specified by the ENGINEER.
- C. Imported topsoil shall be hauled to the site and stockpiled in locations designated by the ENGINEER.
- D. Any salvaged topsoil exceeding the quantity required shall be removed off site by CONTRACTOR or spread on site by CONTRACTOR as directed by ENGINEER.

3.02 OFFSITE HAULING

- A. The CONTRACTOR shall comply with all applicable local, state, and federal laws and regulations with regard to material removal, handling and disposal, and shall pay all assessed costs and fees.
- B. The CONTRACTOR shall comply with the Illinois Environmental Protection Act as amended by Public Act 096-1416 that was signed into law on July 30, 2010, Public Act 097-0137 that was signed into law on July 14, 2011, and all applicable amendments and the Illinois Environmental Protection Act.

3.03 STOCKPILING

- A. Stockpile topsoil on approved staging areas.
- B. Stockpile in sufficient quantities to meet project schedule and requirements.

TOPSOIL STRIPPING AND STOCKPILING

- C. Construct stockpiles to freely drain surface water. Cover or sprinkle water on stockpiles if required to prevent windblown dust. No soil stockpile shall exceed four (4) feet in height.
- D. Separate differing materials with dividers or stockpile apart to prevent mixing. Topsoil shall be clearly stockpiled separately from subsoil and from other debris.
- E. Protect stockpiles from erosion and disturbance with landscape fabric, tarp, or other material.

3.04 PREPARATION OF STOCKPILED SOIL

- A. Control and eliminate all perennial grass and weeds including their root systems until stockpiled topsoil is required for use. Stockpile topsoil shall be reasonably free of all perennial grass and weed growth before being placed and spread on site.
- B. Perform weed control, as necessary, in accordance with relevant chemical pesticide/herbicide application regulations. Only properly licensed applicators shall handle, mix, and apply herbicides/pesticides. Obtain ENGINEER's approval for all pesticide/herbicide applications.
- C. Record and submit detailed pesticide/herbicide applicator's log for verification after each application of approved pesticide/herbicide.
- D. Screen stockpiled topsoil as directed by ENGINEER prior to re-spreading on site. Provide a screener capable of removing stones, soil lumps, foreign debris, undesirable plants and roots from soil to meet requirements of specifications.

3.05 FIELD QUALITY CONTROL

- A. Restrictions: The CONTRACTOR shall not strip or stockpile soil when the soil is excessively wet, too dry, frozen, or otherwise detrimental to work.

3.06 PROTECTION, RESTORATION, AND CLEAN-UP

- A. Protection, restoration, and clean-up shall be in accordance with the specifications.

END OF SECTION

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SECTION 312500

EROSION AND SEDIMENT CONTROLS

PART 1 -- GENERAL

1.01 SECTION INCLUDES

- A. The Contract requirements for erosion and sediment control in accordance with the Contract Documents.

1.02 RELATED SECTIONS

- A. The work of the following Sections is related to the work of this Section. Other Sections, not referenced below, may also be related to the proper performance of this work. It is the CONTRACTOR's responsibility to perform all the WORK required by the Contract Documents.
 - 1. Section 311413 – Topsoil Stripping and Stockpiling.
 - 2. Section 329113 – Soil Preparation.

1.03 REFERENCES

- A. Association of Illinois Soil and Water Conservation Districts, Urban Manual. (IUM)
<http://aiswcd.org/IUM/index.html>
- B. Illinois Environmental Protection Agency. (IEPA).
 - 1. [.http://www.epa.state.il.us/water/forms.html](http://www.epa.state.il.us/water/forms.html).
- C. Illinois Urban Manual – Practice Standards. (IUM – PS)
 - 1. Construction Road Stabilization: IUM-PS Code 806.
 - 2. Erosion Control Blanket: IUM-PS Code 830.
 - 3. Mulching for Seeding and Soil Stabilization: IUM-PS Code 875.
 - 4. Silt Fence: IUM-PS Code 920.
 - 5. Stabilized Construction Entrance: IUM-PS Code 930.
 - 6. Inlet Protection: Paved Area: IUM-PS Code 861.
 - 7. Temporary Seeding: IUM-PS Code 965.
 - 8. Silt Curtain – Floating: IUM-PS Code 917
 - 9. Soil Stockpile: IUM-PS Code 927.
 - 10. Temporary Concrete Washout Facility: IUM-PS Code 954.
 - 11. Dust Control: IUM-PS Code 825.
- D. State of Illinois Department of Transportation. (IDOT)

1. Standard Specifications for Road and Bridge Construction, Current Edition. <http://www.dot.state.il.us/desenv/stdspecs07.html>.

1.04 SUBMITTALS

- A. Furnish submittals in accordance with the requirements of Section 013300 – Submittals.
 1. After CONTRACTOR has determined initial means, methods, and construction sequence, and before construction has started, provide an updated erosion control plan indicating proper methods, materials, and schedule for controlling erosion and sedimentation.
 2. Plan shall include the following:
 - a. Proposed methods for erosion and siltation control.
 - b. Erosion plan shall indicate locations of all erosion and sedimentation control measures, shown at a scale appropriate for the project site.
 - c. Schedule for implementation of plan.
 - d. Provision for maintenance and upkeep of erosion control and siltation materials, identifying persons responsible for said maintenance.

1.05 REGULATORY REQUIREMENTS

- A. A conditional letter of approval by the Soil and Water Conservation District (SWCD) for the SESC Plans and details included in the contract documents has been obtained by the Park District and is included in Appendix A – Permits and Conditions. The CONTRACTOR shall be responsible for satisfying all requirements provided by the SWCD during their inspection of the SESC measures during construction at no additional cost to the Park District.
- B. CONTRACTOR shall be responsible for paying all applicable fees required by the SWCD.
- C. CONTRACTOR shall be responsible for obtaining an NPDES General Construction Permit (ILR-10) for the project. The CONTRACTOR shall submit the NOI and be responsible for compliance with the terms of the permit.
- D. Areas for temporary topsoil or other material stockpiling shall be surrounded by adequate silt fencing to prevent sediment and erosion issues. Temporary stockpiles shall be less than 10 feet high.
- E. Comply with all other applicable state and federal rules and regulations governing erosion and siltation on construction sites.

1.06 EROSION CONTROL PRINCIPLES

- A. Keep disturbed area small.
- B. Stabilize disturbed areas with mechanical or structural and vegetative methods.
- C. Keep runoff low through use of short slopes, low gradients, and preservation of natural vegetative cover.

- D. Protect disturbed areas from stormwater runoff.
- E. Retain sediment within site boundaries.
- F. Implement a thorough maintenance and follow-up program.
- G. Comply with the requirements of the SWCD letter and the NPDES General Construction Permit (ILR-10).
- H. Implement SESC practices according to IUM Practice Standards and Plan requirements.
- I. CONTRACTOR is required to control dust or air-borne dirt resulting from construction operations throughout the duration of the project. Dust shall be controlled by the uniform application of sprinkled water from a water truck or by utilizing a mechanical street sweeper on all pavement within or adjacent to the project work zone. Individual fire hydrant use shall not be permitted to control dust at specific locations. CONTRACTOR shall provide dust control operations daily or as directed by the ENGINEER.

PART 2 -- PRODUCTS

2.01 MATERIALS

- A. Erosion and sediment control measure materials shall meet the requirements of the Illinois Urban Manual Practice Standards. The applicable standards are listed in Section 1.3 – References. Exceptions to the IUM-PS are listed below.
 - 1. Erosion Control Blanket: The short-term single net erosion control blanket shall be a machine produced mat of 100 percent agricultural straw with a functional longevity of up to 12 months. The blanket shall be of consistent thickness with the straw evenly distributed over the entire area of the mat. The blanket shall be covered on the top side with a 100 percent biodegradable woven natural organic fiber net. The netting shall consist of machine directional strands formed from two intertwined yarns with across directional strands interwoven through the twisted machine strands (commonly referred to as a Leno weave) to form approximate 0.50 x 1.0 in. (1.27 x 2.54 cm) mesh.
 - a. The recommended soil erosion control blanket is North American Green (NAG) S75BN or equivalent product, as approved by the ENGINEER.

PART 3 -- EXECUTION

3.01 INSTALLATION

- A. Installation of all erosion control shall be in accordance with the Association of Illinois Soil and Water Conservation Districts, Urban Manual practice standards, construction specifications and material specifications and manufacturer's written instructions.
- B. Erosion control blanket shall be installed over bare ground by contractor when final grading is completed outside of landscape planting window. All exposed soil areas not disturbed for up to seven days shall be immediately covered with erosion control blanket.
- C. Silt fence, straw wattles and sandbags is to be placed per plan at contractor staging areas.

EROSION AND SEDIMENT CONTROLS

- D. Silt curtain to be placed before construction activities begin. Place curtain only in areas of construction activity. Contractor to finalize silt curtain extent, location, and phasing.

3.02 MAINTENANCE

- A. Inspect erosion control devices within 24 hours after each rainfall or daily during periods of prolonged rainfall in accordance with the requirements of the NPDES General Construction Permit.
- B. Repair or replace damaged or defective materials or installation immediately.
- C. Remove sediment deposits within 24 hours after each storm event or when deposits reach one-half height of fence or barrier, whichever occurs first.
- D. Apply replacement bales or additional mulch, netting, or matting immediately to maintain suitable cover.
- E. Where vegetative cover has been placed, inspect until vegetative cover is established and functioning as intended.

3.03 REMOVAL OF EROSION CONTROL DEVICES

- A. Maintain erosion control blanket and silt fence until disturbed earth has been paved or vegetated.
- B. Remove floating silt curtain once sheet pile wall and/or final grading and trail install is complete.
- C. Remove erosion control devices prior to final inspection and acceptance of Project site by the Park District.
- D. Restore or replace areas disturbed or damaged by removal of erosion control devices to satisfaction of ENGINEER.

END OF SECTION

SECTION 313219
GEOTEXTILE FABRIC

PART 1 -- GENERAL

1.01 SECTION INCLUDES

- A. This work consists of furnishing and placing geotextile filter fabrics for use as shown on the Plans except for erosion and sediment control specified in Section 312500 – Erosion and Sediment Control.

1.02 RELATED SECTIONS

- A. The work of the following Sections is related to the work of this Section. Other Sections, not referenced below, may also be related to the proper performance of this WORK. It is the CONTRACTOR's responsibility to perform all the WORK required by the Contract Documents.

1. Section 312500 – Erosion and Sediment Control.
2. Section 310000 – Earthwork.

1.03 QUALITY ASSURANCE

- A. Referenced Standards: This Section incorporates by reference the latest revision of the following documents. These references are a part of this Section as specified and modified. In case of conflict between the requirements of this Section and those of a listed document, the requirements of this Section shall prevail.

1. American Society for Testing and Materials (ASTM)

Reference	Title
ASTM D1777	Standard Test Method for Thickness of Textile Materials
ASTM D3776	Standard Test Methods for Mass Per Unit Area (Weight) of Fabric
ASTM D4354	Standard Practice for Sampling of Geosynthetics for Testing
ASTM D4355	Standard Test Method for Deterioration of Geotextiles by Exposure to Light, Moisture and Heat in a Xenon Arc Type Apparatus
ASTM D4533	Standard Test Method for Trapezoid Tearing Strength of Geotextiles
ASTM D4632	Standard Test Method for Grab Breaking Load and Elongation of Geotextiles
ASTM D4751	Standard Test Method for Determining Apparent Opening Size of a Geotextile
ASTM D4759	Standard Practice for Determining the Specification Conformance of Geosynthetics
ASTM D4833	Standard Test Method for Index Puncture Resistance of Geomembranes and Related Products
ASTM D4991	Standard Test Method for Leakage Testing of Empty Rigid Containers by Vacuum Method

1.04 SUBMITTALS

A. Furnish submittals in accordance with the requirements of Section 013250 – Project Management System

B. For approval by the Park District

1. Before starting the work, the CONTRACTOR shall submit the following:

a. A Certification of Compliance from the geotextile manufacturer that the product(s) delivered to the project will have property values equal to or greater than those specified.

b. Factory test results of materials certified by the manufacturer as being similar, showing conformance with the requirements of these Specifications. Certified property values shall be equal to the average value less two standard deviations. A swatch of the geotextile to be used shall be submitted with the certification letter.

2. For quantities over 10,000 square yards, the CONTRACTOR shall furnish to the Park District, at least 14 days prior to use in the work, a sample of five square yards of the geotextile from the shipment of materials to be used on the project for verification testing. The lot number of the roll and the location of the sample obtained shall be documented.

3. Installation Work Plan

a. The CONTRACTOR shall submit a work plan at least 14 calendar days prior to the start the WORK that describes the proposed methods for installation of geotextile for backfill, riprap in front of the retaining wall and for drainage trenches.

C. Submit for information only

1. After Contract award, upon request, the geotextile manufacturer shall make available quality control test results for the materials delivered to the project. Quality control sampling shall be done in accordance with ASTM D4354, and the samples shall be tested according to ASTM standards for grab tensile strength, trapezoidal tear strength, and puncture resistance. At least one Apparent Opening Size (AOS) test and one permeability test shall be performed per lot number.

PART 2 -- PRODUCTS

2.01 GEOTEXTILES

A. Fibers, used in the manufacture of geotextiles, and thread used in joining geotextiles by sewing, shall consist of long chain synthetic polymers, composed of at least 95%, by weight, polypropylene or polyester. The material shall be free of defects and tears and shall meet or exceed the material requirements as listed below.

B. The geotextile fabric shall be needle punched, nonwoven that meet or exceed the minimum property requirements as shown in the table below as Thrace-LINQ product or approved equal.

Geotextile Fabric Designation	110 mil ¹	160 mil ¹
Thickness (ASTM D-5199)	110 mil	160 mil
Fabric Weight (ASTM D-5261)	12 oz/yd ²	16 oz/yd ²
Grab Tensile Strength (ASTM D-4632)	320 lbs	380 lbs
Grab Elongation (ASTM D-4632)	50 %	50 %
Puncture Resistance (ASTM D-4833)	190 lbs	240 lbs
Trapezoid Tear Strength (ASTM D-4533)	125 lbs	145 lbs
Apparent Opening Size (ASTM D-4751)	100 sieve size	100 sieve size
Permittivity (ASTM D-4991)	0.8 sec ⁻¹	0.7 sec ⁻¹
Water Flow Rate (ASTM D-4991)	60 gpm/ft ²	50 gpm/ft ²
Ultraviolet Degradation (ASTM D-4355)	> 70% strength 500 hrs exposure	> 70% strength 500 hrs exposure
¹ The property values shown are in weaker principal direction. All values listed are Minimum Average Roll Values (MARV) except apparent opening size in mm and UV resistance. Apparent opening size (mm) is a Maximum Average Roll Value. UV is a typical value. Specification conformance of the geotextile will be based on the ASTM D-4759 procedure.		

- C. Nonwoven 110 mil shall be used for wrapping granular material.
- D. Nonwoven 160 mil shall be used for temporary access road and ramps.
- E. In addition to the above requirements, the following limitations will also apply:
 - 1. If the fabric will be in contact with asphalt, it shall be capable of withstanding temperatures of 375 degrees F without any negative effect on material properties.

2.02 PACKAGING

- A. Geotextile materials delivered to the site shall be furnished with an outer plastic wrapping, suitable for protection against moisture and extended ultraviolet exposure prior to placement. An opaque tarp shall be placed over all rolls where the outer wrap is removed or damaged, such that the geotextile is exposed.
- B. Each roll of geotextile shall be externally labeled or tagged to provide product identification sufficient for field identification, as well as inventory and quality control purposes. As a minimum, external tagging shall include:
 - 1. Name of Manufacturer.
 - 2. Product Type and Style.

3. Product Grade.
 4. Lot Number.
 5. Physical Dimensions (Length and width).
- C. The product grade, manufacturer's name, and lot number shall be clearly marked directly on the geotextile at the beginning and end of each roll of product.
- D. Rolls shall be stored in a manner, which protects them from the elements. If stored outdoors, they shall be elevated and protected with a waterproof cover.

PART 3 -- EXECUTION

3.01 GENERAL

- A. The installation site shall be prepared by clearing and grading the areas, as indicated on the Plans. Remove all sharp objects, large stones, stumps, etc.
- B. The geotextile fabric shall be unrolled as smoothly as possible with no wrinkles or folds (except in curved sections and corners) on the prepared subgrade in the direction of construction traffic. Adjacent rolls shall be overlapped 12 inches or greater. For slope placement, upstream sheets shall overlap downstream sheets. Adjacent rolls may be connected by sewn or sealed seams, provided the seam meets or exceeds the grab strength requirement as shown in Section 2.01 herein.
- C. Prior to placement of the geotextile, the surface shall be prepared to a smooth condition free of debris, depressions, loose material or obstructions which may damage the geotextile. For slope placement, the geotextile shall be anchored using key trenches at the crest of the slope, pins on the sloping surface and keyed around the toe of the slope. Pins shall be used in securing the geotextile during installation on the sloping surface in accordance with the Illinois Department of transportation's specification section 282.6. In no instance shall the geotextile be left exposed to sunlight longer than 7 Days. Overexposed geotextile shall be removed and replaced.
- D. For curves, the geotextile fabric shall be folded or cut and overlapped in the direction of the turn. Overlaps shall be 12 inches or greater. Folds in geotextile shall be stapled or pinned five feet on center.
- E. Holes, tears, or otherwise damaged geotextiles, as determined by the Park District, shall be repaired immediately at the CONTRACTOR's expense. The damaged area shall be cleared of all fill material, a suitable distance from the damaged area, to allow placement of a geotextile patch which extends 3 feet beyond perimeter of the damaged area.
- F. The geotextile fabric placement shall also be in accordance with the approved Work Plan.

END OF SECTION

SECTION 321216

ASPHALT PAVEMENT

PART 1 -- GENERAL

1.01 SCOPE

- A. This section covers materials, products, and other incidentals for furnishing and placing asphalt pavement for the restoration of existing trails that are impacted by construction as shown on the plans. All work shall be conducted according to the phasing requirements of the contract drawings and public access along the designated trails shall be maintained at all times.

1.02 APPLICABLE PUBLICATIONS

- A. The following publications listed below, but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by the reference thereto:

- 1. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

- a. ASTM D 2041-95: Standard Test Method for Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
- b. ASTM D 698-91: Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft)

- 2. AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)

- a. Standard Specifications for Transportation Materials and Methods of Sampling and Testing, 1982

- 3. ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT)

- a. Standard Specifications for Road and Bridge Construction, adopted by the Illinois Department of Transportation January 1, 2022, and all Supplemental Specifications and Recurring Special Provisions issued through January 1, 2023. (SSRBC).
- b. Manual of Instructions for Bituminous Proportioning and Testing.
- c. Bureau of Materials and Physical Research Policy Memorandum "Recycling Portland Cement Concrete into Aggregate".

1.03 RELATED SECTIONS

- A. Section 014000 – Contractor Quality Control.
- B. Section 024000 – Site Preparation and Demolition.
- C. Section 310000 – Earthwork.
- D. Section 311313 – Selective Tree and Shrub Removal.
- E. Section 311413 – Topsoil Stripping and Stockpiling.

1.04 SUBMITTALS

- A. The following items shall be submitted in accordance with the Contract Conditions. The CONTRACTOR's Quality Control organization shall be responsible for certifying that all submittals are in compliance with the contract requirements.
 - 1. Product Data: Provide product data for each product specified.
 - a. Job-Mix designs: for each job-mix proposed:
 - 1) Job-mix design documentation shall include the amount of Reclaimed Asphalt Pavement (RAP) material by percentage of total mix to be utilized.
 - 2) Job-mix design documentation shall clearly indicate source/origin of RAP material.
 - 2. Qualifications Data: For IDOT qualified manufacturer. Hot-mix asphalt manufacturer shall have valid and current IDOT approvals for materials and work specified. The installer can be IDOT qualified.
 - a. Material Certificates: For each paving material from manufacturer.
 - b. Material Test Reports: For each paving material and mix. Obtain materials from same source throughout.

1.05 HAZARDOUS MATERIAL EXCLUSION

- A. Materials produced for or supplied on this project shall not be considered hazardous waste as defined by EPA Title 40 CFR 261.3. The CONTRACTOR shall provide a certificate to the owner stating that the materials for this project strictly conform to the above criteria.

PART 2 -- PRODUCTS

2.01 MATERIALS

- A. General: Provide materials in accordance with the requirements of the applicable Article of the IDOT Standard Specifications for Road and Bridge Construction.
- B. Asphalt Prime and Tack Coats: IDOT Standard Specifications for Road and Bridge Construction Section 406.
- C. Bituminous Wear and Non-Wear Course: Refer to plans and comply with IDOT SSRBC Section 406. Coarse aggregate and the use of Reclaimed Asphalt Pavement (RAP) must conform to the current IDOT District 1 requirements.
 - 1. Bituminous Wear Course, Mix "D" N50
 - a. Mix Type = IL 9.5mm.
 - 2. Bituminous Non-Wear Course N50
 - a. Mix Type = IL 19.0.

3. Leveling Binder (Machine Method), N50 (IL 9.5mm); 3/4 inch

a. Mix Type = IL 9.5mm.

D. Stone base course shall conform to the specifications for IDOT CA-6 as specified in IDOT SSRBC Article 1004.04. Stone base shall be compacted to a minimum of 95 percent of the maximum dry density as determined by the Standard Proctor test (ASTM D 698-91). Sand Cushion shall meet FA-2 gradation according to Section 1003

1. Restoration of existing Asphalt Trails Path Soft Edge Mix: Stone screenings shall be "Premium Bike Path Screenings" as manufactured by Thelen Sand & Gravel, Inc. of Antioch, IL or approved equal. Screenings shall not contain limestone and shall conform to the following gradation.

Sieve Designation	Range of Percent Passing
3/8"	100
No. 4	95-100
No. 8	75-80
No. 16	50-65
No. 30	40-50
No. 50	25-35
No. 100	20-25
No. 200	5-20

2. Screenings shall be mixed with "Stabilizer" according to the manufacturer's recommendations. "Stabilizer" material available from: Stabilizer, attn: Jonathon Hubbs, Phoenix, AZ, (800-336-2488) or equal.

3. Connecting Asphalt PathSoft Edge Edging: Border King, 1/4-inch x 5-inch steel edging, with 24-inch Super Stake by Border Concepts (800-845-3343) or approved equal. Edging shall have a factory applied finish black in color.

E. Pavement Marking Paint shall conform to IDOT 1095.02 and Section 321723 – Recreational Trail Pavement Markings and Signs.

PART 3 -- EXECUTION

3.01 EXECUTION

A. Coordination: Prior to construction, review pavement layout and installation phasing plan to maintain existing bicycle and pedestrian circulation with Park District and obtain approval.

B. Saw cut edge of existing pavement where new paving meets existing. Do not chop.

C. General: For the Restoration of Existing Asphalt Trails, provide a 10 inch thick stone base course and a 2-inch bituminous concrete non-wear, binder course, overlain by a 2-inch inch thick bituminous concrete wear, surface course. Binder and surface courses of bituminous concrete shall have a bituminous tack coat installed between them.

D. Placement of Asphalt

1. Subgrade: Comply with IDOT SSRBC Section 301.
2. Granular Subbase: Comply with IDOT SSRBC Section 311.
3. Bituminous Surface Treatment (Prime Coat) shall be applied to the existing surfaces according to IDOT SSRBC Section 403.
4. Hot-Mix Asphalt binder and surface courses shall be constructed as specified in IDOT SSRBC Section 406.
5. Hot-Mix Asphalt Leveling Binder shall be constructed as specified in IDOT SSRBC Section 406.

E. Connecting Asphalt PathSoft Edge Mix

1. Steel edging to be installed per manufacturer's guidance for stake spacing, edging overlap, and all other requirements, shall be installed along all edges not adjacent to concrete.
2. Path soft surfaces shall consist of 3.5-inch depth of hard tamped and rolled screenings/stabilizer mix on 6-inch depth of compacted CA-6 overlying geotextile fabric

F. PAVEMENT MARKINGS

1. Prepare the surface and apply paint pavement markings in accordance with Section 780 of the IDOT SSRBC. Marking must not be placed on short-term, temporary, or existing pavement markings.
2. Markings must be installed within three (3) working days after all patching work has been completed.
3. The CONTRACTOR must protect all markings from traffic until the paint has set sufficiently to assume traffic. Any damage to the markings due to traffic must be replaced immediately by the CONTRACTOR at no additional cost.

3.02 QUALITY CONTROL

- A. The CONTRACTOR shall establish and maintain quality control for work under this section to ensure compliance with contract requirements and maintain records of his quality control for all construction including, but not limited to, the following:
1. Quality of materials.
 2. Surface preparation, and
 3. Placement thickness and compaction.
- B. A copy of all inspection and test records, as well as corrective actions taken, shall be furnished to the Commissioner within two (2) days of completion of the WORK. Quality control tests and inspections shall be performed by and at the expense of the CONTRACTOR.

- C. Tests: All samples of materials shall be supplied by the CONTRACTOR at his expense, and all tests necessary to determine conformance with the requirements specified herein will be performed without costs to the Park District. All materials shall be approved by the Park District prior to use. The sources from which the materials are to be obtained shall be selected in advance of the time when the materials will be required in the WORK. Additional samples shall be furnished during construction, upon request. Samples cut from the completed work, when required by the Park District for testing purposes, shall be replaced with new mixture and refinished. Furnishing test samples and replacing the areas with new material will be considered as incidental to the construction. Specimens shall be cut by the CONTRACTOR with a core drill. The diameter of the specimen shall in no case be less than 3-7/8 inches nor more than 4 inches. After completion of the each of the base, binder, and surface courses, test the surface for smoothness, trueness to grades, and proper drainage in the presence of Park District staff, by applying sufficient water to wet the entire surface. By observation of the excess water standing on the surface, Park District staff will determine the exact areas to be corrected and the methods to be used to achieve the desired results.

END OF SECTION

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SECTION 321313

PORTLAND CEMENT CONCRETE

PART 1 -- GENERAL

1.01 SCOPE

- A. This section covers materials, products and other incidentals for furnishing and placing Portland Cement Concrete (PCC) paving for the new fishing plaza, fishing access wall, stairs, site furnishing concrete pads, and concrete cap of sheet pile wall as shown on the plans. The work involves the following: sub-grade preparation, formwork, reinforcement, expansion control, sand and granular base, concrete paving, surface finish, color admixture, curing, and seal paving. All work shall be conducted according to the phasing requirements of the contract drawings and public access shall be maintained at all times.

1.02 APPLICABLE PUBLICATIONS

- A. The following publications listed below, but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by the reference thereto:
1. ASTM A185-79: Welded Steel Wire Fabric for Concrete Reinforcement. ASTM A497 - Welded Deformed Steel Wire Fabric for Concrete Reinforcement.
 2. ASTM D 1751: "Specification for Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction (Non-extruding and Resilient Bituminous Types)", American Society for Testing and Materials.
 3. ASTM C33-81: Concrete Aggregates. ASTM C94-81 -Ready-Mix Concrete.
 4. ASTM C260-77: Air-Entraining Admixtures for Concrete.
 5. ASTM C309-81: Liquid Membrane-Forming Compounds for curing Concrete. ASTM C494-80 - Chemical Admixtures for Concrete.
- B. Illinois Department of Transportation (IDOT)
1. Standard Specifications for Road and Bridge Construction, adopted by the Illinois Department of Transportation January 1, 2022, and all Supplemental Specifications and Recurring Special Provisions issued through January 1, 2023. (SSRBC)
 2. Bureau of Materials and Physical Research Policy Memorandum "Recycling Portland Cement Concrete Into Aggregate".
- C. American Concrete Pavement Association (ACPA): Reference Manuals.
- D. American Concrete Institute (ACI):
1. 301 - Specifications for Structural Concrete for Buildings.
 2. 305 - Hot Weather Concreting.
 3. 306 - Cold Weather Concreting.

4. 309 - Recommended Practice for Consolidation of Concrete.

E. Concrete Reinforcing Steel Institute (CRSI): Manual of Standard Practice

1.03 SUBMITTALS

A. The following items shall be submitted in accordance with the Contract Conditions. The Contractor's Quality Control organization shall be responsible for certifying that all submittals are in compliance with the contract requirements.

B. Product Data: Submit a listing of the types and sources of materials proposed for the work for review. Submit certifications and laboratory reports verifying compliance of materials with these specifications. Submit data for:

1. Admixtures.
2. Curing compounds.
3. Joint sealants.
4. Reinforcement.
5. Submit manufacturer's written installation instructions for all product data submitted.
6. Certification: Manufacturer's Certification that the products delivered to the project meet or exceed project specifications.
7. Ready-mix delivery tickets.

1.04 HAZARDOUS MATERIAL EXCLUSION

Materials produced for or supplied on this project shall not be considered hazardous waste as defined by EPA Title 40 CFR 261.3. The contractor shall provide a certificate to the owner stating that the materials for this project strictly conform to the above criteria.

PART 2 -- PRODUCTS

2.01 MATERIALS

A. Acceptable Manufacturers

1. Acceptable products: Provide all materials in compliance with IDOT requirements.

B. Reinforcement

1. Reinforcing Bars: Deformed billet steel bars conforming to ASTM A615: Grade 60.
2. Welded Wire Fabric: Steel wire spot welded at intersections conforming to ASTM A185. Use flat sheets only.
3. Tie Wire: Shall be black annealed wire, 16 gauge or heavier.
4. Threaded Dowel Inserts: Threaded dowel inserts shall conform to ASTM A615 and be manufactured of minimum Grade 60 steel and shall be capable of achieving

PORTLAND CEMENT CONCRETE

125 percent of specified yield strength of reinforcement steel for the bar size indicated.

5. Epoxy Coated Dowels and Tie-Bars: Comply with IDOT SSRBC Article 1006.10.

C. Accessories

1. Subbase: CA-6
2. Forms: Comply with IDOT SSRBC Article 1103.05.
3. Curing compound: Comply with IDOT Specification, Article 1022.01. The use of Linseed Oil as a curing compound will not be allowed.
4. Liquid surface sealer: ASTM D-3405.
5. Expansion joints: Conform with IDOT SSRBC Article 424.02.
6. Concrete Joint Sealers: TYPE:
 - a. Silicone Joint Sealant.
 - b. Product shall be self-leveling.
 - c. Product shall be DOWSIL 890-SL or an Engineer approved equal.
 - d. Stone color on all joints requiring sealant.

D. Mix Design

1. Concrete shall comply with, Class-SI concrete as defined in IDOT Specifications Article 1020 for concrete mix design.
2. Admixtures shall comply with IDOT Specifications Article 1020.
3. Mix Proportions: Proportion the concrete mixes to match the following materials per cubic yard of concrete, adjusted as necessary to meet the specified requirements.

E. Mixing

1. Use accelerating admixtures in cold weather only with Commission Representative's prior written approval. Use of admixtures will not relax cold weather placement requirements.
2. Add air entraining agent to concrete mix for concrete work subject to freeze/thaw cycling and exposed to exterior.

PART 3 -- EXECUTION

3.01 EXECUTION

- A. Coordination: Prior to construction, review pavement layout and installation phasing plan to maintain existing bicycle and pedestrian circulation with the Park District and obtain approval.

- B. Saw cut edge of existing pavement where new paving meets existing. Do not chop.
- C. Subgrade Preparation
1. Prepare in accordance with IDOT SSRBC Section 301.
 2. Provide additional fill for soft spots and hollows.
 3. Level and Compact subgrade, to receive granular base for concrete work, to 95% Modified Proctor Density.
- D. Subbase Placement
1. Observe the proof-rolling of the subgrade prior to placing subbase material.
 2. Prepare granular subbase for pavement base course in accordance with the plans and IDOT SSRBC, Section 351.
 3. For sidewalk, remove unsuitable subbase material and place a minimum 3- inch sand cushion. The sand cushion must meet FA-2 gradation according to Section 1003 of the IDOT SSRBC. The use of a mechanical vibratory compactor is required.
- E. Concrete Placing
1. Place all concrete pavements in accordance with IDOT SSRBC, Section 420.
 2. Place all concrete sidewalk in accordance with applicable sections of IDOT SSRBC, Section 424 and 508.
- F. Inspection
1. The Testing Laboratory must verify that the compacted base is ready to support paving and imposed loads.
 2. Verify gradients and elevations of base are correct.
 3. Start of installation constitutes acceptance of existing conditions.
- G. Preparation
1. Moisten base to minimize absorption of water from fresh concrete.
 2. Notify the Park District a minimum 24 hours before start of concreting operations.
- H. Forming
1. Place and secure forms to correct location, dimensions and profile.
 2. Assemble formwork to permit easy stripping and dismantling without damaging concrete.
 3. Place joint fillers vertical in position, in straight lines. Secure to formwork during concrete placement.

I. Reinforcement

1. Place reinforcement at mid-height of slabs-on-grade.
2. Interrupt reinforcement at contraction and expansion joints.
3. Place reinforcement to achieve slab and curb alignment as detailed.
4. Provide dowelled joints at interruptions of concrete with one end of dowel set in capped sleeve to allow longitudinal movement.

J. Formed Joints

1. Place expansion, control, and contraction joints per IDOT SSRBC Articles 420 and 424 and direction of the Engineer. Align wall cap and pavement joints. Placement of joints shall be completed within 24 hours of concrete placement in accordance with Article 424.07 of the IDOT SSRBC unless approved by the Park District.
2. Place joint sealant between paving components as shown on drawings. Recess top of filler 1/2 inch for sealer placement per manufacturer requirements.
3. Provide joints as specified in IDOT SSRBC Articles 420 and 424.

K. Curing

1. Curing Compound shall conform with IDOT SSRBC Article 420.18.

L. Finishing

1. Medium broom finish, radiused and trowel joint edges, wood float.
2. Place curing compound on exposed concrete surfaces immediately after finishing. Apply in accordance with manufacturer's current printed instructions.

M. Field Quality Control

1. The Contractor must remove and replace concrete that does not satisfy the performance requirements of this specification, which does not conform to grades and profiles shown on the drawings or maximum slopes identified by the City of Des Plaines Public Right-of-way Accessibility Transition Plan, contains cracks, spalling, or other defects which impair the strength, safety, or appearance of the work, or has been damaged or discolored during construction. All corrections including removal and replacement will be at the Contractor's expense.
2. Maintain record of placed concrete items. Record date, location of pour, quantity, air temperature and test samples taken.

N. Protection

1. Immediately after placement, protect concrete from premature drying, excessive hot or cold temperatures and mechanical injury. Maintain protection until accepted. The Contractor is responsible for protecting freshly poured concrete. Any damage to new work from graffiti, footsteps, rain, etc. must be corrected immediately.

3.02 QUALITY CONTROL

- A. The Contractor shall establish and maintain quality control for work under this section to ensure compliance with contract requirements and maintain records of his quality control for all construction including, but not limited to, the following:
 - 1. Quality of materials.
 - 2. Surface preparation, and
 - 3. Placement thickness and compaction.
- B. A copy of all inspection and test records, as well as corrective actions taken, shall be furnished to the Park District within two (2) days of completion of the work. Quality control tests and inspections shall be performed by and at the expense of the Contractor.
- C. Perform work in accordance with referenced IDOT Specifications including compliance with the IDOT Recurring Special Provision: Quality Control/Quality Assurance of Concrete Mixtures and IDOT BDE Special Provision: Alkali-Silica Reaction for Cast-in- Place Concrete.
- D. Obtain materials from same source throughout. Do not change source or brands of materials during course of work.
- E. Regulatory Requirements
 - 1. Illinois Steel Products Procurement Act as amended (Illinois Revised Statutes, Ch. 48, par. 1901 et. seq.).
- F. Testing and Inspection
 - 1. Three concrete test cylinders must be taken for every 75 or less cu. yds. of each class of concrete placed each day.
 - 2. One additional test cylinder must be taken during cold weather and be cured on site under same conditions as concrete it represents.
 - 3. One slump test and one air entrainment test must be taken for each set of test cylinders taken.
- G. Warranties
 - 1. The Contractor must warrant all PCC pavement Work in accordance the Contract Specifications against defective materials and workmanship, improper performance and non-compliance with the Contract Documents for a period of two (2) years from and after the date of Substantial Completion of the Work.

END OF SECTION

SECTION 321500

BONDED AGGREGATE SURFACE

PART 1 -- GENERAL

1.01 SCOPE

- A. This section covers materials, products, and other incidentals for furnishing and placing bonded aggregate surface as shown on the Plans. All work shall be conducted according to the phasing requirements of the contract drawings and public access along the designated trails shall be maintained at all times.

1.02 APPLICABLE PUBLICATIONS

- A. The following publications listed below, but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by the reference thereto:

- 1. ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT)

- a. Standard Specifications for Road and Bridge Construction, adopted by the Illinois Department of Transportation January 1, 2022, and all Supplemental Specifications and Recurring Special Provisions issued through January 1, 2023. (SSRBC).
- b. Manual of Instructions for Bituminous Proportioning and Testing.

1.03 RELATED SECTIONS

- A. Section 014000 – Contractor Quality Control.
- B. Section 310000 – Earthwork.

1.04 SUBMITTALS

- A. The following items shall be submitted in accordance with the Contract Conditions. The CONTRACTOR's Quality Control organization shall be responsible for certifying that all submittals are in compliance with the contract requirements.
 - 1. Weight tickets shall be submitted to the Engineer or on-site Inspector on a daily basis.
 - 2. Provide mock-up installation for approval by the Engineer. Mock-up can become part of permanent installed work.
 - a. Material specifications, supplier, and color of the bonded aggregate surface.

PART 2 -- PRODUCTS

2.01 MATERIALS

- A. Base Aggregate
 - 1. CA-6 according to IDOT SSRBC Section 351

B. Bonded Aggregate Surface

1. Bonded aggregate surface shall consist of Kafka Granite Organic-Lock Stabilized Pathway Mix Beige Blend Marble, Southwest Bolder & Stone Soil Secure Organic DG Stabilizer, or approved equal.

C. Metal Edging

1. Install metal edging per manufacturer's specifications.

PART 3 -- EXECUTION

3.01 EXECUTION

A. Subgrade Preparation

1. Prepare in accordance with IDOT SSRBC Section 301.
2. Provide additional fill for soft spots and hollows.
3. Level and Compact subgrade, to receive granular base for concrete work, to 95% Modified Proctor Density.

B. Base Placement

1. Observe the proof-rolling of the subgrade prior to placing subbase material.
2. Prepare granular base for bonded aggregate in accordance with the plans and IDOT SSRBC, Section 351.

C. Bonded Aggregate Surface

1. Coordination: Prior to construction, review layout and installation phasing plan to maintain existing bicycle and pedestrian circulation with Park District and obtain approval.
2. Aggregate shall be placed in locations and thickness as shown on the Plans.
3. Prior to placement, stabilizers shall be mechanically pre-mixed with the aggregate according to the manufacturer's specifications. After mixing aggregate with stabilizer, place aggregate, water, and compact per manufactures specifications.

3.02 QUALITY CONTROL

- A. The CONTRACTOR shall establish and maintain quality control for work under this section to ensure compliance with contract requirements and maintain records of his quality control for all construction including, but not limited to, the following:
1. Quality of materials.
 2. Surface preparation, and
 3. Placement thickness and compaction.

END OF SECTION

BONDED AGGREGATE SURFACE

SECTION 32 3113

CHAIN LINK FENCE & METAL RAILING

PART 1 -- GENERAL

1.01 SUMMARY

- A. Section Includes: Requirements for providing chain link fencing replacement, stainless steel cable guardrail systems and fitting, stainless steel pipe railings, and appurtenant work to be installed as shown on project drawings.

1.02 RELATED DOCUMENTS

- A. Section 310000 – Earthwork.
- B. Section 321313 – Portland Cement Concrete.

1.03 REFERENCES

- A. ASTM A53 - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
- B. ASTM A116 - Standard Specification for Metallic-Coated, Steel Woven Wire Fence Fabric.
- C. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
- D. ASTM A276 - Stainless Steel Bars and Shapes.
- E. ASTM A312 - Seamless and Welded Austenitic Stainless-Steel Pipes.
- F. ASTM A314 - Stainless Steel Billets and Bars for Forging.
- G. ASTM A320 - Alloy Steel Bolting Materials for Low-Temperature Service.
- H. ASTM A479 - Stainless and Heat-Resisting Steel Bars and Shapes for Use in Boilers and Other Pressure Vessels.
- I. ASTM A492 – Specification for Stainless Steel Wire Rope.
- J. ASTM A500 - Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
- K. ASTM A554 - Welded Stainless Steel Mechanical Tubing.
- L. ASTM A582 - Free-Machining Stainless and Heat-Resisting Steel Bars.
- M. ASTM A702 - Standard Specification for Steel Fence Posts and Assemblies, Hot Wrought.
- N. ASTM A780/A780M - Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings.

- O. ASTM A90/A90M - Standard Test Method for Weight [Mass] of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings.
- P. ASTM B117 - Standard Practice for Operating Salt Spray (Fog) Apparatus.
- Q. ASTM B211 - Aluminum and Aluminum-Alloy Bar, Rod, and Wire.
- R. ASTM B221 - Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
- S. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete.
- T. ASTM F1043 - Strength and Protective Coatings on Metal Industrial Chain-Link Fence Framework.
- U. ASTM F1083 - Standard Specification for Pipe, Steel, Hot-Dipped Zinc Coated (Galvanized) Welded, for Fence Structures.
- V. ASTM F567 - Standard Practice for Installation of Chain Link Fence.
- W. ASTM F626 - Standard Specification for Fence Fittings.
- X. ASTM G152 - Operating Open Flame Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials.
- Y. ASTM G153 - Operating Enclosed Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials.
- Z. ASTM G154 - Standard Practice for Operating Fluorescent Light Apparatus for UV Exposure of Nonmetallic Materials.
- AA. ASTM G155 - Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials.
- BB. ASTM F1184 - Standard Specification for Industrial and Commercial Horizontal Slide Gates.
- CC. SAE/AMS QQ-S-763 - Steel Bars, Wire Shapes, and Forgings; Corrosion-Resistant.
- DD. IDOT Standard Specifications for Roads and Bridges.

1.04 SUBMITTALS

- A. General: Provide all submittals, including the following, as specified in the General Specifications:
- B. Shop drawings:
 1. Manufacturer's technical data, product specifications, standard details, certified product test results, installation instructions, and general recommendations.
 2. Scale layout of fencing, railings, and accessories. Drawings shall show fence/railing height, post layout, including sizes and sections, post setting and bracing configuration, details of gates and corner construction, intermediate cable braces, cables, cable hardware, and grommets and other accessories.

3. Show details of anchoring cable railing system to mounting surface.
 4. Signed and Sealed Shop Drawings to be provided by a Registered Professional Engineer registered in the jurisdiction of the project.
- C. Samples:
1. Chain Link Fence:
 - a. Samples of proposed fence components, at least 12-inches long, to illustrate the selected color and finish.
 2. Metal Railing:
 - a. Samples of metal railing components
 - 1) Frame components by fabricator.
 - 2) Intermediate cable braces by fabricator.
 - 3) Cables by manufacturer or fabricator.
 - 4) Cable hardware by manufacturer or fabricator.
 - 5) Grommets by manufacturer or fabricator.

1.05 QUALITY ASSURANCE

A. Qualifications

- a. Manufacturers: Chain link fencing and metal railings shall be products of single manufacturers which have been successfully engaged in the production of such items for a period of at least 5 years.
 - b. Installers: Installation of the chain link fence and metal railings shall be by the manufacturer or by a firm accepted and licensed by the manufacturer.
2. Pre-Installation Meeting: Convene a pre-installation meeting approximately two weeks before start of construction of railing frame component mounting surfaces. Require attendance of parties directly affecting work of this section, including Contractor, Architect, Fabricator, and Installer. Review the following:
- a. Specific method of installation of railing frame components into mounting surfaces.
 - b. Installation, adjusting, cleaning, and protection of cable railing system.
 - c. Coordination with other work.
 - d. Carbon Steel: post-consumer plus one-half pre-consumer.
 - e. Stainless Steel: post-consumer plus one-half pre-consumer.
3. Field measurements/scans and installation shall be coordinated by the railing manufacturer.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to site with labels or other markings clearly identifying the products and contractor or fabricator.
- B. Store materials in a clean, dry area, away from exposure to the weather until they are ready for installation.
- C. Protect materials while handling to avoid damage during installation.

1.07 WARRANTY

- A. Provide manufacturer's standard warranty for each product indicated.

PART 2 -- PRODUCTS

2.01 CHAIN LINK FENCE

- A. 4' black vinyl dipped chain link fence by Master Halco or approved equal. Fence shall meet the following specifications:
 - 1. 2 1/2 inch line post (schedule 40).
 - 2. 3 inch terminal/gate post (schedule 40).
 - 3. 9-gauge core knuckle-knuckle selvage black PVC coated chain link – 48 inch height.
 - 4. 1 5/8 inch Top Rail and Bottom Rail w Beveled Ends (schedule 40).
 - 5. 6-gauge black PVC coated bottom tension wire.
 - 6. All gate/terminal post to be set in concrete footing (10 inch diameter—4 feet deep).
 - 1) Concrete mix shall conform to Class-SI concrete as defined in IDOT Specifications Article 1020 for concrete mix design.
 - 7. All line post driven to a depth of 4 feet.
 - 8. No bracing necessary at each terminal/gate post.

2.02 METAL RAILING

- A. Manufacturers:
 - 1. Acceptable Manufacturers or approved equal:
 - a. Basis of design for cable and cable hardware components.
 - b. R&B Wagner, Inc (Wagner Companies)
10600 West Brown Deer Road
Milwaukee WI 53224

Tel: (888)-243-6914 / (414)-214-0444
Fax: (414)-214-0450
Email: rfq@mailwagner.com

CHAIN LINK FENCE & METAL RAILING

Web: www.wagnercompanies.com
www.shopwagner.com

- c. Trex Commercial.
- d. Provide all cable, materials, fittings, and components from a single manufacturer.

B. Railing Frame Components:

1. Framing: Round Pipe.

- a. Material: 4 inch Diameter, Stainless Steel Pipe, ASTM A312, Type 316L. Minimum tensile strength of 70,000 pounds per square inch (4921 kg/sq. cm).
- b. Spacing: As noted on Drawings.

2. Post Mounting:

- a. Floor Plates: Surface mount with tamper-proof Stainless Steel cover plate in locations as shown on Drawings.
- b. Concrete Footings: Set railing frame posts in concrete footing (10 inch diameter-- 3' 6" deep) in locations as shown on Drawings.

1) Concrete mix shall conform to Class-SI concrete as defined in IDOT Specifications Article 1020 for concrete mix design.

3. Cable Grommets: For prevention of abrasion of intermediate posts, end posts, and cable braces bored for cables.

- a. Material: Black, UV-resistant Delrin or approved equal.

4. Accessories

- a. Stainless Steel Handrail Saddle Brackets for connecting round handrail to square posts. ASTM A312, Type 316L as shown on Drawings.
- b. Fixed Angle Stainless Steel Handrail Bracket for wood railing attachment to square posts as shown on Drawings. ASTM A312, Type 316L.
- c. Miscellaneous Stainless Steel Hardware and appurtenances for a complete installation.

C. Cables And Cable Hardware

1. Cables.

- a. Material: 1 x 19 Type 316 stainless steel strand, left-hand lay, per dimensional properties contained in MIL-DTL-87161.
- b. Finish: Mill.
- c. Diameter: 3/16 inch (4.8 mm) diameter cable with a minimum breaking strength of 4000 pounds (1814.37 kilograms).

- d. Orientation: Horizontal.
 - e. Orientation: Slope parallel to finish grade.
 - f. Spacing: 6 inches on center as indicated on the Contract Drawings.
2. Cable Hardware Components.
- a. Material: Stainless steel, ASTM A276 and A479, SAE/AMS QQ-S-763, Type 316.
 - b. Type: Swageless hardware wherever practical.
 - c. Type: Hardware substantially concealed inside end posts where practical.
 - d. Type: Most economical combinations of fittings that are practical.
 - e. Type: Tensioned Fittings:
 - 1) Fitting: Invisiware Receiver.
 - 2) Fitting: Adjust-A-Jaw Tensioner.
 - 3) Fitting: Adjust-A-Body with Threaded Eye Tensioner.
 - 4) Fitting: Adjust-A-Body with Threaded Bolt Tensioner.
 - 5) Fitting: Adjust-A-Body with Hanger Bolt Tensioner.
 - 6) Fitting: Adjust-A-Body with Concrete Bolt Tensioner.
 - 7) Fitting: Receiver with Push-Lock Stud Swageless Tensioner.
 - f. Type: Non-Tensioned Fittings:
 - 1) Fitting: Invisiware Radius Ferrule.
 - 2) Fitting: Clip-on-Stop.
 - 3) Fitting: Fixed Jaw.
 - 4) Fitting: Push-Lock Swageless Fitting.
 - 5) Fitting: Push-Lock with Threaded Eye Swageless Fitting.
 - 6) Fitting: Pull-Lock Swageless Fitting.
 - g. Finishes
 - 1) Stainless Steel Finish: #4 Satin.

PART 3 -- EXECUTION

3.01 INSPECTION

- A. Prior to commencing installation of chain link fence and metal railing, the CONTRACTOR shall inspect all areas and conditions within which Work of this Section will be performed. Dimensions and clearances shall be verified. Final grading shall be completed and all earth, brush, or other obstructions which interfere with the proper alignment and construction of fencing shall be removed.

3.02 CONSTRUCTION

A. Chain Link Fence:

1. General:

- a. Fencing and gates shall be installed in accordance with ASTM F567
- b. Unless otherwise indicated, all posts shall be set in concrete. Gate and related posts, corner posts, and other critical elements shall be provided with concrete foundations.

2. Excavation:

- a. Holes for post footings shall be drilled to the diameters, depths, and spacings indicated on the drawings, in firm, undisturbed or compacted soil.

3. Setting Posts:

- a. Space line post footings at a maximum of 8 ft on center and parallel to the ground slope
- b. Posts shall be set plumb and shall be centered in holes, 4 inches above the bottom of the excavation, with posts extending not less than 48 inches below finish grade surface. Set posts deeper, as required, in soft and problem soils and for heavy, lateral loads.
- c. Corner posts shall be installed where changes in the fence lines equal or exceed 10 degrees, measured horizontally.
- d. Each post shall be properly aligned vertically. Posts shall be maintained in proper position during placement and finishing operations.

4. Concrete:

- a. Concrete for footings may be placed without forms, providing the ground is firm enough to permit excavation to neat line dimensions. Prior to placing concrete, the earth around the hole shall be thoroughly moistened.
- b. Encasement concrete for footings shall be placed immediately after mixing in a manner such that there will be no concentration of the large aggregates. The concrete shall be consolidated by tamping or vibrating.
- c. Concrete shall cure for a minimum of 7 days prior to installation of chain link fence fabric material.

5. Top and Bottom Rails:
 - a. Top and bottom rails shall be run continuously through post caps, bending to radius for curved runs. Expansion couplings shall be provided as recommended by the fencing manufacturer.
6. Tension Wire:
 - a. Continuous bottom tension wire shall be stretched tight with turnbuckles at end, gate, intermediate, and corner posts.
 - b. Tension wire shall be installed on a straight grade between posts, with approximately 2 inches of space between finish grade and bottom selvage, unless otherwise indicated.
 - c. Tension wire shall be tied to each post with not less than 6-gauge galvanized wire. Tension wire shall be interlaced with the fabric or attached to the fabric along the extreme bottom of the fence.
7. Fabric Installation:
 - a. Chain-link fabric shall be fastened on the secured side of the posts.
 - b. Fabric shall be stretched and securely fastened to posts. Between posts, top and bottom edges of the fabric shall be fastened to the top rail and bottom tension wire, respectively.
 - c. Fabric shall be stretched and anchored in such a manner that it remains in tension after the pulling force is released.
8. Tie-Wires:
 - a. Tie wire shall be bent to conform to the diameter of the pipe to which it is attached, clasp pipe and fabric firmly with ends twisted at least two full turns. Ends of wire shall be bent back to minimize hazard to persons or clothing.
 - b. Fabric shall be tied to line posts with tie wires spaced at 12 inches on center.
 - c. Fabric shall be tied to rails and braces with tie wires spaced at 24 inches on center.
 - d. Fabric shall be tied to tension wires, with hog rings spaced 24 inches on center.
9. Tension (Stretcher) Bars:
 - a. Fabric shall be fastened to end, corner, intermediate brace, and gate posts with tension (stretcher) bars. Bars shall be threaded through or clamped to fabric at 4 inches on center and secured to posts with tension (stretcher) bar bands, spaced no more than 14 inches on center.
10. Fasteners:
 - a. Nuts for tension bands and hardware bolts shall be installed on the side of fence opposite the fabric side. Ends of bolts shall be peened or the threads scored to prevent removal of nuts.

11. Touch Up:

- a. Clean damaged galvanized surfaces with wire brush removing loose and cracked coatings. Apply two coats of organic zinc-rich paint to damaged areas.
- b. Damage to PVC coating shall be repaired with material equivalent in color and thickness to the original coating.

B. Metal Railing:

1. General:

- a. Install cable railing system in accordance with manufacturer's instructions at locations indicated on the drawings.
- b. Install cable railing system plumb, level, square, and rigid.
- c. Anchor cable railing system to mounting surface as indicated on the drawings.
- d. Use manufacturer's supplied cable hardware.
- e. Terminate and tension cables in accordance with manufacturer's instructions.
- f. Tension cables to a minimum of 225 pounds (103 kilograms) each in sequence in accordance with manufacturer's instructions.
- g. Ensure cables are clean, parallel to each other, and without kinks or sags.
- h. Replace defective or damaged components as directed by OWNER and ENGINEER.
- i. Repair damaged factory-applied finish as directed by OWNER and ENGINEER.

2. Adjusting and Tensioning:

- a. Adjust cables and cable hardware as required to provide properly installed cable railing system as directed by OWNER and ENGINEER.

3. Cleaning:

- a. Remove temporary coverings and protection of adjacent work areas. Clean installed products in accordance with manufacturer's instructions prior to handover.
- b. Clean cables thoroughly in accordance with manufacturer's instructions to remove residual lubricants.
- c. Clean surfaces with soap and water or commercially available stainless steel cleaners.
- d. Do not use abrasive cleaners or metal/steel wool type pads.

4. Protection:
 - a. Protect cable railing system and finish from damage during construction.
 - b. Repair or replace damaged products before Substantial Completion

END OF SECTION

SECTION 323253

LIMESTONE OUTCROPPING SEATING

PART 1 -- GENERAL

1.01 SUMMARY

- A. Section includes Limestone Outcropping Seating.

1.02 DEFINITIONS

- A. A Limestone Outcropping Seating is an installation of limestone blocks placed on grade.

1.03 SUBMITTALS

- A. Submit in accordance with Section 013300 – Contractor Submittals.
- B. Testing certificates from a qualified testing agency shall be submitted prior to acceptance of the rock source to verify the conformity to the requirements of the Contract Documents.
- C. Material Data:
 - 1. Location of offsite source of limestone material.
 - 2. One gradation for each source and type of limestone block.
 - 3. Each Variety of Stone: Submit supplier's data on physical properties.
 - 4. Accessories and Other Manufactured Products: Submit product data, including installation instructions.
- D. Shop Drawings: Submit manufacturer's shop drawings, including plans, elevations, sections, and details, indicating layout, dimensions, and attachments to other Work.
- E. Samples:
 - 1. For Each Limestone Block Type Indicated: Submit sets of samples a minimum of 12 inches square. Include two (2) or more samples in each set and show full range of variations in appearance characteristics expected in completed Work.
- F. Cleaning and Maintenance Instruction: Submit suppliers' instructions for cleaning and maintaining limestone blocks.

1.04 QUALITY ASSURANCE

- A. Installer Qualifications: CONTRACTOR shall have successfully installed at least three (3) projects similar to that of this project within the last two years.
- B. Installer Qualifications:
 - 1. Employs experienced mechanics and stone fitters who are skilled in installing limestone blocks or stone paving similar in material, design, and extent to that indicated for this Project.

LIMESTONE OUTCROPPING SEATING

2. Projects have record of successful in-service performance.
- C. Source Limitations for Limestone Blocks:
1. Obtain each variety of blocks, regardless of finish, from single quarry with resources to provide materials of consistent quality in appearance and physical properties.
 2. Obtain each variety of stone from single quarry, whether specified in this section or in another section.

PART 2 -- PRODUCTS

2.01 LIMESTONE OUTCROPPING SEATING

- A. Seating Stones: Winnebago Outcropping dimensional stones – 30-inch to 42-inch length, 12-inch width, and 18-inch height. Natural finish on all sides. Supplier: Halquist Stone or equal.
- B. Blocks shall be uncut, undressed, limestone quarry stone of approved quality free of seams, cracks and other structural defects, with no man-made cut, blast or shear marks. Field stone, crushed rock, and broken concrete will not be accepted.

PART 3 -- EXECUTION

3.01 EXAMINATION

- A. Verify locations of utilities and existing structures prior to excavation.
- B. Examine the Project site and evaluate conditions where the block seating will be constructed. Notify the proper supervising authority in writing of any conditions that may interfere with the proper construction of the seating or delay completion.
- C. Promptly notify the ENGINEER of site conditions which may affect performance, soil conditions observed other than those assumed, or other conditions that may require a reevaluation of the outcropping design.
- D. Examine surfaces to receive rock seating stone for compliance with requirements for installation tolerances, and other conditions affecting performance.
- E. Notify ENGINEER of conditions detrimental to performance of limestone outcropping seating.
- F. Do not begin installation until unacceptable conditions have been corrected.

3.02 FIELD QUALITY CONTROL

- A. CONTRACTOR shall be responsible for proper installation and quality control of all limestone outcropping components.
- B. OWNER shall, at their expense, retain a qualified professional to monitor and perform quality assurance checks of the installer's work.
- C. Quality Assurance should include foundation soil inspection and compliance with Construction Drawings and Project Specifications.

3.03 CLEANING

- A. After completion of wall installation, remove construction debris and restore any adjacent finished areas affected by wall construction to their pre-construction state.
- B. Wash block faces to remove soiling and stains. Do not use acid or detergents that may “burn” or discolor face.

3.04 LIMESTONE OUTCROPPING SEATING

- A. Install erosion control practices prior to demolition and removals.
- B. Place bonded limestone aggregate.
- C. Limestone blocks should be placed with at least a three-point bearing on the foundation material or underlying rock course. Limestone should be placed with gap up to 3 inch between blocks.
- D. Blocks should be placed so that the center of gravity is as low as possible, with the long axis and bedding planes slanting inward toward the slope.
- E. Overall height of the outcropping seating, should not exceed 18 inches.

3.05 STONE WALL INSTALLATION

- A. Do not exceed 1/2 inch in 10 feet from level or slope indicated.
- B. Tamp and beat limestone blocks with wooden block or rubber mallet to obtain full contact with bedding and to bring finished surfaces within specified tolerances.

3.06 TOLERANCES

- A. Line and Grade Tolerance: The final horizontal and vertical placement will be checked for conformance to the specified tolerances. The horizontal and vertical tolerances shall be as follows:
 - 1. Length of outcropping seating – ± 4 inch
 - 2. Top of outcropping seating – ± 1 inches

3.07 INSPECTION AND MAINTENANCE

- A. Inspect installation after significant rainstorms to check for erosion and undermining. Any failure during the installation or maintenance period shall be repaired immediately. If washout occurs, re-install blocks.

3.08 ADJUSTING AND CLEANING

- A. Remove and replace limestone blocks of following description:
 - 1. Broken, chipped, stained, or otherwise damaged stone.
 - 2. Stone blocks not in accordance with other requirements indicated.

3.09 PROTECTION

- A. Protect limestone block paving during construction with non-staining kraft paper or equal.

END OF SECTION

SECTION 329119

SOIL PREPARATION

PART 1 -- GENERAL

1.01 SECTION INCLUDES

- A. The Contract requirements for topsoil and topsoil placement and grading.

1.02 RELATED SECTIONS

- A. The work of the following Sections is related to the work of this Section. Other Sections, not referenced below, may also be related to the proper performance of this work. It is the CONTRACTOR's responsibility to perform all the WORK required by the Contract Documents.

1. Section 024000 – Site Preparation and Demolition.
2. Section 310000 – Earthwork.
3. Section 311413 – Topsoil Stripping and Stockpiling.
4. Section 312500 – Erosion and Sediment Control.

1.03 REFERENCES

- A. The following is a list of standards which may be referenced in this section:

1. ASTM D5268 – Standard Specification for Topsoil Used for Landscaping Purposes.
2. U.S. Compost Council Seal of Testing Assurance (STA).

1.04 TEST METHODS FOR THE EVALUATION OF COMPOST AND COMPOSTING (TMECC) SUBMITTALS

- A. Imported Topsoil Data: Provide to the Park District the location(s) and name(s) of topsoil sources from which supplemental topsoil is to be obtained for the project, approximate quantities obtained at each site, depth at which soil was taken and indicate whether crops had grown on site(s). Provide uncontaminated soil certifications LPC-663 for each source in accordance with 35 Illinois Administrative Code part 1100. Soil Testing Results: Submit original copies of the soil analysis reports and recommendations for existing and/or imported topsoil. The results must include a sample date and reference the collection location. Soil analysis shall include results for:

1. Chemical Analysis: Include existing major soil nutrients; soil pH value; Cation Exchange Capacity (CEC); soluble salts; percentage of organic matter; and any harmful chemicals.
2. Mechanical Analysis: Include soil texture and percentages of sand, silt, and clay.
3. Laboratory Recommendations: Include testing laboratory's nutrient recommendations and recommendations for soil amendments.

- B. Imported Topsoil Sample: Provide one cubic foot sample of approved imported topsoil to the Park District for review and inspection. Obtain written approval of soil from Park District before procuring for site.
- C. Organic Compost Product Data and Testing Results: Submit the location and name of compost source, mixing facility, and testing results. The test results must include a sample date and reference the collection location. Test method standards shall comply with TMECC and include results for nutrient analysis (NPK), pH, soluble salts, moisture content, organic matter content, stability, particle size, and any pathogens or foreign material.

1.05 SOIL ANALYSIS

- A. Native Stockpiled Topsoil: CONTRACTOR will arrange and pay for services of accredited testing laboratory to perform horticultural soil analysis on stockpiled native topsoil, where applicable.
- B. Imported Soil (if required): CONTRACTOR will arrange and pay for services of accredited testing laboratory to perform horticultural soil analysis on each source of topsoil supplied by CONTRACTOR.
- C. CONTRACTOR shall be responsible for ensuring all samples of imported soil are submitted for testing well in advance of commencement of work. Imported topsoil shall not be placed on site until approved in writing by the Park District.
- D. Soil analysis for horticultural use shall include results for: existing major soil nutrients; soil pH value; total soluble salts (electrical conductivity); percentage of organic matter; soil texture and percentage of sand, silt, and clay; nutrient recommendations; and recommendations for soil amendments.
- E. Perform and pay for additional soil tests to confirm compliance with recommendations of soil analysis for soil amendments, where applicable. ENGINEER reserves the right to randomly select various locations to be tested for compliance.

1.06 SOURCE OF TOPSOIL SUPPLY

- A. CONTRACTOR shall use native topsoil previously stripped and stockpiled under this Contract, provided it meets specified requirements. CONTRACTOR shall be responsible for estimating quantity of stockpiled topsoil available on site.
- B. If native topsoil is inadequate in quantity, quality, or both, CONTRACTOR shall use imported topsoil meeting specified requirements for balance of topsoil required.
 - 1. ENGINEER reserves the right to inspect and evaluate all sources of imported soil selected by CONTRACTOR.

PART 2 -- PRODUCTS

2.01 MATERIALS

- A. Topsoil: Topsoil shall consist of natural, fertile, friable soil possessing the characteristics of rich productive soils in the Chicago area. Topsoil shall be without admixture of subsoil and shall be clean, free from clay lumps, weed seeds, roots, stones, stumps, or similar substances, debris, or other objects which are a hindrance to planting or care operations. Topsoil containing construction debris, sod clumps, quackgrass or other noxious weeds is not acceptable.

SOIL PREPARATION

1. Topsoil shall be loam soil from the A horizon of local soils. At least 90 percent must pass the 2.00 mm (No. 10) sieve. Composition shall be in general accordance with ASTM D5268 subject to the following:
 - a. Acidity/Alkalinity: pH 6.0 – 7.5.
 - b. Texture: 35-45% Sand, 35-45% Silt, 15-25% Clay.
 - c. Organic Content: 5-8%.
- B. Planting Soil: The CONTRACTOR shall prepare planting soil for planting beds and pits by adding and premixing soil amendments with topsoil. The planting soil shall be 5 parts by volume of topsoil mixed with 1 part by volume of organic compost.
 - a. Organic Compost: Well-composted, stable, low-nutrient, and weed-free organic matter meeting the requirements of the U.S. Compost Council Seal of Testing Assurance (STA) and the following:
 - b. Organic Matter: 20-55 percent dry weight basis.
 - c. Moisture Content: 20-65 percent wet weight basis.
 - d. Nutrient Analysis: less than 4 percent Total Nitrogen (N) and less than 2 percent for Total Phosphorus (P) percent dry weight basis.
 - e. pH: 6.5 to 8.0.
 - f. Soluble Salts: less than 2.00 dS/m.
 - g. Particle Size: greater than 80 percent passing a 9.5mm or roughly 3/8-inch screen.
 - h. Foreign Material: less than 0.50 percent by weight.

All testing method standards are per the Test Methods for the Evaluation of Compost and Composting (TMECC).

1. Mixing the Planting Soil: The CONTRACTOR shall notify the ENGINEER as to site location, time, and equipment necessary for mixing the planting soil a minimum of one week before processing. All mixing shall be done by mechanical means subject to the approval of the ENGINEER. The planting soil shall be in a loose friable condition at the time of planting.
- C. Sand: #2 torpedo sand, clean coarse, ungraded, meeting ASTM C33-55 requirements for concrete sand.

PART 3 -- EXECUTION

3.01 SUB-BASE CONDITIONS

- A. Notify the Park District for written approval of condition of sub-base before installation of topsoil begins. Failure to obtain approval may result in CONTRACTOR's having to remove topsoil for inspection at no additional cost to the Park District.
- B. The sub-base should be in a dry state and slightly scarified to allow moisture interaction with the topsoil.

- C. The sub-base should be prepared so as to eliminate rough and low areas to ensure positive drainage. Maintain levels, profiles and contours of sub-grades during spreading and application of topsoil.
- D. Remove foreign material, debris, roots, branches, stones in excess of 1-1/2-inch (1.5") diameter, and other deleterious materials including concrete spoils, gravel, overburden, and rubble. Remove subsoil contaminated with toxic materials or petroleum products. Remove foreign debris that protrudes above subsoil surface.
 - 1. Dispose of removed materials off site as directed by ENGINEER. Do not bury any foreign material beneath areas to be landscaped.
- E. Prior to final placement of topsoil, cultivate subgrade areas to a minimum three to four inches (3" – 4") deep where topsoil will be placed. Scarify or till subsoil using discs, harrows or other suitable equipment that will loosen subsoil before placing any topsoil. Repeat cultivation in areas where equipment used for hauling and spreading topsoil has compacted subgrade soil. Manually cultivate soil around existing trees, plants, and surface obstacles as required to prevent damage.

3.02 TOPSOIL AND PLANTING SOIL PLACEMENT

- A. A minimum of 6 inches of topsoil shall be placed in all areas to be seeded and a minimum of 12 inches of planting soil shall be placed in areas to be mass planted.
- B. Do not place or spread topsoil and planting soil until the Park District has approved subgrade preparation.
- C. When conducting grading operations with topsoil and planting soil on site, use lightweight hand-operated equipment.
- D. Place approved topsoil and planting soil in dry weather on loose, friable, and graded subgrade surface. Do not place or spread topsoil when the subsoil or topsoil is excessively wet, too dry, frozen, or otherwise detrimental to work.
- E. Uniformly distribute topsoil and planting soil throughout areas to receive seeding and mass plantings (shrubs, perennials, etc.) in quantity sufficient to provide a rough grade and according to depths noted herein.
- F. Place and spread planting soil in 6-inch-thick lifts, cultivating and lightly compacting planting soil to reduce future settlement. Do not mechanically compact topsoil; water in to assist natural soil settlement. Allow for complete drainage and drying out prior to working topsoil.
- G. Planting soil after placement shall be tested with a compaction tester and shall not exceed 200 psi (1400kPA).
- H. Manually spread topsoil around existing trees, plants, and surface obstacles as required to prevent damage.

3.03 PREPARATION OF FINAL GRADE

- A. Remove all surface debris, stones in excess of 20 mm diameter, soil clods, vegetation, roots, grass and weeds, litter, and other foreign debris. Dispose of collected materials off site as directed by ENGINEER.

- B. Fine grade and loosen topsoil. Eliminate rough spots and low areas to ensure positive drainage away from building faces and walkways. Prepare a loose friable bed by means of cultivation and subsequent raking. Maintain levels, profiles, and contours of subgrade.
- C. Float and leave surfaces smooth, uniform, and sufficiently firm against deep foot printing with a fine loose texture. Finish surface shall be clean, even, and free from irregular surface changes.
- D. Keep topsoil one inch (1") below finish grade for sodded areas adjacent to walkways, curbs, edging materials, other hard surfaces, and crown of adjacent existing turf. Elsewhere, bring topsoil up to finished grade.
- E. Keep planting soil 3-inches (3") below finish grade for planting areas adjacent to walkways, curbs, edging materials, other hard surfaces, and crown of adjacent existing turf, to allow for mulch placement in planting areas.
- F. Do not cover catch basins, valve covers, or manholes. Cut smooth falls to catch basin rims, finish flush. Provide smooth transitions at top and bottom of slopes.
- G. Grading work shall not be performed when moisture content of soil is such that excessive compaction will occur, or when soil is so dry that clods will not break readily or dust will form in the air. Apply water as required to prevent the formation of an airborne dust nuisance and to provide ideal soil moisture content for tilling.
- H. Finished grade shall meet existing grade at Contract limits. The CONTRACTOR shall continue to correct finished grade until Project Acceptance.

3.04 SOIL AMENDMENTS

- A. Apply and evenly spread soil amendments at specified rate as recommended in soil analysis report.
- B. Mix soil amendment well into full depth of topsoil. Retest amended topsoil to confirm compliance with soil analysis report.

3.05 PROTECTION

- A. Protecting Graded Areas: Protect newly graded areas from traffic, freezing, and erosion, and from disturbances caused by operations of other trades and trespassers. Keep free of trash and debris.
- B. Repair and reestablish grades to specified tolerances where completed or partially completed surfaces become eroded, rutted, settled, or where they lose compaction due to subsequent construction operations or weather conditions.
- C. Where settling occurs before Project correction period elapses, remove finished surfacing, backfill with additional topsoil material, and reconstruct surfacing.
 - 1. Restore appearance, quality, and condition of finished surfacing to match adjacent work, and eliminate evidence of restoration to the greatest extent possible.
- D. Protect existing structures, fences, sidewalks, utilities, paving and curbs.

3.06 ACCEPTANCE

- A. ENGINEER may inspect and test topsoil in place and determine acceptance of material, depth, and finish grading.

3.07 CLEAN-UP

- A. Clean up, immediately, any soil or debris spilled onto roads, walkways and other finished surfaces. Keep site clean and tidy at all times.
- B. Excess topsoil not required for landscape use on site shall be removed off site by CONTRACTOR or spread on site by CONTRACTOR as directed by ENGINEER.

END OF SECTION

SECTION 333913

STORM DRAINAGE SYSTEM

PART 1 -- GENERAL

1.01 SUMMARY

- A. Section Includes: Requirements for providing reinforced concrete pipe, end sections, and all other appurtenances for a complete installation including the salvage and reinstall of existing drainage pipe and end sections as shown on project drawings.

1.02 RELATED DOCUMENTS

- A. Section 310000 – Earthwork.

1.03 REFERENCES

- A. ASTM C 478 - Specification for Precast Reinforced Concrete Manhole Sections.
- B. IDOT Standard Specifications for Roads and Bridges.

1.04 SUBMITTALS

- A. General: Provide all submittals, including the following, as specified in the General Specifications.
- B. Shop drawings including schedule of drainage structures/pipes and complete description and dimensioning of all items. Show location, elevation, and size of pipe openings.
- C. CONTRACTOR shall furnish photo documentation showing existing storm structure condition intended for salvage and reinstall to OWNER and ENGINEER.

1.05 DELIVERY, STORAGE AND HANDLING OF PRECAST CONCRETE STRUCTURES

- A. General: Take every precaution to prevent damage to the structure/pipe sections during transportation and unloading. Unload sections using skids, pipe hooks, rope slings, or suitable power equipment if necessary, and keep the sections under control at all times. Do not allow the sections to be dropped, dumped, or dragged under any conditions.
- B. Damaged Section: If any section is damaged in the process of transportation or handling, reject, and immediately remove such sections from the site, and replace the damaged vault sections at no increase in Contract Amount.

PART 2 -- PRODUCTS

2.01 MATERIALS

- A. Reinforced Concrete Pipe (RCP)
 - 1. RCP shall conform with IDOT Standard Specifications for Roads and Bridges, Section 550 -- STORM SEWERS and Section 1042 – PRECAST CONCRETE PRODUCTS. Minimum pipe Class III.

- a. RCP Rubber Gaskets: Conform to IDOT Standard Specifications for Roads and Bridges, Section 550 and Section 1056.
- b. RCP Joint Collar Concrete: Conform to IDOT Standard Specifications for Roads and Bridges, Section 420 and Section 1020, Class SI.
- c. RCP Joint Collar Wrap: Conform to IDOT Standard Specifications for Roads and Bridges, Section 1080, Ground Stabilization Woven Fabric.

2.02 SOURCE QUALITY CONTROL

A. Salvage and Reinstall Material and Appurtenances:

- 1. Salvage items to be reinstalled shall be of the same shape, dimension, location, and quality of the original item prior to construction or at location/dimension indicated on the drawings or directed by the ENGINEER.

PART 3 -- EXECUTION

3.01 CONSTRUCTION

- A. Construct and install drainage structures/pipes in accordance with the plans and IDOT Standard Specifications for Roads and Bridges, Section 550, Storm Sewers and Section 551 Storm Sewer Removal and Installation.
- B. CONTRACTOR shall salvage storm pipes and end sections as identified on the drawings. Salvaged pipes and end sections shall be examined to determine if condition is suitable for reuse. CONTRACTOR shall contact ENGINEER and provide photo documentation of the salvaged pipes and end section condition, prior to reinstalling salvaged pipe or installing new pipe. Salvaged pipes determined suitable for reuse shall be sawcut to length and reinstalled as identified on the drawings. Provide new pipe joint gaskets in accordance with the Specifications for the salvaged pipe joints. Salvaged pipe determined to not be suitable for reuse shall be disposed of offsite. If existing pipe joints include a steel joint fastener/tie, the fastener shall be reinstalled at the intact bell and spigot joints. If there are no existing joint fasteners, bell and spigot pipe joints of salvaged pipe shall be installed with new metal joint fasteners/ties.
 - 1. RCP Joint Collar: In the event the salvaged pipe is installed where the pipe connection between an existing in place pipe and salvaged pipe is not both a bell and spigot, the connection shall require a joint collar. The joint collar shall consist of wrapping the joint with RCP Joint Collar Wrap (geotextile) minimum 4 feet wide with a 1 foot thick by 4 feet wide concrete collar poured around the joint (centered over the joint) and over the collar wrap.

END OF SECTION

SECTION 355411

STEEL SHEET PILING, WALERS, AND CAPS

PART 1 -- GENERAL

1.01 SCOPE

- A. The work covered by this section includes furnishing all plant, equipment, labor and materials and performing all operations in connection with the installation and protection of steel sheet piling wall system, including walers, caps and connections in accordance with these specification notes and applicable drawings. The available subsurface geotechnical information is provided in Appendix A.

1.02 REFERENCES

- A. The following publications listed below, but referred to thereafter by basic designation only, form a part of this specification to the extent indicated by the references thereto. Reference to standard specifications, guides, reports, and practices stated herein shall be interpreted to mean the latest version or revision as of the date noted in the footer of this section.

1. American Institute of Steel Construction (AISC) Steel Construction Manual.
2. American Society for Testing and Materials (ASTM)
 - a. ASTM A 6 for Rolled structural sheet piling, ASTM A 328 for steel sheet piling, A36 for carbon structural steel, ASTM F3125 for bolts and assemblies and other Applicable standards.
3. American Welding Society
 - a. AWS D1.1-Structural Welding Code – Steel.

1.03 SUBMITTALS

- A. Owner approval is required for all submittals. The Contractor's Quality Control organization shall be responsible for certifying that all submittals are in compliance with the contract requirements.

1. Data

Manufacturer's literature, available from suppliers, which demonstrates compliance with applicable specifications for the materials listed below.

- a. Complete descriptions of driving equipment including hammers, extractors, protection caps and other installation appurtenances shall be submitted for approval prior to commencement of work.
- b. Materials test certificates and test reports shall be submitted for each shipment of steel sheet piling, walers, plates and structural tees and identified with specific lots prior to installing piling. Identification data should include piling type, heat analysis number, chemical composition, mechanical properties and the steel manufacturer's name.

- c. Contractor shall submit a construction operation plan and work sequence for the installation of all sheet piles 30 days prior to installation of sheet piles. Include a description of the construction sequence and planned approach to complete the work as per these specifications including quality control requirements of section 3.4. Include all equipment, materials and performing all operations in connection with the installation and protection of steel sheet pile wall system, including walers, caps and ancillary system. Also, to describe method protection of adjacent structures and utilities from construction work.
 - d. Records of the sheet piling driving operations shall be submitted after driving is completed at the end of each day and at the end of constructions. These records shall provide a system of identification which shows the disposition of approved piling in the work, driving equipment performance data, piling penetration rate data, piling dimensions and top and bottom elevations of installed piling.
 - e. Design calculations for the use of alternative pile sections shall be stamped by a Structural Engineer registered in the State of Illinois and submitted prior to installing of piling.
2. Shop Drawings
- a. Shop drawings for steel sheet piling, including fabricated sections, shall show complete piling dimensions and details, driving sequence and location of installed piling. Shop drawings shall include details and dimensions of templates and other temporary guide structures for installing sheet piling. Shop drawings shall provide details of the method of handling sheet piling to prevent permanent deflection, distortion or damage to piling interlocks.

PART 2 -- PRODUCTS

2.01 STEEL SHEET PILING

A. Steel Sheet Piling

- 1. Steel sheet piling shall be hot-rolled sections of LZ-3 and the type shown on the drawings conforming to the requirements of ASTM A 572 Grade 50. The interlocks of the sheet piling shall be free-sliding, provide a swing angle suitable for the intended installation, but not less than five (5) degrees when interlocked, and maintain continuous interlocking when installed throughout their entire length. The sheet piling shall be homogeneous for the full thickness of the section and shall be capable of developing the structural capacity using the full section modulus.

B. Alternative Steel Sheet Piling

- 1. Alternative hot-rolled steel sheet pile sections may be substituted for the section shown on the drawings.

C. Domestic Sheet Pile Section

- 1. Domestic hot-rolled steel sheet pile sections of the quality and quantity required to fulfill this contract may be available. The Contractor shall verify the availability of these sections prior to submitting his bid.

D. Cold-Formed Sheet Pile

1. Cold-formed sheet pile sections will not be considered and not accepted for this project.

2.02 WALERS OR CAPS

- A. Walers or caps shall be of the sections shown on the drawings and shall conform to ASTM A 992, Grade 50, unless otherwise shown on the drawings.

PART 3 -- EXECUTION

3.01 GENERAL

- A. Delivery and Storage. Materials delivered to the site shall be new and undamaged and shall be accompanied by certified test reports. The manufacturer's logo and mill identification mark shall be provided on the sheet piling as required by the referenced specifications. Sheet piling shall be stored and handled in the manner recommended by the manufacturer to prevent permanent deflection, distortion or damage. Storage of piling should also facilitate required inspection activities.

3.02 PILING DRIVING EQUIPMENT - HAMMER

- A. Driving Hammers. Hammers shall be steam, air, or diesel drop, single-acting, double-acting, differential-acting type, or vibratory type. The driving hammer and energy of the hammers shall be as recommended by the manufacturer for the piling weights, piling section and depth and subsurface materials to be encountered.

3.03 PLACING AND DRIVING

A. Driving Line

1. The driving line shall be cleared of any debris, wood obstructions, stone, or pieces of the existing revetment prior to the placing of the sheet piling.

B. Driving

1. Piling shall be driven with the proper size hammer and by approved methods so as not to subject the piling to damage and to insure proper sheet pile interlock throughout its length. Piles shall be driven to the depths shown on the plans.
2. The horizontal alignment of the steel sheet pile wall shall be within one inch of required location after completion of driving and after installation walers.
3. Piling shall be driven to depths shown on the drawings and shall extend up to the elevation shown on the drawings for the top of pilings. A tolerance of plus or minus one inch above the required indicated top elevations will be permitted. Piling shall not be driven within 100 feet of cast-in-place concrete less than seven days old.

C. Inspection of Driven Piling

1. The Contractor shall inspect the interlocked joints of driven sheet piling extending above ground. Piling found to be out of interlock shall be removed and replaced at the Contractor's expense.

- D. All appurtenant metal materials shall be installed in accordance with the contract plans.

3.04 QUALITY CONTROL

- A. The Contractor shall establish and maintain quality control for work under this section to assure compliance with contract requirements and maintain records of his quality control for all construction operations including, but not limited to, the following:
 - 1. Materials;
 - 2. Sheet piling driving operations, including type and rating of hammer;
 - 3. The Contractor certification that selected impact or vibratory hammers shall not damage the sheet pile while driven to the required depth shown on the drawings and up to 5 feet deeper if necessary and directed by the Owner;
 - 4. Sheet pile alignment; and
 - 5. Driving depth or depth of accepted refusal as approved by Owner.
- B. Alignment Tolerance: The sheet pile alignment, top, tip shall not deviate from those shown on the drawings. The maximum allowable tolerance for deviation from alignment and top of sheet pile is +/- 1/2 inch.
- C. Any sheets determined to be defective by the Owner shall be rejected and replaced as directed by the Owner at no cost to the Owner.
- D. Sheet piling shall be provided with standard pulling holes as necessary.
- E. A copy of the records of inspections, as well as the records of corrective actions taken, shall be furnished to the Owner as per Contract quality control plan.

END OF SECTION