

*Village of Dobbs Ferry  
112 Main Street  
Dobbs Ferry, New York 10522*

**Specifications and  
Contract Documents for**

*Renovation of the Gould Park Pools  
Dobbs Ferry New York*

JANUARY, 2019

**BE**

A.S. Bell Engineering, P.C.  
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## **GENERAL INDEX TO ALL CONTRACT DOCUMENTS**

Listed below are the contents of the Contract Documents and Specifications for the

Construction of a New Pool at  
Gould Park, Village of Dobbs Ferry  
Westchester County, New York

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## **ADVERTISEMENT & INVITATION TO BIDDERS**

NOTICE IS HEREBY GIVEN that sealed bids will be received by the Town Clerk, until February 4, 2019, at the office of Town Clerk, 112 Main Street, Dobbs Ferry, New York 10522. Proposals are for:

### **CONSTRUCTION OF NEW POOL AT GOULD PARK, DOBBS FERRY, NEW YORK**

THE WORK shall be shown on the drawings and according with the specifications and other contract documents prepared by A.S. BELL ENGINEERING, P.C, 5895 Johnston Road, Slingerlands, New York 12159.

THE INSTRUCTIONS TO BIDDERS, Form of the Bid Proposal, Form of the Contract, Drawings, General Conditions, Supplemental General Conditions Plans and Specifications may be examined at the offices of the Village Clerk's, and the office of A.S. BELL ENGINEERING, 1732 Western Avenue, Albany, NY 12203, (Located in Burns Management Building) Phone 518-452-2838. Upon payment of \$25.00 (non-refundable), one (1) complete set of plans and specifications may be obtained at the offices of the Village of Dobbs Ferry TOWN CLERK or A.S. BELL ENGINEERING, P.C. Checks shall be made out to the Village of Dobbs Ferry.

EACH BIDDER must deposit with his bid, security in the amount of no less than 5 percent of the bid, in the form and subject to the conditions provided in the INFORMATION TO BIDDERS.

SIMULTANEOUSLY WITH his executed contract, the successful bidder must deliver to the Village of Dobbs Ferry an executed performance and completion bond in a form meeting the Village's approval, in an amount not less than 100 percent of the accepted bid as security for the faithful performance and completion of this contract, and also a separate bond guaranteeing the prompt payment of monies due to all persons supplying the contractor or subcontractors with labor and materials employed and used in carrying out the contract, and having as surety on the bonds such surety companies as are approved or acceptable to the Village of Dobbs Ferry.

ALL WORK shall be subject to equal opportunity in employment, state wage rates and all other requirements in accordance with applicable law.

The Town Board reserves the right to reject all bids.

BY ORDER OF  
VILLAGE OF DOBBS FERRY

BY: Bob McLoughlin  
Mayor

## INFORMATION TO BIDDERS

### 1. Receipt and Opening of Bids

The Village of Dobbs Ferry (herein called the "Owner") invites bids on the forms attached hereto. All blanks must be appropriately filled in. **Bids will be received by the Owner until 11 AM February 4, 2019, at 112 Main Street, Dobbs Ferry, New York 10522.** The envelope containing the bid must be sealed, addressed to the Owner and designated as bid for

**Construction of New Pool at Gould Park,**

**Dobbs Ferry, Westchester County, New York.**

and bear on the outside the name of the bidder, and his address. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another addressed as specified above.

The Owner may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. No bidder may withdraw a bid within 45 days after the actual date of the opening thereof.

Each bid must be submitted on the prescribed forms and accompanied by a signed, Non-Collusive Bidding Certificate. All blank spaces for bid prices must be filled in, in ink or typewritten, in both words and figures, and the forgoing certification must be fully completed and executed when submitted.

### 2. Subcontractors

The bidder is specifically advised that any person, firm or other party to whom it is proposed to award a subcontract under this contract must be acceptable to the Owner.

### 3. Qualifications of Bidder

The Owner may make such investigations as he deems necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the Owner that such bidder is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein. Conditional bids will not be acceptable. All prospective bidders shall furnish the Owner with a listing of no less than two (2) previous projects of this nature successfully completed within similar time constraints.

#### **4. Bid Security**

Each bid must be accompanied by certified check of the bidder, or bid bond, duly executed by the bidder as principal and having as surety thereon a surety company approved by the Owner, in the amount of no less than five percent (5%) of the bid. Such check or bid bond will be returned to all except the three lowest bidders within three days after the bid opening, and the remaining checks, or bid bonds will be returned promptly after the Owner and the acceptable bidder have executed the contract, or if no award has been made within thirty (30) days after the date of bid opening, upon demand of the bidder at any time thereafter, so long as he has not been notified of the acceptance of this bid. A contractor furnishing a certified check as bid surety must include with it a letter from a bonding company indicating their intent to furnish the bonds required under the contract.

#### **5. Liquidated Damages for Failure to Enter into Contract**

The successful bidder, upon his failure or refusal to execute and deliver the contract and bonds required within ten (10) after he has received notice of the acceptance of his bid, shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with his bid.

#### **6. Time of Completion and Liquidated Damages**

The bidder must agree to commence work on or before a date to be specified in a written "Notice to Proceed" and complete the work by July 1, 2019. The bidder must agree to pay liquidated damages in the amount of \$1000.00 per calendar day beyond the completion date limit. If the shortage or availability of materials prevents completion, the time of completion may be extended at the discretion of the Owner.

#### **7. Conditions of the Work**

Each bidder must inform himself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve the successful bidder of his obligation to furnish all materials and labor necessary to carry out the provisions of his contract. Insofar as possible, the contractor must employ such methods or means as will not cause any interruption or of interference with the work of any other contractor.

#### **8. Addenda and Interpretations**

No interpretations of the meaning of the Plans, Specifications, or other pre-bid documents will be made to any bidder orally. Any oral discussions between the bidder and the Owner, or A.S. BELL ENGINEERING, P.C. is to be considered informal and not binding. Every request for such interpretations should be made in writing addressed to A.S. BELL ENGINEERING, P.C., 5895 Johnston Road, Slingerlands, NY 12159, hereinafter called Engineer, and to be given consideration must be received at least five days prior to the date fixed for the opening of bids. Any and all such interpretations and any supplemental instructions will be in the form of written addenda to the specifications which, if issued, will be made by certified mail with return receipt requested to all prospective bidders (at the respective addresses furnished for such purposes), not

later than three days prior to the date fixed for the opening of bids. Failure of any bidder to receive any such addendum or interpretation shall not relieve such bidder from any obligation under his bid as submitted. All addendum so issued shall become part of the contract documents.

#### **9. Security for Faithful Performance**

Simultaneously, with his delivery of the executed contract, the contractor shall furnish a surety bond or bonds as security for the faithful performance of this contract and for the payment of all persons performing labor on the project under this contract, as specified in the General Conditions included herein. The surety on such bonds shall be a duly authorized surety company satisfactory to the Owner.

#### **10. Power of Attorney**

Attorneys-in fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

#### **11. Notice of Special Conditions**

Attention is particularly called to those parts of the contract documents and specifications which deal with the following:

- (a) Products proposed for use
- (b) Insurance requirements
- (c) Contractor experience

#### **12. Laws and Regulations**

The bidder's attention is directed to the fact that all applicable State and Local Codes, State laws, municipal ordinances and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though written out in full.

#### **13. Obligation of Bidder**

At the time of the opening of the bids, each bidder will be presumed to have thoroughly inspected the site and to have read and to be thoroughly familiar with the plans and contract documents (including all addenda). Failure or omission of any bidder to examine any form, instrument or document shall in no way relieve any bidder from any obligation in respect to his bid.

#### **14. Sales and Compensating Use Tax Exemption for Materials Sold to Owner**

The Owner is **NOT** exempt from payment of sales and compensating use taxes of the State of New York and of cities and counties on all supplies and materials sold to the Owner pursuant to this Contract. The contractor and his subcontractors, shall be responsible for any and all applicable taxes including sales and compensating use taxes on such leased tools, machinery, equipment and other property.

**15. Required Certificates**

The contractor and his subcontractors and material men are required to obtain all necessary exemption certificates from the Owner and to furnish a resale certificate to all persons, firms or corporations from which they purchased the supplies and materials in performance of the work under this contract.

**17. Non-Collusive Bidding Certification**

All contractors bidding under the provisions of the specifications are subject to provisions of Section 103-d of the General Municipal law of the State of New York. a signed non-collusive certification is required to be submitted with each bid in the form specified with the bid documents.

**18. Prevailing Wage Rates**

The NYS Department of Labor wage reates for this project can be found on the Departments Web site – Reference PRC#2018 011769

**BID FORM**

**Construction of a New Pool**

**at Gould Park, Dobbs Ferry, Westchester County, New York.**

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## ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

***Village of Dobbs Ferry, 112 Main Street, Dobbs Ferry, New York 10522***

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 – BIDDER'S ACKNOWLEDGEMENTS

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

## ARTICLE 3 – BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

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

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

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

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site

that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

- E. 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 any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.
- F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
- G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
- H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.
- I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.
- J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

#### **ARTICLE 4 – BIDDER'S CERTIFICATION**

##### **4.01 Bidder certifies that:**

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

- B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:
  - 1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;
  - 2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
  - 3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
  - 4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

#### ARTICLE 5 – BASIS OF BID

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

Lump Sum Price for the:  Constrution of a New Pool at Gould Park, Village of Dobbs Ferry, Westchester County, New York.	\$
--	----

WORDS: \_\_\_\_\_ DOLLARS

Bidder to include in other Bid item(s) the other costs (if any) associated with accepting such assignment and administering the assigned contract.

Total number of calendar days to substantially complete the Work: 120 days.

Liquidated Damages Rate (from Agreement): \$1,000 /day.

#### ARTICLE 6 – TIME OF COMPLETION

- 6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

#### ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 The following documents are submitted with and made a condition of this Bid:

- A. Required Bid security;
- B. List of Proposed Subcontractors;
- C. List of Proposed Suppliers;
- D. List of Project References;
- E. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such license within the time for acceptance of Bids;
- F. Contractor's License No.:  [or] Evidence of Bidder's ability to obtain a State Contractor's License and a covenant by Bidder to obtain said license within the time for acceptance of Bids;
- G. Required Bidder Qualification Statement with supporting data; and

#### ARTICLE 8 – DEFINED TERMS

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

#### ARTICLE 9 – BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

By:

*[Signature]* \_\_\_\_\_

*[Printed name]* \_\_\_\_\_

*(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)*

Attest:

*[Signature]* \_\_\_\_\_

*[Printed name]* \_\_\_\_\_

Title: \_\_\_\_\_

Submittal Date: \_\_\_\_\_

Address for giving notices:

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Telephone Number:

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Fax Number:

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Contact Name and e-mail address:

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Bidder's License No.:

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*(where applicable)*

**NON-COLLUSIVE BIDDING CERTIFICATION**

By submission of this bid for Construction of a New Swimming Pool  
At Gould Park, Dobbs Ferry, New York

each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid, each party thereto certifies as to its own organization, under penalty of perjury, that to the best of knowledge and belief:

1. The prices in this bid have been arrived at independently without collusion, consultation, communication or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;
2. Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor; and
3. No attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

A bid shall not be considered for award, nor shall any award be made where 1, 2 and 3 above, have not been complied with, provided, however, that in any case, the bidder cannot make the foregoing certification, the bidder shall so state and shall furnish with the bid, a signed statement which sets forth in detail the reasons thereof. Where 1, 2 and 3 above have not been complied with, the bid shall not be considered for any award, nor shall any award be made, unless the head of the Purchasing Unit to the political subdivision, public department, agency or official thereof to which the bid is made, or his designee, determines that such disclosure was not made for the purpose of restricting competition.

The fact that a bidder a) has published price lists, rates or tariffs covering items being procured, b) has informed prospective customer of proposed or pending publication of new or revised price lists for such items, or c) has sold the same items to other customers at the same prices being bid, does not constitute, without more, a disclosure within the meaning of paragraph above.

Any bid hereafter made to any political subdivision of the State or any public department, agency or official thereof by a corporate bidder for work or services performed to be performed or goods sold or to be sold, where competitive bidding is required by statute, rule, regulation, local law, and where such bid contains the certification referred to in paragraph above, shall be deemed to have been authorized by the Board of Directors of the bidder, and such authorization shall be deemed to include the submission of the bid and the inclusion therein of the certificate as to non-collusion as the act and deed of the corporation.

I hereby affirm under the penalties of perjury that the foregoing statement is true.

Firm: \_\_\_\_\_

By: \_\_\_\_\_  
(signature)

\_\_\_\_\_  
(typed)

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Sworn to before me this \_\_\_\_\_

Day of \_\_\_\_\_, 2019

\_\_\_\_\_  
Notary Public

STATE OF NEW YORK )

COUNTY OF ) SS:

On this \_\_\_\_\_ day of \_\_\_\_\_, 2018, before me personally  
came \_\_\_\_\_, to me known and known to me to be the person  
who executed the foregoing instrument, and said person duly acknowledged to me that they  
executed the same.

\_\_\_\_\_  
Notary Public

## BID BOND

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

BIDDER (Name and Address):

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

OWNER (Name and Address): **Village of Dobbs Ferry**  
**112 Main Street, Dobbs Ferry, New York 10522**

### BID

Bid Due Date:

Description: **CONSTRUCTION OF NEW POOL**

### BOND

Bond Number:

Date:

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

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

**BIDDER**

**SURETY**

\_\_\_\_\_  
Bidder's Name and Corporate Seal

(Seal)

\_\_\_\_\_  
Surety's Name and Corporate Seal

(Seal)

By:

Signature

By:

Signature (Attach Power of Attorney)

Print Name

Print Name

Title

Title

Attest:

Signature

Attest:

Signature

Title

Title

*Note: Addresses are to be used for giving any required notice.*

*Provide execution by any additional parties, such as joint venturers, if necessary.*

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and



assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.

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

3. This obligation shall be null and void if:

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

3.2 All Bids are rejected by Owner, or

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

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

5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.

6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after the Bid due date.

7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.

8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.

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

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

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

THIS AGREEMENT is by and between Village of Dobbs Ferry, New York ("Owner") and  
("Contractor").

EJCDC® C-520 (Rev. 1), Agreement Between Owner and Contractor for Construction Contract (Stipulated Price).  
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and American Society of Civil Engineers. All rights reserved. Page 1 of 7

1. Substantial Completion: Contractor shall pay Owner **\$1,000** for each day that expires after the time (as duly adjusted pursuant to the Contract) specified in Paragraph 4.02.A above for Substantial Completion until the Work is substantially complete.
2. Completion of Remaining Work: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner **\$1,000** for each day that expires after such time until the Work is completed and ready for final payment.
3. Liquidated damages for failing to timely attain Substantial Completion and final completion are not additive and will not be imposed concurrently.
4. ~~Milestones: Contractor shall pay Owner \$ [REDACTED] for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for achievement of Milestone 1, until Milestone 1 is achieved.~~

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#### 4.04 ~~Special Damages~~

- A. ~~In addition to the amount provided for liquidated damages, Contractor shall reimburse Owner (1) for any fines or penalties imposed on Owner as a direct result of the Contractor's failure to attain Substantial Completion according to the Contract Times, and (2) for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Substantial Completion (as duly adjusted pursuant to the Contract), until the Work is substantially complete.~~
- B. ~~After Contractor achieves Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times, Contractor shall reimburse Owner for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Work to be completed and ready for final payment (as duly adjusted pursuant to the Contract), until the Work is completed and ready for final payment.~~

### ARTICLE 5 – CONTRACT PRICE

- 5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents the amounts that follow, subject to adjustment under the Contract:
- A. For all Work other than Unit Price Work, a lump sum of: \$ [REDACTED]
- All specific cash allowances are included in the above price in accordance with Paragraph 13.02 of the General Conditions.

### ARTICLE 6 – PAYMENT PROCEDURES

#### 6.01 *Submittal and Processing of Payments*

- A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

## 6.02 Progress Payments; Retainage

- A. Owner shall make progress payments on account of the Contract Price on the basis of Contractor's Applications for Payment ~~on or about the [ ] day of~~ each month during performance of the Work as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.
1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract
    - a. 95 percent of Work completed (with the balance being retainage). ~~If the Work has been 50 percent completed as determined by Engineer, and if the character and progress of the Work have been satisfactory to Owner and Engineer, then as long as the character and progress of the Work remain satisfactory to Owner and Engineer, there will be no additional retainage; and~~
    - b. ~~[ ] percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).~~
- B. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 100 percent of the Work completed, less **retainage**. ~~such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less [ ] percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.~~

## 6.03 Final Payment

- A. Upon final completion and acceptance of the Work in accordance with Paragraph 15.06 of the General Conditions, Owner shall pay the remainder of the Contract Price as recommended by Engineer as provided in said Paragraph 15.06.

## ARTICLE 7 — INTEREST

~~7.01 All amounts not paid when due shall bear interest at the rate of [ ] percent per annum.~~

## ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

- 8.01 In order to induce Owner to enter into this Contract, Contractor makes the following representations:
- A. Contractor has examined and carefully studied the Contract Documents, and any data and reference items identified in the Contract Documents.
  - B. Contractor has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
  - C. Contractor is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

- D. Contractor has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and ~~(2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.~~
- E. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Site-related reports and drawings identified in the Contract Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (3) Contractor's safety precautions and programs.
- F. Based on the information and observations referred to in the preceding paragraph, Contractor 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.
- G. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
- H. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
- I. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
- J. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

## ARTICLE 9 – CONTRACT DOCUMENTS

### 9.01 *Contents*

- A. The Contract Documents consist of the following:
  - 1. This Agreement
  - 2. Performance bond
  - 3. Payment bond
  - 4. General Conditions
  - 5. Supplementary Conditions
  - 6. Specifications as listed in the table of contents of the Project Manual.
  - 7. Drawings (not attached but incorporated by reference.
  - 8. Addenda (um)
  - 9. Exhibits to this Agreement

- a. Contractor's Bid
- 10. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
  - a. Notice to Proceed.
  - b. Work Change Directives.
  - c. Change Orders.
  - d. Field Orders.
- B. The documents listed in Paragraph 9.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 9.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the General Conditions.

## **ARTICLE 10 – MISCELLANEOUS**

### **10.01 Terms**

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

### **10.02 Assignment of Contract**

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party hereto of any rights under or interests in the Contract will be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, 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 Documents.

### **10.03 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.

### **10.04 Severability**

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

### **10.05 Contractor's Certifications**

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 10.05:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process or in the Contract execution;
2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and
4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

#### 10.06 *Other Provisions*

- A. Owner stipulates that if the General Conditions that are made a part of this Contract are based on EJCDC® C-700, Standard General Conditions for the Construction Contract, published by the Engineers Joint Contract Documents Committee®, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or "track changes" (redline/strikeout), or in the Supplementary Conditions.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

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

OWNER: Village of Dobbs Ferry, New York

CONTRACTOR:

By: \_\_\_\_\_

By: \_\_\_\_\_

Title: Owner

Title: \_\_\_\_\_

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

Attest: \_\_\_\_\_

Attest: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Address for giving notices:

Address for giving notices:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

License No.: \_\_\_\_\_  
*(where applicable)*

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

*NOTE TO USER: Use in those states or other jurisdictions where applicable or required.*



## PERFORMANCE BOND

CONTRACTOR (name and address):

SURETY (name and address of principal place of business):

OWNER **Village of Dobbs Ferry, 112 Main Street, Dobbs Ferry, New York 10522**

**CONSTRUCTION CONTRACT:**

Effective Date of the Agreement:

Amount:

Description **CONSTRUCTION OF SWIMMING POOL**

**BOND**

Bond Number:

Date (not earlier than the Effective Date of the Agreement of the Construction Contract):

Amount:

Modifications to this Bond Form: ☐ None ☐ See Paragraph 16

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

**CONTRACTOR AS PRINCIPAL**

**SURETY**

\_\_\_\_\_  
Contractor's Name and Corporate Seal

\_\_\_\_\_  
Surety's Name and Corporate Seal

By: \_\_\_\_\_  
Signature

By: \_\_\_\_\_  
Signature (attach power of attorney)

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

Attest: \_\_\_\_\_  
Signature

Attest: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

**Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.**

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 shall 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 shall 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 shall 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 shall 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 shall 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 shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall 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 shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than 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 may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after 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 shall be applicable.

12. Notice to the Surety, the Owner, or the Contractor shall 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 shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall 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 shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

16. Modifications to this Bond are as follows:

## PAYMENT BOND

CONTRACTOR *(name and address):*

SURETY *(name and address of principal place of business):*

OWNER Village of Dobbs Ferry, 112 Main Street, Dobbs Ferry, New York 10522

### CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description **CONSTRUCTION OF SWIMMING POOL**

### BOND

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract):*

Amount:

Modifications to this Bond Form: ☐ None ☐ See Paragraph 18

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

### CONTRACTOR AS PRINCIPAL

### SURETY

\_\_\_\_\_  
Contractor's Name and Corporate Seal

\_\_\_\_\_  
Surety's Name and Corporate Seal

By: \_\_\_\_\_  
Signature

By: \_\_\_\_\_  
Signature *(attach power of attorney)*

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

Attest: \_\_\_\_\_  
Signature

Attest: \_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

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 shall 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 shall 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 shall 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 shall 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 shall 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 shall 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 satisfy 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 shall 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 shall be applicable.
13. Notice and Claims to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, shall 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 shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall 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:
1. The name of the Claimant;
  2. The name of the person for whom the labor was done, or materials or equipment furnished;
  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;
  4. A brief description of the labor, materials, or equipment furnished;
  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;
  6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
  7. The total amount of previous payments received by the Claimant; and
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 shall be 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 shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.
18. Modifications to this Bond are as follows:

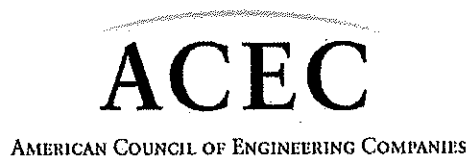
This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

## STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by



Issued and Published Jointly by



Endorsed by



These General Conditions have been prepared for use with the Agreement Between Owner and Contractor for Construction Contract (EJCDC® C-520, Stipulated Sum, or C-525, Cost-Plus, 2013 Editions). Their provisions are interrelated and a change in one may necessitate a change in the other.

To prepare supplementary conditions that are coordinated with the General Conditions, use EJCDC's Guide to the Preparation of Supplementary Conditions (EJCDC® C-800, 2013 Edition). The full EJCDC Construction series of documents is discussed in the Commentary on the 2013 EJCDC Construction Documents (EJCDC® C-001, 2013 Edition).

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## 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 form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
  4. *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, or both; 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, or both; 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; or (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. 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), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to (a) the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. §§9601 et seq. ("CERCLA"); (b) the Hazardous Materials Transportation Act, 49 U.S.C. §§5101 et seq.; (c) the Resource Conservation and Recovery Act, 42 U.S.C. §§6901 et seq. ("RCRA"); (d) the Toxic Substances Control Act, 15 U.S.C. §§2601 et seq.; (e) the Clean Water Act, 33 U.S.C. §§1251 et seq.; (f) the Clean Air Act, 42 U.S.C. §§7401 et seq.; or (g) any other federal, state, or local statute, law, rule, regulation, ordinance, resolution, code, order, or decree 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 the 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. *Engineer*—The individual or entity named as such in the Agreement.
21. *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.
22. *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. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated in the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, does not establish a Hazardous Environmental Condition.
23. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
24. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.

25. *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.
26. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
27. *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.
28. *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.
29. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
30. *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.
31. *Project Manual*—The written documents prepared for, or made available for, procuring and constructing the Work, including but not limited to the Bidding Documents or other construction procurement documents, geotechnical and existing conditions information, the Agreement, bond forms, General Conditions, Supplementary Conditions, and Specifications. The contents of the Project Manual may be bound in one or more volumes.
32. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative or "RPR" includes any assistants or field staff of Resident Project Representative.
33. *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.
34. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals and the performance of related construction activities.
35. *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.
36. *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.
37. *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 furnished by Owner which are designated for the use of Contractor.



38. *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.
39. *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.
40. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
41. *Successful Bidder*—The Bidder whose Bid the Owner accepts, and to which the Owner makes an award of contract, subject to stated conditions.
42. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
43. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
44. *Technical Data*—Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (a) subsurface conditions at the Site, or physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) or (b) Hazardous Environmental Conditions at the Site. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then the data contained in boring logs, recorded measurements of subsurface water levels, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical or environmental report prepared for the Project and made available to Contractor are hereby defined as Technical Data with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06.
45. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including but not limited to those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, fiber optic transmissions, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
46. *Unit Price Work*—Work to be paid for on the basis of unit prices.
47. *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.
48. *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 the following paragraphs are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:*
1. The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:*
1. The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:*
1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:
    - a. does not conform to the Contract Documents; or
    - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
    - c. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or 15.04).
- E. *Furnish, Install, Perform, Provide:*
1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
  2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
  3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
  4. 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. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

## **ARTICLE 2 – PRELIMINARY MATTERS**

### **2.01 *Delivery of Bonds and Evidence of Insurance***

- A. *Bonds:* When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Contractor's Insurance:* When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract), the certificates and other evidence of insurance required to be provided by Contractor in accordance with Article 6.
- C. *Evidence of Owner's Insurance:* After receipt of the executed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each named insured and additional insured (as identified in the Supplementary Conditions or otherwise), 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 executed 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 specifically 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 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.03.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
  - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
  - 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
  - 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

#### 2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may transmit, and shall accept, Project-related correspondence, text, data, documents, drawings, information, and graphics, including but not limited to Shop Drawings and other submittals, in electronic media or digital format, either directly, or through access to a secure Project website.
- B. If the Contract does not establish protocols for electronic or digital transmittals, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. When transmitting items in electronic media or digital format, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items 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 items, or from those established in applicable transmittal protocols.

## ARTICLE 3 – DOCUMENTS: INTENT, REQUIREMENTS, REUSE

### 3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic or digital versions of the Contract Documents (including any printed copies derived from such electronic or digital versions) and the printed record version, the printed record version shall 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.

### 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, shall mean 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, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the 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 Documents 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 Documents 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 shall 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 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 thereunder.
- 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 give written notice to Owner and Contractor 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 editions, 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 shall preclude 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 thirtieth 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 sixtieth day after the day of Bid opening or the thirtieth 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 shall 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 shall 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 shall 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 the Contract Times and Contract Price. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- 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. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall 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 utility owners (other than those performing other work at or adjacent to the Site by arrangement with the Owner, as contemplated in Article 8); and
  4. acts of war or terrorism.
- D. 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.
- E. Paragraph 8.03 governs 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.
- F. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times 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.
- G. Contractor must submit any Change Proposal seeking an adjustment in Contract Price or Contract Times under this paragraph within 30 days of the commencement of the delaying, disrupting, or interfering event.



## ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

### 5.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.
- 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; 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 7.12, 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 at law; 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 shall conform to applicable Laws and Regulations.

- C. *Cleaning*: Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site 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 known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site;
- 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities); 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 upon the accuracy of the Technical Data (as defined in Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. 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; or
- 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
- 3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

#### 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 either:

- 1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate; or
- 2. is of such a nature as to require a change in the Drawings or Specifications; or
- 3. differs materially from that shown or indicated in the Contract Documents; or

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

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 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 the necessity of Owner's obtaining 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 above; 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. *Possible Price and Times Adjustments:*
  1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, or both, 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 conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
  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; or
    - 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 as 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, or both, then any such adjustment shall 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, or both, 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.

#### 5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or adjacent to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:
  1. Owner and Engineer do not warrant or guarantee the accuracy or completeness of any such information or data provided by others; and
  2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
    - a. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
    - b. locating all Underground Facilities shown or indicated in the Contract Documents as being at the Site;
    - c. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
    - d. 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 in the Contract Documents, or was not shown or indicated 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), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer.
- C. *Engineer's Review:* Engineer will promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated in the Contract Documents, or was not shown or indicated with reasonable accuracy; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the Underground Facility in question; 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 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. *Possible Price and Times Adjustments:*

1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, or both, to the extent that any existing Underground Facility at the Site that was not shown or indicated in the Contract Documents, 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. Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated the existence or actual location of the Underground Facility in question;
  - 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;
  - c. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times; and
  - d. 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, or both, then any such adjustment shall 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, or both, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

#### 5.06 *Hazardous Environmental Conditions at Site*

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

1. those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
2. 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 Article 1) contained in any geotechnical or environmental report prepared for the Project and made available to Contractor. 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; or
  2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
  3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for 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, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, 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.
- 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 or 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 shall obligate 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 shall obligate 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 all of Contractor's obligations under the Contract. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the Supplementary Conditions, or other specific provisions of the Contract. Contractor shall also furnish such other bonds as are required by the Supplementary Conditions or other specific provisions of the Contract.
- B. All bonds shall be in the form prescribed by the Contract except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (as amended and supplemented) by the Financial Management Service, Surety Bond Branch, 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 shall show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

- C. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds in the required amounts.
- D. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or its right to do business is terminated in any state or jurisdiction where any part of the Project is located, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the bond and surety requirements above.
- E. 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.
- F. Upon request, Owner shall provide a copy of the payment bond to any Subcontractor, Supplier, or other person or entity claiming to have furnished labor or materials used in the performance of the Work.

#### 6.02 Insurance—General Provisions

- A. Owner and Contractor shall obtain and maintain insurance as required in this Article and in the ~~Supplementary Conditions~~ **Additional General 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. Contractor shall deliver to Owner, with copies to each named insured and additional insured (as identified in this Article, in the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Contractor has obtained and is maintaining the policies, coverages, and endorsements 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 and endorsements, and documentation of applicable self-insured retentions and deductibles. Contractor may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- D. Owner shall deliver to Contractor, with copies to each named insured and additional insured (as identified in this Article, the Supplementary Conditions, or elsewhere in the Contract), certificates of insurance establishing that Owner has obtained and is maintaining the policies, coverages, and endorsements 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 and endorsements, and documentation of applicable self-insured retentions and deductibles. Owner may block out (redact) any confidential premium or pricing information contained in any policy or endorsement furnished under this provision.
- E. 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, shall not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.

- F. If either party does not purchase or maintain all of 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.
- G. If Contractor has failed to obtain and maintain required insurance, Owner may exclude the Contractor from the Site, impose an appropriate set-off against payment, and exercise Owner's termination rights under Article 16.
- H. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price shall be adjusted accordingly.
- I. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests.
- J. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor's liability under the indemnities granted to Owner and other individuals and entities in the Contract.

#### 6.03 *Contractor's Insurance*

- A. *Workers' Compensation:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance for:
  - 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts.
  - 2. United States Longshoreman and Harbor Workers' Compensation Act and Jones Act coverage (if applicable).
  - 3. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees (by stop-gap endorsement in monopolist worker's compensation states).
  - 4. Foreign voluntary worker compensation (if applicable).
- B. *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:
  - 1. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees.
  - 2. claims for damages insured by reasonably available personal injury liability coverage.
  - 3. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- C. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy shall be written on a 1996 (or later) ISO commercial general liability form (occurrence form) and include the following coverages and endorsements:
  - 1. Products and completed operations coverage:
    - a. Such insurance shall 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, to the extent permitted by law, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
  3. Broad form property damage coverage.
  4. Severability of interest.
  5. Underground, explosion, and collapse coverage.
  6. Personal injury coverage.
  7. 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); or CG 20 10 07 04 and CG 20 37 07 04 (together); or their equivalent.
  8. 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.
- D. *Automobile liability*: Contractor shall purchase and maintain automobile liability insurance against claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy shall be written on an occurrence basis.
  - E. *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. Subject to industry-standard exclusions, the coverage afforded shall follow form as to each and every one of the underlying policies.
  - F. *Contractor's pollution liability insurance*: Contractor shall purchase and maintain a policy covering third-party injury and property damage claims, including clean-up costs, as a result of pollution conditions arising from Contractor's operations and completed operations. This insurance shall be maintained for no less than three years after final completion.
  - G. *Additional insureds*: The Contractor's commercial general liability, automobile liability, umbrella or excess, and pollution liability policies shall include and list as additional insureds Owner and Engineer, and any individuals or entities identified in the Supplementary Conditions; include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds; and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby (including as applicable those arising from both ongoing and completed operations) on a non-contributory basis. Contractor shall obtain all necessary endorsements to support these requirements.
  - H. *Contractor's professional liability insurance*: If Contractor will provide or furnish professional services under this Contract, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance shall provide protection against claims arising out of performance of professional design or related services, and caused by a negligent error, omission, or act for which the insured party is legally liable. It shall be maintained throughout the duration of the Contract and for a minimum of two years after Substantial

Completion. If such professional design services are performed by a Subcontractor, and not by Contractor itself, then the requirements of this paragraph may be satisfied through the purchasing and maintenance of such insurance by such Subcontractor.

- I. *General provisions:* The policies of insurance required by this Paragraph 6.03 shall:
  - 1. include at least the specific coverages provided in this Article.
  - 2. be written for not less than the limits of liability provided in this Article and in the Supplementary Conditions, or required by Laws or Regulations, whichever is greater.
  - 3. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least 10 days prior written notice has been given to Contractor. Within three days of receipt of any such written notice, Contractor shall provide a copy of the notice to Owner, Engineer, and each other insured under the policy.
  - 4. remain in effect at least until final payment (and longer if expressly required in this Article) 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 Documents.
  - 5. be appropriate for the Work being performed and provide protection from claims that may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable.
- J. The coverage requirements for specific policies of insurance must be met by such policies, and not by reference to excess or umbrella insurance provided in other policies.

#### 6.04 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 6.03, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.
- B. 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.

#### 6.05 *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 full insurable replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
  - 1. include the Owner and Contractor as named insureds, and all Subcontractors, and any individuals or entities required by the Supplementary Conditions to be insured under such builder's risk policy, as insureds or named insureds. For purposes of the remainder of this Paragraph 6.05, Paragraphs 6.06 and 6.07, and any corresponding Supplementary Conditions, the parties required to be insured shall collectively be referred to as "insureds."

2. be written on a builder's risk "all risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire; lightning; windstorm; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; flood; collapse; explosion; debris removal; demolition occasioned by enforcement of Laws and Regulations; water damage (other than that caused by flood); and such other perils or causes of loss as may be specifically required by the Supplementary Conditions. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake; volcanic activity, and other earth movement; or flood, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance may be provided through other insurance policies acceptable to Owner and Contractor.
  3. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.
  4. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects).
  5. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier).
  6. extend to cover damage or loss to insured property while in transit.
  7. allow for partial occupation or use of the Work by Owner, such that those portions of the Work that are not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
  8. allow for the waiver of the insurer's subrogation rights, as set forth below.
  9. provide primary coverage for all losses and damages caused by the perils or causes of loss covered.
  10. not include a co-insurance clause.
  11. include an exception for ensuing losses from physical damage or loss with respect to any defective workmanship, design, or materials exclusions.
  12. include performance/hot testing and start-up.
  13. be maintained in effect, subject to the provisions herein regarding Substantial Completion and partial occupancy or use of the Work by Owner, until the Work is complete.
- B. *Notice of Cancellation or Change:* All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this

Paragraph 6.05 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed 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.

- C. *Deductibles*: The purchaser of any required builder's risk or property insurance shall pay for costs not covered because of the application of a policy deductible.
- 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 notice of such occupancy or use to the builder's risk insurer. The builder's risk insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy; rather, those portions of the Work that are occupied or used by Owner may come off the builder's risk policy, while those portions of the Work not yet occupied or used by Owner shall remain covered by the builder's risk insurance.
- E. *Additional Insurance*: 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 6.05, it may do so at Contractor's expense.
- F. *Insurance of Other Property*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, such as tools, construction equipment, or other personal property owned by Contractor, a Subcontractor, or an employee of Contractor or a Subcontractor, then the entity or individual owning such property item will be responsible for deciding whether to insure it, and if so in what amount.

#### 6.06 *Waiver of Rights*

- A. All policies purchased in accordance with Paragraph 6.05, expressly including the builder's risk policy, shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any insureds thereunder, or against Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors. 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 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 Subcontractors, all individuals or entities identified in the Supplementary Conditions as 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. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for:
  - 1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by,

arising out of, or resulting from fire or other perils whether or not insured by Owner;  
and

2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial 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.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 6.06.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them.
- D. Contractor shall be responsible for assuring that the agreement under which a Subcontractor performs a portion of the Work 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 any of the perils or causes of loss covered by builder's risk insurance and any other property insurance applicable to the Work.

#### 6.07 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of insurance required by Paragraph 6.05 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 6.05 shall 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, the damaged Work shall be repaired or replaced, the money so received applied on account thereof, and the Work and the cost thereof covered by Change Order, if needed.

### **ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES**

#### 7.01 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.

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

#### 7.02 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours, 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.

#### 7.03 *Services, Materials, and Equipment*

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

#### 7.04 *"Or Equals"*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the 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 material or equipment, or items from other proposed suppliers under the circumstances described below.
  - 1. If Engineer in its sole discretion determines that an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer shall deem it an "or equal" item. For the purposes of this paragraph, a proposed item of material or equipment will be considered functionally equal to an item so named if:

- a. in the exercise of reasonable judgment Engineer determines that:
  - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
  - 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
  - 3) it has a proven record of performance and availability of responsive service; and
  - 4) it is not objectionable to Owner.
- b. Contractor certifies that, if approved and incorporated into the Work:
  - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
  - 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.
- 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 shall result in any change in Contract Price. The Engineer's denial of an "or-equal" request shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents.
- E. *Treatment as a Substitution Request*: If Engineer determines that an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer considered the proposed item as a substitute pursuant to Paragraph 7.05.

#### 7.05 Substitutes

- A. Unless the specification or description of an item of material or equipment 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 material or equipment under the circumstances described below. To the extent possible such requests shall 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 material or equipment from anyone other than Contractor.



2. The requirements for review by Engineer will be as set forth in Paragraph 7.05.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 material or equipment that Contractor seeks to furnish or use. The application:
  - a. shall 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 that specified, and
    - 3) be suited to the same use as that 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 that specified, and
    - 2) available engineering, sales, maintenance, repair, and replacement services.
  - d. shall 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 shall be final and binding, and may not be reversed through an appeal under any provision of the Contract Documents. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.05.D, by timely submittal of a Change Proposal.

#### 7.06 *Concerning Subcontractors, Suppliers, and Others*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner.
- B. Contractor shall retain specific Subcontractors, Suppliers, or other individuals or entities 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, Supplier, or other individual or entity 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 five days.
- E. Owner may require the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work. 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, Suppliers, or other individuals or entities 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, Supplier, or other individual or entity so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity.
- F. If Owner requires the replacement of any Subcontractor, Supplier, or other individual or entity retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, or both, 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, Supplier, or other individual or entity, whether initially or as a replacement, shall 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 fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions.
- J. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors, Suppliers, and all other individuals or entities performing or furnishing any of the Work.
- K. Contractor shall restrict all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed herein.
- L. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- M. All Work performed for Contractor by a Subcontractor or Supplier shall be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer.
- N. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor on account of Work performed for Contractor by the particular Subcontractor or Supplier.
- O. Nothing in the Contract Documents:
  - 1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier, or other individual or entity; nor
  - 2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.

#### 7.07 *Patent Fees and Royalties*

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

performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

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

#### 7.08 *Permits*

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

#### 7.09 *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.

#### 7.10 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work 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 shall not be Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Owner or Contractor may give 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 notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

#### 7.11 *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.

#### 7.12 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
  - 1. all persons on the Site or who may be affected by the Work;
  - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
  - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify Owner; the owners of adjacent property, Underground Facilities, and other utilities; and other contractors and utility owners performing work at or adjacent to the Site, when 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.
- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
- D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- E. All damage, injury, or loss to any property referred to in Paragraph 7.12.A.2 or 7.12.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor 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).

- F. Contractor's duties and responsibilities for safety and protection shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 15.06.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).
- G. Contractor's duties and responsibilities for safety and protection shall 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.

#### 7.13 *Safety Representative*

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

#### 7.14 *Hazard Communication Programs*

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

#### 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 threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

#### 7.16 *Shop Drawings, Samples, and Other Submittals*

##### A. *Shop Drawing and Sample Submittal Requirements:*

1. Before submitting a Shop Drawing or Sample, Contractor shall have:
  - a. reviewed and coordinated the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
  - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
  - c. determined and verified the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
  - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that submittal, and that Contractor approves the submittal.

3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be set forth in a written communication separate from the Shop Drawings or Sample submittal; and, in addition, in the case of Shop Drawings by a specific notation made on each Shop Drawing submitted to Engineer for review and approval of each such variation.
- B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals. Each submittal will be identified as Engineer may require.
1. *Shop Drawings:*
    - a. Contractor shall submit the number of copies required in the Specifications.
    - b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.D.
  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.D.
  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. *Other Submittals:* Contractor shall submit other submittals to Engineer in accordance with the accepted Schedule of Submittals, and pursuant to the applicable terms of the Specifications.
- D. *Engineer's Review:*
1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
  2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction 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 shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 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.

5. Engineer's review and approval of a Shop Drawing or Sample shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 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, shall 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, Sample, or other submittal shall 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.D.4.

**E. Resubmittal Procedures:**

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

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



1. observations by Engineer;
  2. recommendation by Engineer or payment by Owner of any progress or final payment;
  3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
  4. use or occupancy of the Work or any part thereof by Owner;
  5. any review and approval of a Shop Drawing or Sample submittal;
  6. the issuance of a notice of acceptability by Engineer;
  7. any inspection, test, or approval by others; or
  8. any correction of defective Work by Owner.
- D. 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 shall 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 and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 7.18.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
  2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

#### 7.19 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable Laws and Regulations.
- B. If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this paragraph, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 7.16.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria specified by Owner or Engineer.

### 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 utility work at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford each other contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work. 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.

- D. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 8, 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.

#### 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 at or adjacent to the Site for Owner, the Owner's employees, any other contractor working for Owner, or any utility owner for whom the Owner is responsible 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, or both. 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 shall 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. When applicable, any such equitable adjustment in Contract Price shall 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 is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- 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. 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 to 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.

- C. 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 to Contractor.
- D. 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 shall 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 Documents (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 10.08. 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 *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 Paragraph 10.08. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent, or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

#### 10.04 *Rejecting Defective Work*

- A. Engineer has the authority to reject Work in accordance with Article 14.

#### 10.05 *Shop Drawings, Change Orders and Payments*

- A. Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, are set forth in Paragraph 7.16.
- B. Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, are set forth in Paragraph 7.19.
- C. Engineer's authority as to Change Orders is set forth in Article 11.
- D. Engineer's authority as to Applications for Payment is set forth in Article 15.

#### 10.06 *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.

#### 10.07 *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.

#### 10.08 *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, shall create, impose, or give rise to any duty in

contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 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 10.08 shall also apply to the Resident Project Representative, if any.

#### 10.09 *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 (if any) of which Engineer has been informed.

### **ARTICLE 11 – AMENDING THE CONTRACT DOCUMENTS; CHANGES IN THE WORK**

#### 11.01 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
  - 1. *Change Orders:*
    - a. If an amendment or supplement to the Contract Documents includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order. A Change Order also may be used to establish amendments and supplements of the Contract Documents that do not affect the Contract Price or Contract Times.
    - b. Owner and Contractor may amend those terms and conditions of the Contract Documents that do not 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, without the recommendation of the Engineer. Such an amendment shall be set forth in a Change Order.
  - 2. *Work Change Directives:* 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 11.04 regarding change of Contract Price. Contractor must submit any Change Proposal seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 30 days after the completion of the Work set out in the Work Change Directive. Owner must submit any Claim seeking an adjustment of the Contract Price or the Contract Times, or both, no later than 60 days after issuance of the Work Change Directive.

3. *Field Orders*: 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. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

#### 11.02 *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. Such changes shall be supported by Engineer's recommendation, to the extent the change involves the design (as set forth in the Drawings, Specifications, or otherwise), or other engineering or technical matters. Such changes 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 shall be performed under the applicable conditions of the Contract Documents. Nothing in this paragraph shall obligate 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.

#### 11.03 *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.

#### 11.04 *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 shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment of Contract Price shall 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); or
  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 11.04.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 11.04.C).
- C. *Contractor's Fee:* When applicable, the Contractor's fee for overhead and profit shall be determined as follows:
1. a mutually acceptable fixed fee; or
  2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
    - a. for costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee shall be 15 percent;
    - b. for costs incurred under Paragraph 13.01.B.3, the Contractor's fee shall be five percent;
    - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.04.C.2.a and 11.04.C.2.b is that the Contractor's fee shall be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.A.1 and 13.01.A.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 five 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 shall be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the work;
    - d. no fee shall 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 will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
    - f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 11.04.C.2.a through 11.04.C.2.e, inclusive.

#### 11.05 *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 shall comply with the provisions of Paragraph 11.06. Any Claim for an adjustment in the Contract Times shall comply with the provisions of Article 12.
- B. An adjustment of the Contract Times shall be subject to the limitations set forth in Paragraph 4.05, concerning delays in Contractor's progress.

#### 11.06 *Change Proposals*

- A. Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; appeal an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; contest a set-off against payment due; or seek other relief under

the Contract. The Change Proposal shall specify any proposed change in Contract Times or Contract Price, or both, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents.

1. *Procedures:* Contractor shall submit each Change Proposal to Engineer promptly (but in no event later than 30 days) after the start of the event giving rise thereto, or after such initial decision. 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. The supporting data shall 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. Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal.
  2. *Engineer's Action:* Engineer will review each Change Proposal and, within 30 days after receipt of the Contractor's supporting data, either deny the Change Proposal in whole, approve it in whole, or deny it in part and approve it in part. Such actions shall 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.
  3. *Binding Decision:* Engineer's decision will be final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- B. *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 that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice shall be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

#### 11.07 Execution of Change Orders

- A. Owner and Contractor shall execute appropriate Change Orders covering:
1. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
  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 11.02, (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 in the Contract Price or Contract Times, or other changes, which embody the substance of any final and binding results under Paragraph 11.06, or Article 12.

- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of this Paragraph 11.07, it shall be deemed to be of full force and effect, as if fully executed.

#### 11.08 *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 shall be submitted 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; and
  - 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.
- 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 shall rest with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, or both, 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 shall 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 shall 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 shall 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 shall 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 shall 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 shall 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 shall be incorporated in a Change Order 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. 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 shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 13.01.C, and shall include only the following items:
  1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing

Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
  - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
  - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
  - c. Rentals of all construction equipment and machinery, and the parts thereof, whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
  - d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
  - e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
  - f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 6.05), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or

indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.

- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as 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 shall not include any of the following items:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 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. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
- 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee:* When the Work as a whole is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 11.04.C.

E. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

## 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 on account of any of the foregoing will be valid.
- C. *Contingency Allowance:* Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

### 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, subject to the provisions of the following paragraph.
- E. Within 30 days of Engineer's written decision under the preceding paragraph, Contractor may submit a Change Proposal, or Owner may file a Claim, seeking an adjustment in the Contract Price if:
1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement;
  2. there is no corresponding adjustment with respect to any other item of Work; and
  3. Contractor believes that it is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price, and the parties are unable to agree as to the amount of any such increase or decrease.

## ARTICLE 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 will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

### 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 shall 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 shall 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 shall 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 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 shall 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, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, 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 shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

#### 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 rejected Work as required by Engineer, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, then Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 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 on account of 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. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens, and evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
  2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
  3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.
- 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, or
  - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
  - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
  - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid on account of the Contract Price, or
  - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 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 on account of Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages on account of 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 that would constitute a default by Contractor and therefore justify a termination for cause has occurred;
  - j. liquidated 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;
  - l. there are other items entitling 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 shall 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 shall be treated as an amount due as determined by Paragraph 15.01.C.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 seven 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 shall 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 seven 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 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 6.05 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 7.11), and other documents, Contractor may make application for final payment.

2. The final Application for Payment shall 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 disputes that Contractor believes are unsettled; 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 Application and Acceptance:***

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the Application for Payment to Owner for payment. Such recommendation shall 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. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to the provisions of Paragraph 15.07. 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. *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.
- D. *Payment Becomes Due:*** Thirty days after the presentation to Owner of the final Application for Payment and accompanying documentation, the amount recommended by Engineer (less any further sum Owner is entitled to set off against Engineer's recommendation, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions above with respect to progress payments) will become due and shall be paid by Owner to Contractor.



#### 15.07 *Waiver of Claims*

- A. The making of final payment will not constitute a waiver by Owner of claims or rights against Contractor. Owner expressly reserves claims and rights arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 15.05, from Contractor's failure to comply with the Contract Documents or the terms of any special guarantees specified therein, from outstanding Claims by Owner, or from Contractor's continuing obligations under the Contract Documents.
- 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 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 terms of any applicable special guarantee required by the Contract Documents, or by any specific provision of the Contract Documents), any Work is found to be defective, or if the repair of any damages to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas used by Contractor as permitted by Laws and Regulations, is found to be defective, then 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 other adjacent areas;
  - 2. correct such defective Work;
  - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
  - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others).
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- E. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph shall not 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, or both, directly attributable to any such suspension. Any Change Proposal seeking such adjustments shall 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) ten 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) 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 seven 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 shall govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

#### 16.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
  - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
  - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; 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 on account of loss of anticipated overhead, profits, or revenue, 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 seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 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, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this paragraph 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; and
  - 2. Disputes between Owner and Contractor concerning the Work or obligations under the Contract Documents, and arising 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; or
  - 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 Documents requires the giving of written notice, it will be deemed to have been validly given if:
  - 1. delivered in person, by a commercial courier service or otherwise, to the individual or to a member of the firm or to an officer of the corporation for which it is intended; or
  - 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the sender of the notice.

### 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 shall not constitute a waiver of that provision, nor shall 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 or completion of the Contract or termination 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 *Headings*

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

## **ADDITIONAL GENERAL CONDITIONS**

### **ARTICLE 1 - OWNER'S RIGHT TO DO WORK - ABANDONMENT**

A. Sections 103-A and 103-B of the General Municipal Law of the State of New York as added by the Laws of 1959, Chapter 605, are incorporated herein by reference and made part of the General Conditions and the Contractor agrees to comply with and be bound by all the terms, provisions, and conditions of said Sections.

B. If the Contractor should neglect to prosecute the work properly or fail to perform any provisions of this Contract, the Owner after ten (10) days written notice to the Contractor may, without prejudice to any other remedy he may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due to the Contractor, provided, however, that the Engineer shall approve such action and the amount charged to the Contractor.

1. If the work to be done under this Contract or any part thereof be abandoned by the Contractor, or if this Contract be assigned by him, or any part of said work be sublet by him otherwise than herein specified, or if at any time the Engineer be of the opinion and so shall certify in writing to the owner that the performance of this Contract has been unnecessarily or unreasonably delayed, or that the Contractor is willfully violating any of the conditions or covenants of this Contract, or is executing the same in bad faith or not in accordance with terms thereof, or if the work be not fully completed within the time named in this contract for its completion, or if any insolvency or bankruptcy proceeding be instituted voluntarily or otherwise against the Contractor, then and upon the happening of such events, the owner may notify the Contractor to discontinue all work, or any part thereof, under this Contract, by written notice to be served upon the Contractor either personally or by leaving said notice at his residence or place of business, or with his agent in charge of the work, or in the manner hereinafter provided. Thereupon the Contractor shall discontinue the work, or such part thereof as the Owner may direct, and the owner shall thereupon have power to contract for the completion of the contract or to place such persons and as many persons as the Owner may deem advisable, by Contract or otherwise, to work at and complete the work herein described, or such part thereof as the Owner may direct and to use such materials, implements, appliances, and tools as the owner may find at the place of work, and to procure other materials for the completion of the same, and to charge to expense of said labor and materials to the Contractor. The expense so charged shall be deducted and paid for by the Owner out of such monies as would have been payable to the Contractor had he completed the work.

And in case such expenses shall exceed the sum which would have been payable under this contract had the same been completed by the Contractor, he shall and will pay the amount of such excess to the Owner and in case such expense shall be less than the sum which would be payable to the Contractor, if the Contractor had completed the Contract he shall forfeit the difference to the Owner.

2. Upon the Owner's making the aforesaid written notice to the Contractor to discontinue all or any part of the work, the Owner shall have the right to take immediate possession of the plant and materials at the place of the work without further notice to the Contractor, to the purpose hereinbefore specified and no such plant or materials shall be removed so long as the same may be required for the work. When any particular part of the work is being carried on by the Owner, by contract or otherwise under the provisions of this clause of the Contract, the Contractor agrees to continue the remainder of the work in conformity with the terms of this Contract and in such a manner as will in no way hinder or interfere with persons or workmen employed as above provided, by the Owner, by contract or otherwise to do any part of the work, or to complete the same under to provisions of this clause of the Contract. In the event that the Owner undertakes to have performed the work or any part thereof under this clause of the contract, the certificate of the Engineer as to the amount of work done, materials furnished, the cost thereof, and as to the excess cost, if any, of completing the work called for by this contract shall be binding and conclusive upon the Contractor, his assigns and his sureties.

## **ARTICLE 2 - APPLICATION FOR PAYMENTS**

Monthly progress payments shall be made on valuation of work done and/or on account of materials delivered and suitable stored on the site during the preceding payment period.

## **ARTICLE 3 - CERTIFICATES OF PAYMENT**

### **A. Progress Payments**

Progress payments will be made to the Contractor by the Owner based on a monthly work performance period ending on the last day of the month. The estimate for in-place work performed during the preceding period must be duly certified and approved by the Owner. The Contractor shall submit his pre-approved billing to the Owner the day after the work period ends and is to receive payment by the 25th day following the work period. To insure proper performance of the contract the Owner shall retain five percent (5%) of the amount of each billing until final completion and acceptance of all work covered by the Contract.

No partial payments will be made for materials delivered and stockpiled on the project site.

All materials and work covered by partial payments made shall thereupon become the sole property of the Owner, but this provision shall not be construed as relieving the Contractor from sole responsibility for the care and protections of materials and work upon which payments have been made or the restoration of any damaged work, or as a waiver of the right of the Owner to require fulfillment of all the terms of the Contract.

The Contractor agrees that he will indemnify and save the Owner harmless from all claims growing out of the lawful demands of subcontractors, laborers, workmen, mechanics, materialmen and furnishers of machinery and parts thereof, equipment, power tools and all supplies, including commissary, incurred in the furtherance of the performance of this contract. The Contractor shall, at the Owner's requests, furnish satisfactory evidence that all obligations of the nature hereinabove designated have been paid, discharged or waived. If the Contractor fails to do so, the Owner may, after having served written notice on the said Contractor, either pay unpaid bills, of which the Owner has written notice, direct, or withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged, whereupon payment to the Contractor shall be resumed in accordance with the terms of this contract, but in no event shall the provisions of this sentence be construed to impose any obligation upon the Owner to either the Contractor or his Surety.

In paying any unpaid bills of the Contractor, the Owner shall be deemed the agent of the Contractor, and any payment so made by the Owner, shall be considered as a payment made under the contract by the Owner to the Contractor and the Owner shall not be liable to the Contractor for any such payment made in good faith.

#### **ARTICLE 4 - CONTRACTOR'S INSURANCE**

##### **A. General**

During the period from the signing of the contract to the date of final acceptance by the Owner, the Contractor must maintain insurance as described in this Article.

##### **B. Prefiling**

The Contractor shall not commence work under this Contract until he has filed with the Owner triplicate copies of certificates as described in Paragraph (D) below and obtained from the Owner or its Engineer, a written approval of such certificates.



C. **Subcontractors**

The Contractor shall not permit any subcontractor to undertake any portion of his Contract unless he has received from such subcontractor certificates verifying that the subcontractor has all forms of coverage as are required by the Contractor by this Article. Such certificates shall be issued to the Contractor and shall be in such form as shall be acceptable to the Contractor. Copies of such certificates shall be available to the Owner and delivered to the Engineer, in triplicate, if and when requested.

D. **Certificates**

Triplicate copies of the certificates as referred to in Paragraph (B) above shall be filled with the Owner. They shall be issued to the Owner, be in such form as meets the approval of the Owner and shall include information on each policy as follows:

1. Name and address of the insured.
2. Job location and title for the contract.
3. Policy number and expiration date.
4. Issuance date of certificate.
5. Types of coverage afforded.
6. Limit of liability afforded for each type.
7. Types of operations as are covered (classifications).
8. Types of operations or of coverage's as are excluded (other than as are in the printed wording of the standard policies.)
9. Verification that not less than 45 days written notice shall be sent to both the Owner and the Engineer at the addresses shown in the specifications in the event that:
  - a. The policy is to be canceled.
  - b. The coverage is to be reduced or changed.
  - c. The policy is not to be renewed.
10. No certificates shall be accepted if they contain escape clauses such as, THE STATE INSURANCE FUND DOES NOT ASSUME ANY LIABILITY IN THE EVENT OF FAILURE TO GIVE SUCH NOTICE.

By the filing of such Certificates, the Contractor authorizes the Owner or Engineer to make direct inquiry from the insurance carrier and for the insurance carrier to make reply direct to the Owner or the Engineer at any time in the event of any question as to coverage in force during the performance of this contract.

E. **Type of Coverage Required**

The forms of coverage required of each Contractor shall include:

1. Workmen's Compensation Insurance as required by the laws of the State of New York.
2. Comprehensive General Liability Insurance including:
  - (a) Manufacturer's and Contractor's coverage on all premises and operations.
  - (b) Elevators or Hoists, if any
  - (c) Contractor's Protective Liability.
  - (d) Completed operations.

NOTE: Where coverage is under classifications as normally excluded XCU (explosion, collapse, or underground damage) Contractor must obtain coverage to eliminate such exclusions.

Each of the following types of policies furnished with limits of not less than the amounts indicated below and naming the Owner and Bell Engineering and their agents as additional insured and specifically insuring the contractual liability created by the hold harmless and indemnity provisions of this agreement: such coverage shall continue for a period of no less than one year from the date of final acceptance of all work under this contract, as follows:

3. Automobile Liability Insurance on: owned, non-owned, and hired vehicles.
  - (a) Bodily Injury  
As to each person - \$1,000,000 Each Accident - \$1,000,000
  - (b) Property Damage  
Each accident - \$1,000,000

F. **Liability Limits**

Although Contractors are encouraged to carry higher limits, the minimum limits acceptable shall be as follows, unless otherwise specifically stipulated by amendment thereto:

1. Compensation - statutory coverage as required by law

2. Bodily Injury

As to each person the sum of - \$1,000,000  
and subject to the limit for each person,  
As to each accident, the sum of - \$3,000,000

G. **Protective Liability Insurance for the Owner, Village of Dobbs Ferry,  
Aquattica Pools & Water Parks, Inc and A.S.BELL ENGINEERING, PC. its agents**

Such coverage shall continue for a period of no less than one year from the date of final acceptance of all work under this contract.

**Minimum Limits**

<b><u>Bodily Injury Liability</u></b>		<b><u>Property Damage Liability</u></b>	
Each Person	Each Accident	Each Accident	Aggregate
\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000

**ARTICLE 5 - BONDS**

A. **Bid Bond**

Except as provided in Section (C) hereof, no bid shall be received by the Owner for any contract or any portion thereof unless the envelope containing such bid also contains a BID BOND issued by a Corporate Surety licensed to do business in the State of New York. Such bid bond shall be issued in an amount of not less than five percent (5%) of the amount of the bid and shall be conditioned upon the commitment by the Surety to issue the contract bonds as hereinafter described,

B. **Agreement of Surety**

The bid shall also contain an agreement of surety per form attached on the letterhead of the Contractor's Surety and signed by an officer or other authorized employee or authorized agent which letter shall certify that the Surety will issue the contract bonds as hereinafter described.

C. **Bid Deposit**

In lieu of the bid bond as described in Section (A) of this Article, the Contractor shall substitute a certified check drawn on a State or National Bank or Trust Company or a check of such bank or trust company signed by a duly authorized officer thereof. Such check shall be in an amount of not less than five percent (5%) of the bid and be drawn payable to the order of the Owner.

Bid deposits of all but three (3) lowest bidders shall be returned by the Owner within five (5) days after opening the bids. Bid deposits of the three (3) lowest bidders may be returned to the bidders by substitution of the Bid Bond and Agreement of Surety as provided in Sections (A) and (B) hereof. All bid deposits shall be returned within five (5) days of the execution of the contracts and the filing and approval of the contract bonds.

D. **Contract Bonds**

Within ten (10) days after notification of the award of the contract and at the signing of such contract, the Contractor shall deliver to the Owner executed PERFORMANCE AND PAYMENT BONDS, bearing the date of the contract, in an amount equal to 100% of the accepted bid issued by a corporate surety licensed to do business in the State of New York, as follows:

1. The Performance Bond shall be conditioned upon the faithful performance of the terms of the contract, etc., per PERFORMANCE BOND FORM annexed hereto.
2. The Labor and Material Payment Bond shall be conditioned upon the prompt payment of all indebtedness incurred by the Contractor or any of his Subcontractors for labor or material incident to this contract and shall meet all requirements of Section 12 of the Lien Law of the State of New York, etc., per PAYMENT BOND FORM annexed hereto.

E. **Bond Premiums**

All bonds shall be obtained from a broker of his choice by the Contractor, who shall pay the premiums therefor.

**ARTICLE 6 - WAGE RATE SCHEDULE**

- A. In accordance with SECTION 220, Subdivision 3, and 220-d of the LABOR LAW, the following rates are the minimum hourly rates to be paid on this project.

1. ARTICLE 8, Section 220 of the LABOR LAW, as amended by Chapter 750 of the laws of 1956, provides, among other things, that it shall be the duty of the fiscal officer to make a determination of the Schedule of Wages to be paid to all laborers, workmen, and mechanics employed on public projects including supplements for welfare, pension, vacation and other benefits. These supplement include hospital; life insurance or death benefits, accidental death or dismemberment insurance; and pension or retirement benefits. If the amount of the supplements shown on the wage schedule, the difference shall be paid in cash to employees.

2. ARTICLE 8, Section 220 of the LABOR LAW, as amended by Chapter 750 of the Laws of 1956, also provides that supplements to be provided to laborers, workmen, and mechanics upon public work...SHALL BE IN ACCORDANCE WITH THE PREVAILING PRACTICES IN THE LOCALITY... The amount for supplements listed on the schedule does not necessarily include all types of prevailing supplements in the locality, and a future determination of the Industrial Commissioner may require the Contractor to provide additional supplements.

3. Contractor shall provide statutory benefits for disability benefits, workmen's compensation, unemployment insurance and social security.

#### **ARTICLE 7 - WEATHER CONDITIONS**

In the event of temporary suspension of work, or during inclement weather, or whenever the Engineer shall direct, the Contractor will, and will cause his subcontractors to, protect carefully his and their work and materials against damage or injury from weather. If, in the opinion of the Engineer, any work or materials have been damaged or injured by reason of failure on the part of the Contractor or any of his subcontractors to so protect his work, such materials shall be removed and replaced at the expense of the Contractor.

#### **ARTICLE 8 - EXISTING CONDITIONS FOUND DIFFERENT**

Should the Contractor encounter subsurface and/or latent conditions at the site materially differing from those shown on the plans or indicated in the specifications, he shall immediately give notice to the Engineer of such conditions before they are disturbed. The Engineer will thereupon promptly investigate the conditions, and if he finds that they materially differ from those shown on the plans or indicated in the specifications as he may find necessary, and any increase or decrease in cost resulting from such changes to be adjusted in the manner provided in the General Conditions.

## **ARTICLE 9 - QUANTITIES OF ESTIMATE**

Wherever the estimated quantities of work to be done and materials to be furnished on a unit price basis under this contract are shown in any of the documents including the proposal, they are given for use in comparing bids, and the right is expressly reserved, except as herein otherwise specifically limited, to increase or diminish them as may be deemed reasonably necessary by the Owner to complete the work contemplated by this contract, and such increase or diminution shall in no way violate this contract, nor shall any such increase or diminution give cause for claims of liability for damages.

## **ARTICLE 10 - LAND AND RIGHTS-OF-WAY**

Prior to the start of construction, the Owner shall obtain all land rights-of-way necessary for the carrying out and completion of work to be performed under this contract.

## **ARTICLE 11 - NOTICE AND SERVICE THEREOF**

Any notice to any Contractor from the Owner relative to any part of this contract shall be in writing and considered delivered and the service thereof completed, where said notice is posted, by certified or registered mail, to the said Contractor at his last given address, or delivered in person to said Contractor or his authorized representative on the work.

## **ARTICLE 12 - SUSPENSION OF WORK**

Should the Owner be prevented or enjoined from proceeding with work or from authorizing its prosecution either before or after its prosecution, by reason any litigation, the Contractor shall not be entitled to make or assert claim for any damage by reason of said delay, but time for completion of the work will be extended to such reasonable time as the Owner may determine will compensate for time lost by such delay with such determination to be set forth in writing.

## **ARTICLE 13 - TWENTY-FOUR HOUR CALL**

The Contractor shall provide the Engineer with the names and telephone numbers of at least two (2) employees of the firm who can be reached twenty-four (24) hours a day. This will enable the County to contact the Contractor any time that an emergency might arise involving the Contractor's operations or responsibilities.

#### **ARTICLE 14 - SANITARY REGULATIONS**

The Contractor shall provide the necessary enclosed sanitary conveniences for the use of his workmen and inspection personnel. They shall be of a type approved by the Engineer and the New York State Department of Labor and shall be maintained by the Contractor during their use and kept in a clean and satisfactory manner. These structures shall be sufficient in number for the size of the job, and their use will be required. The Contractor shall notify all his workmen that no nuisances will be permitted in this regard, and any complaints from the residents along these lines shall call for stricter enforcement of the provisions of this Article.

Facilities such as "Sani-John" or similar prefabricated units will be approved as long as they are kept in a clean condition. Each unit shall include a toilet and urinal.

Portable drinking water shall also be provided.

#### **ARTICLE 15 - WORK ON EASEMENTS AND RIGHTS-OF-WAY**

The Contractor shall confine his operations to the limits of the rights-of-way indicated on the drawings and shall not trespass on private property. Where the Owner has procured easements and right-of-way from individuals, extreme care must be exercised while working on these areas. Where lawns, gardens, driveways and other developed ground is traversed of necessity by heavy equipment, the surface of the area shall be planked, or otherwise adequately protected to prevent harm by caterpillar tractors, heavy wheels, etc. Bulldozers and other heavy equipment shall not be used for backfilling near lawns or other highly developed areas.

#### **ARTICLE 16 - DISPOSITION OF SURPLUS MATERIALS**

All excavated material shall become property of the Contractor. He shall remove it from the working areas as work proceeds. If the Contractor desires to deposit this surplus material upon private property, he shall first obtain written permission from such property owner or owners.

#### **ARTICLE 17 - BLASTING**

No blasting will be permitted on this project.

## **ARTICLE 18 - CLEAN UP**

As work along the various lines is completed, the Contractor shall systematically clean up the area. Surplus material, debris, or any waste material shall be removed. Fences, shrubs, sidewalks or any items that require replacement shall be set in a workmanlike manner. Where excavated material has been spilled over on lawns, or well developed gardens, etc., said material shall be thoroughly removed to the satisfaction of the Engineer. Sidewalks or paved areas shall be left broomed clean.

## **ARTICLE 19 - TRESPASSING ON PRIVATE PROPERTY**

The General Contractor shall not invade or enter upon private property, lands, or buildings, along the right-of-way, unless he secures written permission from the Owner. He will be held responsible for all damages done. Any such injury committed shall be satisfactorily repaired or items replace at his own expense. The Engineer will act to see that the General Contractor underwrites all expenses and damages cause by him. He may make his own arrangements to use private property for storage, etc.

## **ARTICLE 20 - KEEPING OF RECORDS AND ACCESS THERETO**

The General Contractor shall keep all necessary records books, diary, etc., of the performance of work in accordance with accepted construction and business practices. They shall be available to the Owner, New York State Department of Labor and any other parties as dictated by law, and they shall have access if necessary. A Contractor shall, at any time within three (3) years following the date of acceptance of the project, make such records available, upon request therefor, to the Owner for review and audit. In case all or part of such records are not made so available, the Contractor understands and agrees that any items not supported by reason of such unavailability of the records shall be disallowed, or if payment therefor has already been made, the Contractor shall, upon demand in writing by the Engineer, refund to the Owner the amounts so disallowed.

## **ARTICLE 21 - PRE-CONSTRUCTION CONFERENCE**

It is required that there shall be a pre-work conference and the Contractor shall attend this meeting. It shall take place at a time and place to be announce later. This meeting shall take place before the beginning of construction. Performance of the contract will be discussed plus scheduling, number of crews, equipment, materials and construction details.



## **ARTICLE 22 - JOB MEETINGS**

The Contractor shall attend all job meetings called by the Engineer or shall be represented by a person with complete authority to make all decisions affecting the Contractor's operations. Failure to be so represented at any job meeting which is held at a mutually agreed upon time or for which three (3) days oral or written notice is given, shall in no way relieve the Contractor from abiding by any and all decisions made at such meeting.

## **ARTICLE 23 - STREAM CROSSINGS**

Whenever work is done on this project in the area of streams and waterways, the Contractor shall adhere to all the requirements set out by the New York State Department of Environmental Conservation, Division of Pure Waters. These regulations are as follows:

- A. The project shall not obstruct the upstream or downstream movement of the fish. Culverts and the floors of box culverts in bridges shall be, as nearly as possible, flush with the streambed.
- B. Sufficient flow of water shall be maintained at all times to sustain adequate life downstream.
- C. Any culvert, box culvert, or bridge floor shall be designed to provide a "V" or dish shaped channel, which concentrates flow during periods of low water and facilitates the movement of fish.
- D. Disturbance of the streambed shall be kept to an absolute minimum, the streambed shall be returned as nearly as possible to its original conditions or better. Where possible, in modifying a streambed the centerline shall be eight (8) to twelve (12) inches lower than the toe of the channel bank, to concentrate the flow of water.
- E. Where work necessitates disturbing banks, they shall be returned to original condition or they shall be graded to a 1 vertical to 3 horizontal slope, and rip-rapped or planted with suitable grasses, trees and shrubs so as to prevent erosion. All trees and brush removed shall be kept to a minimum.
- F. Any dike or cofferdam required to facilitate construction shall be erected in such a manner that stream flow will not be sufficiently reduced to endanger fish life downstream. Such dike or cofferdam shall be erected with materials that will not contribute substantially to the turbidity or siltation of the stream.

G. During the project, care shall be taken to prevent or reduce to a minimum any damage to any stream from pollution by debris, sediment or other material, or from the manipulation of equipment and/or materials in or near such streams. Water that is used for washing or processing, or that contains oils or sediments that will reduce the quality of the water in the stream, shall not be directly returned to the stream. Such water will be diverted through a settling basin or filter before being directed into the streams.

H. If water is taken from a stream for construction purposes and an impounding structure is necessary, such structures shall be erected in a manner causing the least possible disturbance to the stream.

I. In all cases involving work in streams, every effort shall be made to return the stream to the highest possible standard for aesthetic value, water quality and fish habitat.

#### **ARTICLE 24 - CLOSING OF HIGHWAY**

~~This structure shall be closed for a minimum of time during construction. After the closure of this structure, the Contractor shall work diligently and continuously to complete the work.~~

#### **ARTICLE 25 - CONTROL OF MATERIAL**

All materials used in the work shall meet the quality requirements as described in the Detailed Specifications for each item.

It shall be the responsibility of the Contractor to advise the Engineer of the sources of proposed materials sufficiently in advance of their use so that proper tests may be made. Immediately upon award of the contract, the Contractor shall furnish, in writing, to the Engineer, the sources of supply, types of all items and kinds of materials which he proposes to use in the work. No change shall be made in the sources of supply or kinds of materials or in the type of any items without written approval of the Engineer.

All materials and products proposed to be used in construction may be inspected, sampled, and tested by the Owner or its designated representative. The expense of all such testing, inspection, and sampling shall be paid for by the Owner unless specifically excluded elsewhere in the contract documents.

Unless otherwise directed by the Engineer, no materials shall be used until the Engineer in charge of the contract give acceptance of that material and such material shall be used only

so long as the quality remains equal to that of the accepted sample. This initial acceptance of a material shall in no way preclude further examination and testing of a material at any time the Engineer suspects that the material is no longer properly represented by the accepted sample. The acceptance at any time of any material shall not bar its future rejection if it is subsequently found to be defective in quality or uniformity.

The United States Standard Screen Sieves meeting ASTM E11 shall be used on all materials requiring gradation tests.

#### **ARTICLE 26 - UTILITIES**

All known public and private utility installations within the contract limits are shown in their approximate existing locations are not guaranteed, nor is there any guarantee that all such facilities within the contract limits have been shown on the plans.

The relocation and adjustment of all privately owned utilities will be performed by the respective utility companies at their expense. It is imperative that the Contractor consult, cooperate, and coordinate his work fully with the utility companies.

The Contractor shall notify, in writing, any public utility, as well as the Engineer, at least five (5) days in advance of any work which may affect the utility or cause an interruption or disruption of utility service.

Utilities encountered during the work shall be maintained and protected in their existing locations until otherwise provided for. If service or utility lines not shown on the plans are encountered, excavation and grading shall be done with caution in order that these services not be disturbed until proper disposition of such is made by their owners.

#### **ARTICLE 27 - DUST CONTROL**

The Contractor shall apply calcium chloride and/or water as directed by the Engineer to prevent undesirable dust conditions. Payment for this work to be included in the various items of the contract.

#### **ARTICLE 28 - SAFETY**

The Contractor shall perform all his operations in accordance with the applicable local, state and federal safety regulations, and shall be responsible at all times for the safety of the general public, and for the protection of persons who may, for any reason, enter within the limits of the work.

## **ARTICLE 29 - HOLD HARMLESS**

The Contractor and subcontractor, if there be such shall, at all times, indemnify and save harmless the Owner and A.S.BELL ENGINEERING, PC from and against any and all claims and demands whatsoever, including costs, litigation expenses, counsel fees and liabilities incurred in connection therewith, arising out of injury to or death of any person whatsoever or damage to property of any kind by whomsoever owned, caused in whole or in part by the acts or omissions of the Contractor, its subcontractors, material men, or any person directly or indirectly employed by them or any of them, while engaged in the performance of this contract, or any activity associated therewith or relative thereto, and shall further indemnify the Owner and Bell Engineering against any such claims allegedly caused in part, whether or not it be the fact, by reason of negligent instructions or direction given or purportedly given by any of their representatives with respect to the performance of the work or any aspect thereof.

## **ARTICLE 30 – DISPUTE RESOLUTION**

In the event that a dispute hereunder arises between the Owner and the Contractor, the Owner and the Contractor, within five (5) working days thereof, agree to meet with the Engineer and the Town Highway Superintendent in an effort to resolve such dispute. If the dispute cannot be resolved at such meeting, the Owner and the Contractor shall promptly submit such dispute to binding arbitration before another person upon whom the Owner and Contractor shall agree. Unless such dispute involves the quality of the work being performed or the quality of the materials being utilized on the project, the work on the project shall not be suspended or delayed during the period of dispute resolution

## Village of Dobbs Ferry Gould Park Swimming Pool

### STATEMENT OF SWIMMING POOL CONTRACTOR'S QUALIFICATIONS

All questions must be answered by the bidding Pool Contractor to the best of their ability and the data given must be clear and comprehensive. This statement must be notarized. If necessary, questions may be answered on separate attached sheets. The bidder may submit any additional information desired.

1.1 Name of Contractor:

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1.2 Permanent main office address:

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1.3 When organized: \_\_\_\_\_

1.4 If a corporation, where incorporated: \_\_\_\_\_

1.5 How many years have you been engaged in the contracting business under your present firm or trade name: \_\_\_\_\_

1.6 Contracts on hand: List contracts showing amount of each contract and the appropriate anticipated dates of completion:

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(show additional contracts on separate sheet)

1.7 General character of work performed by your company:

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1.8 Have you ever failed to complete any work awarded to you: \_\_\_\_\_. If so, where and why:

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1.9 Have you ever defaulted on a contract: \_\_\_\_\_. If so, where and why:

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1.10 In accordance with the requirements of the specifications list the number of completed swimming pool installations of (cast-in-place/dry gunite/shotcrete) pool construction projects utilizing stainless steel gutters. This list is for projects completed under your present firm or trade name with your own personnel and equipment as stipulated. However, any projects that display your personal experience in swimming pool construction may be listed if the said project is clearly identified by you as NOT one of your companies contracted projects. You should indicate the scope of work and your level of responsibility for each project.

Job Name, Contact Reference, Pool Surface Area, and Date Completed.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_

1.11 List your major equipment available for this contract:

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1.12 List the background and experience of the principal members of your organization, including officers:

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1.13 List the work to be performed by subcontractors and summarize the dollar value of each subcontract:

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1.14 Credit available:

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1.14 Provide bank references:

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1.16 Will you, upon request, fill out detailed financial statement and furnish any other information that may be required? \_\_\_\_\_

1.17 The undersigned hereby authorized and requests any person, firm or corporation to furnish any information requested by the Owner in verification of the recitals comprising this Statement of Swimming Pool Contractor's Qualifications.

Dated: \_\_\_\_\_ Name of Contractor: \_\_\_\_\_

Signed By: \_\_\_\_\_

Title: \_\_\_\_\_

State of.....)

) ss.

County of..... )

\_\_\_\_\_ being duly sworn deposes and

says that he is \_\_\_\_\_ of \_\_\_\_\_  
and that the answers to the foregoing questions and all statements therein  
contained are true and correct.

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_

\_\_\_\_\_ Notary

My commission expires \_\_\_\_\_

**END PART 2**



## TECHNICAL SPECIFICATIONS

### A. Scope of Work

The work to be performed under this Contract shall include all necessary materials, labor, tools equipment, bonds and insurances to complete the work as shown on the Plans and as described herein, including , but not limited to the following:

#### BASIC BID ITEMS – CONSTRUCTION OF GOULD PARK POOL AND POOL EQUIPMENT BUILDING

1. Excavation and Backfill.
2. Concrete Footing, Walls, Slab and Waterproofing.
3. Rough Carpentry
4. Finish Carpentry
5. Pre-engineered roof trusses and installation
6. Electrical
7. Pool Construction
8. Concrete Pool Deck
9. Vinyl Clad Steel Fabric Perimeter Fencing and Gates
10. Turf establishment
11. Complete Job

### B. Inspection of the Site Prior to Bid.

It is the Contractor's responsibility, prior to preparing his bid, to inspect the site, visualize the work to be done and prepare his bid accordingly. Failure to do so will not relieve the Contractor of his responsibility to perform the work of this Contract.

### C. Excavation and Backfill

The Contractor shall excavate the area required to pour the concrete footings and walls for the new pool equipment building. Bottom of footing elevation shall be as shown on the plans and shall be a minimum of four (4') feet below finished grade. The contractor shall take the proper precautions not to disturb the foundation of the existing building. The area within the walls shall be graded and compacted to an even elevation in preparation of the floor slab foundation. Upon damproofing of the outside of the walls, the walls shall be backfilled to approximate final grade which will be approximately six inches below top of wall.

D. Cast-in-place concrete footings, walls and slabs

The Contractor shall construct the cast-in-place concrete wall footings, walls, including balance tank, and equipment room floor slab for the new pool equipment building at the location and to the dimensions shown on the Plans, and as described herein. The new footings shall be doweled into the existing building footing. The reinforcing bars extending from the footings into the walls shall be tied to the longitudinal footing reinforcing prior to concrete placement. The forms for the walls shall **remain in place a minimum of three days after concrete placement**. Immediately after stripping the forms, the walls shall be sprayed inside and out with a curing compound on the Department's approved list. Prior to placement of the floor slab, the entire graded area shall be covered with six mil polyethylene vapor barrier or approved equal. The edges of the slab shall be formed against a 1/2" thick premoulded joint filler installed entirely around the perimeter of the slab and fastened to the walls. All concrete shall conform to NYSDOT Item 555.0105, Class A, including slump, water/cement ratios, air entrainment and placement requirements. All steel reinforcing bars shall conform to NYSDOT Item 556.0201, Grade 60, uncoated. Anchor bolts for the sill plates shall be ASTM A-307 hot-dipped galvanized, and shall be tied to the wall reinforcing prior to concrete placement. Wet setting of anchor bolts will not be permitted. Finished floor elevation of the new floor slab shall match the elevation of the floor slab of the existing building, and at the doorway, shall be doweled into, and poured against the existing slab, without bond breaker. At the balance tank, the slab shall bear on the new balance tank walls as shown on the Plans, and shall be recessed to accept the balance tank grating.

E. Rough Carpentry

The Contractor shall provide all rough carpentry required as shown on the plans for the new pool equipment building and as described herein including but not limited to: pressure treated sill plates, wall framing and cement board sheathing including window openings.

F. Finish Carpentry

The Contractor shall provide all finish carpentry required as shown on the plans and as described herein including but not limited to: window installation and stucco wall exterior to match existing, and exterior painting to match existing building.

H. Windows

The Contractor shall supply and install double hung, vinyl windows with low "E" insulated glass and full screens as manufactured by Marvin Windows and Doors or approved equal. Windows shall tilt in for ease of cleaning. Cladding color to be "white".

## I. Pre-engineered Roof Trusses

The Contractor shall supply and install pre-engineered roof trusses as shown on the plans and as described herein. Roof trusses shall be designed and certified by a NYS Professional Engineer, and shall conform to all NYS building code requirements. Trusses shall be designed for no less than the following loads:

- 1) Self weight
- 2) Ten pounds per square foot (10 PSF) dead load on the bottom chord.
- 3) Ten pounds per square foot (10 PSF) dead load on the top chord.
- 4) Thirty pounds per square foot (30 PSF) ground snow load  $p_g$  on the top chord.
- 5) One hundred mile per hour (100 mph) wind load.

Roof trusses shall be properly spaced and braced, and connected to the top wall plates with Simpson Strong-Tie H10 hurricane ties or approved equal.

Trusses shall be covered with 3/4" CDX plywood, which shall be either tongue and groove or have longitudinal seam support connectors mid-way between trusses.

Trusses shall be designed for and supplied with a two (2') foot overhang.

## J. Metal Roofing

The Contractor shall supply and install 12 ga. galvanized, prepainted metal roofing in a color to be chosen by the Village, complete with roof cap. Roofing shall have 15# roofing felt underlayment, and watersheild rubber membrane for the first six (6') feet up the roof from the eaves. Roofing shall be installed with galvanized nails or galvanized tech screws with rubber washers.

## K. Soffits

The Contractor shall finish the roof overhangs by constructing soffits. Soffits shall be white, aluminum clad and constructed with perforated vent strips between each truss.

## L. Electrical

The Contractor shall furnish and have installed all electrical components for the new pool equipment building for the building only, including one (1) GFI convenience outlet, overhead LED shop lights and wiring, exhaust fan and switches. Contractor shall coordinate with the Village's electrician (or others designated by the Village) to have two (2) circuits run from the existing building for this equipment. All electrical work shall conform to the National Electric Code (NEC) of the latest and shall be performed by a licensed electrician.

The Contractor shall coordinate with the Village's electrician (or others designated by the Village) to have the pool equipment properly wired and energized. All electrical bonding of the pool shell, embedded metal objects, and pool equipment shall conform to part 680 of the National Electrical Code (NEC), and shall be certified to Westchester County Department of Health.

M. Pool Construction

The Contractor shall furnish and install, complete with all equipment, a new swimming pool in conformance with the Plans, and the detailed specifications which follow herein.

N. Pool Deck

The Contractor shall construct the reinforced concrete pool deck to the dimensions and location shown in the Plans. Deck shall be a minimum of 4" thick and shall be placed on a base of free-draining compacted crushed stone with a minimum thickness of 6". Concrete shall be Class "A" conforming to the requirements of NYSDOT Item 555.0501, with a minimum compressive strength of 3,000 psi at twenty-eight (28) days. Reinforcement for the deck shall be galvanized wire mesh measuring 6"x 6" made of 10 gauge wire, conforming to NYSDOT 709-02. Deck shall be constructed to slope a minimum of one-fourth (1/4") inch per foot down and away from the pool. Pool deck shall be broom or turf-dragged finished parallel to the slope to provide both slip-resistance, and easy cleaning by hose. Deck shall be scored or saw-cut at intervals not to exceed thirty feet, with scoring or saw cuts running perpendicular to the pool at straight pool portions, and as directed by the engineer elsewhere.

O. Perimeter Fencing.

The Contractor shall furnish and install perimeter fencing as shown on the Plans, as described herein, and conforming to the requirements of NYSDOT Item 607.051X, Vinyl Coated Steel Chain-Link Fencing on Plastic Coated Frame with Top Rail. Fencing shall be a minimum of eight feet (8') high for the entire perimeter, and shall be provided with self-closing, self-latching, lockable gates at the locations shown on the Plans. Intermediate rails shall be provided at mid-height (4'). Fence fabric shall be installed such that the fabric measures no more than one and one-half inches (1-1/2") above finished ground surface, and with the twisted wires of the fabric extended above the top rail as required by NYS Department of Health. Gates shall be designed to swing outward. At the entrance driveway, an eight foot (8') wide double gate shall be provided to allow for maintenance vehicles. The gate half closest to the wall shall be constructed to be fixed and locked in place, only to be opened by authorized personnel. Construction of the portion of the fence from this gate to the existing bathhouse shall be coordinated with the Village to be constructed along the top of the existing stone wall, but still provide the necessary security. Color of all components of the fencing shall be black.

Q. Turf Establishment

The Contractor shall establish turf on all disturbed areas beyond the concrete pool decks, including but not limited to around the new pool equipment building.

R. Complete Job

These documents are intended to describe a complete and workmanlike job by a contractor familiar with this type of construction. All miscellaneous requirements shall be included by the contractor in his price to provide a complete job and no additional payment will be considered or approved for any item or task need to provide a complete, workmanlike final product.

## **POOL CONSTRUCTION SPECIFICATIONS**

Specifications for the construction of the new swimming pool and appurtenances follow this page and consist of twenty-five (25) additional pages.

**GOULD PARK POOL  
DOBBS FERRY, NEW YORK**

**1 PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. This section of the specifications describes the swimming pool construction, swimming pool equipment installation, and service. Only contractors capable of meeting the qualifications and furnishing all work called for in this section shall be considered. All work called for in this section shall be, and remain throughout the warranty periods, the sole responsibility of this contractor.
- B. Preference will be given to qualified contractors supplying the complete recirculation and filtration equipment requirements for this job as specified so that all instruction, service and warranty claims will be handled by an experienced organization specializing in this work.

**1.2 RELATED DOCUMENTS**

- A. Drawings and General Provisions of Contract, including General Conditions apply to work of this Section.
- B. Applicable requirements of the following Specifications and Codes apply to Work of This Section.
  - 1. National Spa and Pool Institute (NSPI).
  - 2. All local building and Westchester County Department of Health codes.
  - 3. National Electrical Code (NEC).
  - 4. National Sanitation Foundation (NSF) Seal of Approval program.
  - 5. American Society for Testing and Materials (ASTM).
  - 6. Department of Public Health.

**1.3 CODES & REFERENCES**

- A. All work in this division shall be according to applicable local, state and national codes and regulations.
- B. Provisions for Gunite: Comply with the provisions of the following codes, specifications and standards except where more stringent requirements are shown or specified.

1. American Concrete Institute (ACI) 301, "Specifications for Structural Concrete for Buildings".
  2. ACI 506.2 "Specifications for Materials, Proportioning and Application of Shotcrete".
  3. Concrete Reinforcing Steel Institute (CRSI) "Manual of Standard Practice".
- C. Provisions for plumbing work that is part of this section: Comply with the following reference standards except where more stringent requirements are shown or specified.
1. ANSI/ASTM D2564 – Solvent cements for polyvinyl chloride (PVC) plastic pipe and fittings.
  2. ANSI/ASTM D1785 – Standard specification for polyvinyl chloride (PVC) plastic pipe schedules 40, 80 and 120, NSF seal for potable water.
  3. ASTM B88 – Seamless copper water tube.
  4. ASTM D2855 – Practice for making solvent cemented joints with PVC pipe and fittings.
  5. Eslon Engineering Manual for plastic piping systems.

#### **1.4 SUBSTITUTIONS:**

- A. The Owner and the Architect have made a detailed investigation before selecting the specified swimming pool recirculation, filtration and other special pool equipment. **All** base bids shall include this equipment or equipment that has been pre-approved as an equal (See Substitutions Item A), without substitution since the operation and maintenance of this swimming pool facility has been predicated upon the specified equipment.
- B. The materials, products and equipment described in these specifications establish a standard of required function, dimension, appearance, quality, and quantity. The base bid proposal will be for supplying equipment as specified, however, the Contractor, at his option, may offer similar products of other manufacturers which meet the required quality and performance standards established by these specifications. Plans and specifications that clearly indicate all substitute equipment and any changes required in the pool structure or building construction shall accompany any such offering at least ten (10) working days prior to the bid date. Any product offered as a substitute must be a proven design with at least ten (10) installations in service for five (5) years. Such substitute proposal shall clearly indicate the product, manufacturer and manufacturer model number. Substitutes submitted post bid will not be considered. All costs incurred due to re-designs, agency submittals, or approvals required because of substitute equipment or materials shall be the sole responsibility of the General Contractor. Alternate equipment and or designs are not acceptable.

## 1.5 QUALITY ASSURANCE

### A. Contractor Qualifications:

1. The Contractor must have had at least five (5) years experience in the construction of the type of swimming pool work herein specified and must list at least ten (10) pools of this type, each with a water surface area of not less than this pool which the Contractor has constructed and which, upon investigation, would be found to have been completed in a satisfactory manner and in operation at least three (3) years.
2. Contractors wishing to bid this project, in addition to the list and information required in the preceding paragraph, shall submit, prior to entering into contract and if requested from the Owner/Architect/Engineer or Construction Manager:
  - a. Complete evidence that the Contractor has the facilities, equipment, personnel, etc., to complete all phases of this trade division.
  - b. Certification that the plans and specifications have been reviewed and that his bid will conform thereto.
  - c. Be bondable and provide a certification of "Bond ability" from their bonding agent.
3. The Owner/Engineer reserves the right to reject any pool contractor if in the opinion of the Owner/Engineer such contractor shall not be acceptable for this project.

### B. **Performance Criteria:** Certain sections of the specifications contain performance criteria rather than product descriptions.

1. It shall be the obligation of the Contractor to ensure that all criteria are satisfied and the burden of proof of conformance shall rest with the Contractor. The Architect/Engineer shall require complete calculations, past performance records and, if required, inspection trips of similar facilities to substantiate conformance with these criteria. The Architect/Engineer shall be the sole judge of conformance and the Contractor is cautioned that he will be required to bid and provide a finished product meeting all the stated criteria and meeting or exceeding Department of Public Health requirements.
2. Shotcrete: All shotcrete work of this section, including formwork and reinforcing, shall comply with applicable requirements of this section.



## **1.6 SUMMARY OF WORK INCLUDED**

A. The work of this section includes, but is not necessarily limited to the following:

1. Layout pool with benchmark and exact location provided by the contractor and approved by the Engineer;
2. Perform bulk excavation of the pool and all required hand trimming;
3. Provide and Install all required forms for pool construction;
4. Furnish and install granular sub-base of #2 washed stone under the entire pool floor – minimum 4" depth;
5. Construct monolithic gunite pool structure;
6. Provide and Install the entire recirculation system, as shown on the drawings;
7. Install ceramic tile lane markings and end wall markers, as shown on the drawings;
8. Provide and apply "marcite" and "diamond brite" finish, as shown on the drawings, to the interior of the pool.
9. Provide and install complete filtration equipment and pool mechanical systems as shown on the drawings. To include all pumps, motors, controls and starters. Wiring installation of the pumps, motors, controls and starters to be completed by a duly licensed Electrical Contractor;
10. Provide and install specified pool sanitizing equipment system;
11. Furnish and install the pool deck and accessory equipment shown and/or specified. All anchorages contained with the pool deck shall be furnished and installed by the pool contractor;

12. Complete installation of the new pool deck and fence as shown on the drawings;
13. Provide miscellaneous pool testing and cleaning equipment, etc., as specified;
14. Provide instruction manuals and/or operating charts for all equipment;
15. Provide three (3) days of start-up supervision and instruction upon project's completion;
16. Provide start-up chemicals;
17. Construct equipment room building with balance tank, as shown on the Drawings; and
18. Furnish and install fencing as shown on the drawings and in accordance with Chapter I State Sanitary Code Subpart 6-1 Swimming Pools (statutory authority: Public Health Law §225)

#### **1.7 RELATED WORK SPECIFIED ELSEWHERE**

- A. Site access for heavy equipment;
- B. Disposal of excavated material;
- C. Stripping pool area, grading, backfilling, and any other area preparation required prior to the start of pool construction;
- D. Construction and backfill of all foundations, equipment room walls, footings, sleeves openings, sumps or other penetrations in the equipment room and/or natatorium wall and closure of same as required for pool construction work;
- E. All General construction work not called for in this section, including dewatering of pool excavation, if necessary;
- F. Fresh water connection to filter, fill spout, or makeup water tank (see drawings) and waste water connection from filter as shown on the drawings;
- G. All backfill required for pool structure, main drain piping, etc., as required;
- H. Provide access to filter room for filter equipment;

- I. All electrical connections and pool or equipment grounding shall be by the Electrical Contractor. This Contractor shall provide the filter pumps and motors. All controls including starters shall be provided by the pool contractor installed by the Electrical Contractor. The Electrical Contractor shall install all electrical equipment furnished by the Pool Contractor and shall provide all disconnect switches as indicated or required by codes;
- J. Provide 120 volt, 12-amp circuit with G.F.I. and wiring to water level controller, solenoid valve and relay;
- K. Provide 120 volt, 15-amp circuit with G.F.I. for chemical feed system. Power to come through auxiliary contractor in motor starter so when main pump is off, chemical feed system is off;
- L. Provide 110-volt wiring between chemical control unit and chlorine pump & acid pump located in the chemical storage room;
- M. Grounding pool structure and all pool and deck equipment as per current N.E.C. Provide certificate of inspection when complete;
- N. Provide and install pool heaters or heat exchangers as specified in the mechanical section of the specifications; and

#### **1.8 DEFINITIONS:**

- A. The term "pool" as used in this Section shall refer to the following:
  - a. New pool structure and all associated piping, equipment and systems.
- B. The term gunite/shotcrete as used in this Section shall refer to gunite/shotcrete for swimming pool construction only.
- C. The term "Architect/Engineer" as used in this section shall refer to A.S Bell Engineering, PC, 1732 Western Avenue, Albany, NY 12203

#### **1.9 QUALITY OF MATERIALS**

- A. Special attention is directed to the materials, products and equipment described in these specifications. They establish a standard of required function, dimension, appearance and quality.

- B. Where only one manufacturer's name is mentioned for an item of equipment or material, the Contractor's base bid shall be on that item.
- C. Where references are made to Federal Specifications, American Society for Testing and Materials, American Standards Association, American Institute of Steel Construction, Steel Institute, and similar associations, organizations and standards, it shall be construed to mean their current specifications and designations as amended as of the date of bid opening.

#### **1.10 TESTING/FIELD QUALITY CONTROL**

- A. This section requires the following tests be performed during construction of the project.
  - 1. Testing and Flushing of Pipe:
    - a. Contractor shall be responsible for discovering leaks and making necessary repairs.
    - b. Pressure piping: After the piece is laid, the joints completed, and the trench partially backfilled leaving joints exposed for examination, subject new lines to a hydrostatic pressure of not less than thirty-five pounds per square inch. Joints shall remain watertight under this pressure for a period of two hours. All air must be expelled from pipes prior to testing.
    - c. Gravity lines: A water test shall be applied to all gravity drain piping system, either in their entirety or in sections. All openings shall be tightly plugged, and each system filled with water and tested with at least a 10-foot head of water. The water shall be kept in the system or in the portion under test, for at least 15 minutes before the inspection starts. System shall be watertight at all joints.
    - d. Test results must be provided to the Engineer before covering the pipes.
    - e. Leaks shall be repaired and tested repeatedly until leakage or infiltration is approved.
    - f. The Contractor must adhere to the applicable provisions in the mechanical portions of the specifications for the installation of piping systems.

2. Water Treatment:

- a. Obtain a chemical analysis of the source/pool make-up water supply and submit to the Engineer prior to ordering water treatment systems.
  - 1) Include the following:
  - 2) Total alkalinity/PPM;
  - 3) Calcium hardness/PPM;
  - 4) Chlorine/PPM;
  - 5) pH;
  - 6) Iron; and
  - 7) Copper.
- b. Provide a list of required chemicals and an estimate of quantities required to the owner in enough time to allow the owner to purchase chemicals.
- c. Treat and balance pool water prior to turnover of pool to the Owner (using chemicals provided by this Contractor).
- d. Pool Water: balance to establish a total Alkalinity level of 60-125 PPM and calcium hardness level of 180-375 PPM (3 times alkalinity level).
- e. Stabilize pool water to 3 PPM

3. Testing of Gunite:

- a. The Owner is to engage a laboratory to perform material evaluation tests, to design shotcrete mixes and to test installed work.
- b. *Pre-Construction Testing:* Comply with the requirements of ACI 506.2 and as specified. Make 3 test panels at least 30 inches by 30 inches for each mix being considered and for each shooting position to be encountered in the project, complying with applicable provisions of ASTM C 1140. Make test panels by each application crew performing guniting work. Fabricate test panels to the same thickness as the structure to be gunited but not less than 6 inches.
  - 1) Provide the same reinforcement in the test panels as used in the structure, placed in at least half the panel to check for proper gunite/shotcrete placement and reinforcing steel.
  - 2) A minimum of five 3-inch cubes or 3-inch diameter core specimens from panels will be taken for testing. The average compressive strength of 3 cores taken from test

panels must equal or exceed 82 percent of the specified compressive strength.

- c. Testing During Construction: Shotcrete will be tested for compressive and flexural strength by one or more of the following methods:
  - 1) Test Panels: Gunned by shotcrete nozzleman who will do production work. One test panel with minimum dimensions of 30 by 30 inches by 6 inches, gunned in the same position as work represented, complying with applicable provisions of ASTM C 1140. Make the test panels once each shift or once for each 50 cu. yds. of shotcrete placed through nozzle, whichever is more frequent. Moist cure panels unless otherwise directed by the Architect. A minimum of three 3-inch, nominal-diameter cores or three 3-inch cubes will be cut from each panel.
  - 2) Samples from In-Place Shotcrete: Three 3-inch, nominal-diameter cores from the structure will be cut and tested in accordance with ASTM C 42. Do not cut into steel reinforcement. A set of cores will be tested once each shift or once for each 50 cubic yards gunite/shotcrete placed through nozzle whichever is more frequent.
- d. Strength Evaluation: Shotcrete will be considered acceptable as follows:
  - 1) Mean compressive strength of any group of cores taken from the structure or test panel equals or exceeds specified compressive strength with no individual core less than 75 percent of specified compressive strength.
  - 2) Mean compressive strength of any group of cores taken from the structure or test panel equals or exceeds 118 percent of the specified compressive strength with no individual cube less than 106 percent of the specified compressive strength.
- e. Installer's Qualifications: Prior to commencement of work, demonstrate that the proposed guniting personnel, materials and equipment are capable of batching, mixing, conveying and uniformly applying shotcrete in accordance with the specified requirements.
  - 1) Use nozzlemen having current certification in accordance with the guidelines of ACI 506.3R for the type of shotcrete required.

## 1.11. SUBMITTALS

### B. Submittals Required.

1. Refer to AIA for further information.

### C. *Product Data:* Provide Manufacturer's/Installer's written installation instructions as called for throughout this section.

1. The Contractor shall submit for approval to the Engineer complete lists, including descriptions, catalogs, cuts, etc. and when available dimensioned shop drawings of all material, fixtures and equipment to be furnished and installed under this specification. Submittals shall adequately and completely describe:
  - a. The equipment, including where necessary or requested complete construction and installation dimensions
  - b. Complete capacity and performance data
  - c. All accessory and auxiliary equipment
  - d. All pertinent details of manufacture.
  - e. Shop drawings for equipment shall be submitted and approval of shop drawing shall be obtained before proceeding with fabrication.

### D. Certificates: Submit in duplicate a certificate from the manufacturer, properly attested, stating the material and construction comply with the requirements of the drawings and specifications. Certificates shall be furnished before the installation of the equipment.

### E. Shop Drawings:

- a. Submit shop drawings required by this Section.
- b. The drawings accompanying this specification are essentially diagrammatic in nature and show the general arrangement of all equipment, piping ductwork, services, etc. Because of the small scale of the drawings, it is not possible to show all offsets, fittings and accessories that may be required. The Contractor shall carefully investigate the structural and finish conditions of all his work, and shall arrange such work accordingly, furnishing all fittings, pipe and accessories that may be required to meet such conditions. Where conditions necessitate a rearrangement, the Contractor shall obtain the Engineer's approval. Locate all valves for maximum operation accessibility.

- c. Before commencing any work, Contractor shall submit and obtain approval of shop drawings indicating all work called for in this division.
- F. Valve Charts: Submit two copies of valve charts for each piping system, consisting of Isometric Drawings, or piping layouts showing and identifying each valve and describing its function to the Engineer for approval.
  - 1. Upon completion of the Work, one copy of each chart sealed to rigid backboard with clear lacquer placed under glass and framed shall be hung in a conspicuous location in the equipment room.
- G. Operation and Maintenance Manuals:
  - 1. Submit to the Engineer four (4) copies at substantial completion of the project.
- H. Furnish to the Owner/Architect/Engineer the following:
  - 1. Product Data:
    - a. Gunit Mix Design, if required
    - b. Non-Shrink Grouts.
    - c. PVC Water Stop, if required.
    - d. Expansion/Construction Joint Materials.
    - e. Caulking.
    - f. Pumps and Strainers.
    - g. Chemical Controller(s), Feeders and Storage Tanks.
    - h. Valves.
    - i. Gauges Thermometer and Flow Meter.
    - j. Pool Water Test Kit.
    - k. Each piece of Deck Equipment.
    - l. Inlets, Main Drain Grating, and Zero Depth Grating.
    - m. Each piece of Safety Equipment.
    - n. Each piece of Filtration equipment
    - o. Each piece of Sanitation & Maintenance Equipment.
    - p. Piping Materials.
    - q. Wall sleeves and seals for piping.
    - r. Tile Setting Materials and Joint fillers.
  - 2. Shop Drawings:
    - a. Piping
    - b. Water Activities
    - c. Filters.
    - d. Stainless Steel Gutter.
    - e. Ceramic Tile installation methods and patterns
    - f. Built in equipment and accessories
    - g. Filtration System



- h. Sanitation & Maintenance system
- 3. Test Results:
  - a. Dry gunite/shotcrete testing.
  - b. Compaction
  - c. Piping Pressure Testing.
- 4. Samples:
  - a. Tile.
  - b. Gratings.
- 5. Training – arrange for three separate days of training, each session separated by a minimum of two weeks, covering all systems and equipment.
- 6. Guarantees/Warranties:
  - a. Standard (1) Year.
  - b. Special (2) Year on Swimming Pool Structure.
  - c. Special Equipment (1) Year
  - d. Future (3) Days of Instruction And Operational Checkout.
- 7. Close Out Documents:
  - a. O & M Manuals.
  - b. As Built Drawings.
  - c. Owners Certification of Instruction.
  - d. Extra Materials.

#### **1.11 Delivery, Storage, and Handling**

- A. Refer to AIA for additional requirements.
- B. Deliver all materials and equipment to the work site in original packages fully identified, with manufacturer's label. Store off ground and protect from weather with a suitable covering.
- C. Deliver cementations materials to work site in manufacturer's standard packages. Immediately upon deliver to work site, store in waterproof sheds. The Contractor shall provide sheds that are required. Nor cementations or other material that has become caked or hardened will be permitted in the work.
- D. Protect plastic pipe from exposure to chemicals i.e.: aromatic hydrocarbons, halogenated hydrocarbons and other esters and keytones that might attack the material. Protect all pipes from mechanical damage and long exposure to sunlight during storage.

## **1.12 Warranties**

- A. General Warranty: Provide one (1) year warranty covering all pool workmanship, materials, and equipment. Refer to Division 1 of the Specifications for additional requirements.
- B. Special Project Warranty on Swimming Pool Structure: The Contractor shall guarantee for two (2) years repair of the concrete/dry gunite/shotcrete pool structure covering any defects, cracks, and/or leaking in the pool shell.
  - 1. The warranty shall not cover damage to the pool attributable to corrosive action, excessive use of acid or other foreign materials during cleaning or for discoloration or other consequences resulting from improper or inadequate use of chemicals or other materials, or from neglect or misuse by the Owner, his agents or invitees.
  - 2. This warranty shall also be void unless pool is always kept full of water and if drained for cleaning purposes, does not remain empty for more than a 48-hour period, unless under supervision furnished by the Contractor.
- C. Stainless Steel Perimeter Recirculation System Guarantee: The equipment manufacturer shall guarantee in writing that if the system is operated in accordance with written instructions given and accepted by the Owner, it will perform in complete accord with the specifications.
- D. Sanitation and Maintenance System Warranty: The equipment shall be warranted in writing that when operated and maintained according to the manufacturer's operating instructions provided and accepted, it will perform in complete accord with these specifications.
  - 1. All components have a limited warranty to be free from defects in workmanship and materials for a period of 12 months from date of start-up or 18 months from date of shipment, whichever occurs first.
- E. All standard manufacturer's warranties shall apply to all equipment and products provided by the Contractor.

## **1.13 JOB COORDINATION/PRECONSTRUCTION MEETING**

- A. All bidding contractors are cautioned to clearly understand the limits of responsibility of the Contractor as detailed in these specifications in preparing their bid.
- B. Prior to a work start a meeting will be held at the job site to establish work limits, job schedule and liaison among contractor, village representatives and the Engineer to ensure a coordinated construction process.
  - 1. The bidding contractor and all pool system sub contractors, or manufacturer's representatives will be present at this meeting.

2. Bring to everyone's attention special considerations requiring care in coordinating the work of those elements or systems.
3. Proposals regarding schedule shall be coordinated with the overall construction schedule to maintain the milestone dates established therein.

## **2 PART 2 PRODUCTS**

### **2.1 STEEL REINFORCING:**

- A. All reinforcing steel shall be standard size deformed bars equal to the requirements of the "Standard Specifications for Billet Steel, Concrete Reinforcement", Intermediate Grad, Serial Designation A15, steel reinforcing bars, equal in the requirement of Serial Designation A615, adopted by the ASTM.

### **2.2 CEMENT:**

- A. All cement for gunite shall conform to the requirements of the "Standard specifications for Portland Cement: Serial Designation C-150 of the ASTM and shall be Type I or II (except where transit mixed cement is to be employed) and shall be delivered to the job site in the original packages or bulk tanker and adequately protected from the weather during storage.

### **2.3 GUNITE/SHOCRETE:**

- A. Gunite/Shotcrete sand shall consist of clean, hard, sharp particles, moisture content shall not exceed 5% and the sand shall be well graded in size.

### **2.4 STAINLESS STEEL PERIMETER RECIRCULATING SYSTEM**

- A. System Description: A perimeter overflow system consisting of an overflow channel, surge recovery channel, and a filtered water supply channel according to the details shown on the accompanying drawings shall be supplied around the entire perimeter of the pool.
  - a. The entire system shall be fabricated of 316L stainless steel.
  - b. All longitudinal welds shall be fully exposed and accessible for inspection.
  - c. All factory welds are to be opposing to compensate for reverse bowing and maintain proper tube alignment.

- d. The system specified is the R300 perimeter as manufactured by the Paddock Pool Equipment Company, Inc., Rock Hill, South Carolina.
- B. Substitution cautions: Any components of a substitute system subject to pressure or suction shall be fabricated and tested prior to shipment. Any proposed substitution shall include a mechanical drawing incorporating all required changes in layout, piping and valves. The cost of such changes shall be included in the price of the substitute. No additional costs will be incurred by the owner because of a substitution proposed by the contractor. Any such proposed system must have prior approval of the State and local Health Departments.

Materials: The exposed surfaces of the filtered water supply and the suction tube which form the front lip of the gutter section shall be fabricated of 12-gauge Type 316L stainless steel with a #3 polished (100 mesh abrasive) finish.

- a. The 1 1/2" X 3/16" angle anchors and all stiffener brackets shall be stainless steel.
  - b. The gutter channel sections shall be fabricated from 14-gauge, Type 316L stainless steel with a finish similar or equal to a #3 polished (100 mesh abrasive) finish.
- C. Finish: The low carbon stainless steel IFRS-ASR components shall be cleaned and polished as required to present a substantially uniform finish.
  - a. Each weld seam, as completed, after it cools to approximately 300°, shall be vigorously brushed with a stainless-steel brush.
  - b. Blending of all surfaces shall be done with a Scotch Brite Pad.
  - c. The strength of the raised weld shall not be reduced by grinding.
  - d. After all stainless-steel welding, brushing, blending, and testing, the welds on the stainless-steel components must be cleaned with a one-to-one solution of muriatic acid (HCL) and water.
  - e. The weld seams must be swabbed and kept wet with acid for five to ten minutes.
  - f. Thoroughly neutralize and rinse.
  - g. Repeat swabbing the entire exposed surface of the stainless-steel components with a 20% nitric acid solution.
  - h. An integral, sandblasted, non-skid strip shall be provided on the top surface of the supply conduit and gutter channel section.

- D. Uniformity of Welds: Filler metal shall be used on all weld joints, whether the sections butt together or not, to result in a uniform appearing raised weld at each joint.
- a. Raised welds shall not be ground.
  - b. After the weld is cooled, a second pass may be made with the arc puddling and smoothing the original weld if required.
  - c. Design shall be such that all longitudinal welds shall be exposed for visual inspection.
- E. Filtered Water Inlets: The filtered water supply channel shall be stainless steel fitted with nylon jet inlet nozzles, not over 36" on center around the entire perimeter of the pool, except where inlets shall be expressly deleted at stairways or touch pads. The inlet jets shall be sized so they will not create a tube pressure more than 12 pounds nor have an orifice opening exceeding 9/16" in diameter. The stream of water passing through the jet nozzle shall be on a fixed 45° angle.
- F. Integral Automatic Surge Control (ASC) Weirs: Surge control weirs shall be installed in the perimeter overflow system at the pool corners and as shown on the drawings. They shall be located to provide a surface cleaning action when the water level is below the perimeter overflow system lip during periods of non-use. The weir gate shall close automatically as the water level in the pool rises, thus allowing the pool to be operated at rim level for competition without flooding the overflow channel. The surge control weirs shall be responsive only to changes in water level within the pool. Weirs responsive only to changes in water level in the perimeter overflow channel shall not be acceptable.
- a. Design of the weir shall be such as to present no bather hazard in the open or closed position. The flow through each weir shall be designed to be 50 GPM.
  - b. The system specified provides "in-pool" surge capacity of one gallon per square foot of filter surface area and quiescent surface cleaning in a manner which permits water displaced by bathers and their dynamic surge to remain within the pool structure.
  - c. The system specified provides for automatic closing of surge weirs for rim flow operation without raising the water level in the perimeter channel thus providing minimum perimeter surge containment of approximately 5 gallons per foot of perimeter to prevent momentary surcharging of the perimeter overflow system channel and to provide capacity for wave entrapment and quelling during competition.
- G. Grating: The grating shall be formed of extruded PVC sections. The top surface of the ribbed "I" beam section shall be 5/8" wide and the depth shall be 1". The

top surface shall be serrated to create a non-skid surface. The space between extruded sections shall not exceed 9/32". The open area of the grating shall not be less than 32%. The ribs shall be placed perpendicular to the pool perimeter for maximum efficiency in quelling waves. Longitudinal ribs shall not be accepted as equal.

- H. Convertors: Convertors shall be installed in the C300T Perimeter where shown on the plans. Piping, as shown, shall connect the convertors to the filter system. There shall be a minimum of two convertor outlets serving the overflow channel on opposite sides or ends of the pool. Materials shall be as shown on the drawings. The special convertors that admit water to the suction tube shall be located as shown on the drawings and each placed to permit visual inspection of the suction tube.
- I. Automatic Water Level Controller: The pool water level shall be maintained automatically by a probe type (pressure sensitive) water level controller, Paddock No. 6610-SNR or approved equal.

## **2.5 POOL EQUIPMENT AND SYSTEMS PIPING**

- A. All plastic pipe flanges shall be schedule 80 PVC with neoprene gaskets where required.
- B. All pool gutter lines shall be schedule 80 solvent welds, conforming to ASTM D1785/76. All gutter lines shall drain by gravity as shown on the drawings.
- C. Underground Piping: The main drain piping for the pool and all other underground (buried) supply and return piping shall be schedule 80 PVC pipe with similar fittings.
- D. All above grade piping inside the pool mechanical room shall be PVC schedule 80, solvent weld.
- E. All chemical piping shall be schedule 80 PVC, solvent weld.
- F. Pool heater connections shall be Type "L" copper piping, with wrought copper or cast brass fittings, 95/5 solder, on heater influent and effluent lines from the bypass to the heater.
- G. All connections between PVC and metal piping must be flanged, plastic flange to metal flange. DO NOT use threaded connections between plastic and metal piping.
- H. HANGERS AND SUPPORTS:
  - 1. General:

- a. All mechanical room piping must be properly supported using the schedule indicated on the drawings as a guideline for maximum allowable spacing between supports.
  - b. It shall be the contractor's responsibility to properly support piping at all valves, pumps, equipment, overhead areas, changes in direction, etc.
  - c. Use of the proper hanger for the conditions is essential. All piping must be supported laterally as well as vertically hung.
  - d. All hangers, pipe supports, threaded rod, hardware, etc. shall be zinc plated or galvanized steel.
  - e. All piping connections and support hardware shall be stainless steel inside surge tanks, balance tanks, and gutters.
  - f. Ring, clevis, roller and J hook type hangers are not acceptable.
2. Strut:
- a. Minimum height 1-5/8", minimum width 1-5/8", minimum thickness 12-gauge material.
  - b. Finish shall be hot-dip galvanized steel, ASTM A123; or type 304 stainless steel or better grade, ASTM A240.
3. Strut clamps:
- a. Pipe sized 1/2" thru 12", two-piece clamps with clamping bolt and nut.
  - b. Pipe sizes 14" and larger, provide "U" bolts, nuts, and washers.
  - c. Finish shall be hot-dip galvanized steel, ASTM A123; or type 304 stainless steel or better grade, ASTM A240.
4. Strut accessories:
- a. Flat plate fittings, corner braces, post bases, etc. Finish shall be hot-dip galvanized steel, ASTM A123; or type 304 stainless steel or better grade, ASTM A240.
5. Wedge anchors:
- a. One-piece assembly, 3/8" minimum body diameter.
  - b. Grade 2, zinc plated with stainless steel clips; or type 304 stainless steel or better grade, ASTM A240.
6. Beam clamps:

- a. Steel "C" clamp type with locknut.
  - b. Finish shall be electro-plated galvanized; or type 304 stainless steel or better grade, ASTM A240.
- 7. Support components:
  - a. All threaded rod, threaded rod couplings, nuts, washers, etc. Finish shall be electro-plated galvanized; or type 304 stainless steel or better grade, ASTM A240.

## **2.6 VALVES:**

- A. Small Valves - valve up to and including two (2) inches in size shall be gate valves, all brass with threaded ends for ferrous pipe. They shall be 125 lbs. non-rising stem type.
- B. Large Valves - valves three (3) inches and larger shall be iron-body bronze mounted and shall conform to AWWA standard C-500. a Valves shall have flanged ends as required for the piping in which they are installed. Valves shall be designed for a minimum water working pressure of 125 lbs. per square inch. Gate valves shall be as manufactured by Walworth Company, Ludlow-Rensselaer Valve Manufacturing Company American Valve or equal.
- C. Valve Extension Stems and Keys - where required, the Contractor shall furnish and install valve extension stems and keys as manufactured by Ludlow-Rensselaer Valve Manufacturing Company or equal.
- D. Wafer Valves - valves as shown on the drawings shall be butterfly wafer valves equal to Cennterline Series A, bronze disc, Neehanite iron body, stainless steel stem, buna N seal gear or lever operated as shown.

## **2.7 PIPE IDENTIFICATION**

- A. Brady, B-946, custom legend, self sticking markers and arrows or equal.

## **2.8 FILTRATION SPECIFICATIONS**

- A. The filter system described in this section shall consist of a Filtrex, Incorporated Model EC 500S regenerative pressure pre-coat media filter as shown on the drawings.
- B. It is the intent of these specifications to describe a filter system complete with all accessory items supplied and warranted by one manufacturer.
- C. The primary components of the system consist of the filter tank, vacuum transfer system, Flex-Tube™ filter elements, tube nest, bump mechanism, sight glass,



pressure gauges, automatic filter controller, inspection window, remote control valves, effluent sight glass.

- D. The filter system shall incorporate a closed pre-coat loop within the filter room designed to preclude filter media passing to the pool during precoating recycle period operations. During the pre-coat recycle period the onstream valve shall be fully closed, isolating the pre-coat stream from the pool return line(s). Bump, pre-coat recycles and onstream cycles shall be fully automatic under direct control of the filter controller.
- E. All components and related subassemblies shall be factory assembled and tested prior to shipment.
- F. The filter shall be listed and approved by the National Sanitation Foundation.

#### FILTER EFFICACY

- A. The filter system shall be capable of first pass turbidity reduction of 98% ( $Tr \text{ Ratio} \leq .02$ ) or better within 90 seconds of onstream transition when subject to a #140 silica challenge test as outlined in NSF Std 50 Section 5.0.10.
- B. The filter manufacturer shall provide a characteristic turbidity reduction curve based on the above test for the applicable filter model.
- C. The filter system shall produce a maximum effluent turbidity of  $\leq .2$  NTU for a period of no more than 15 seconds during the pre-coat recycle to onstream transition.

#### FILTER CAPACITY

- A. The filter system shall have a capacity of filtering 188,600 gallons at a rate of 270 gallons per minute in the activity area and 480 gallons per minute in the lap pool area for a total flow rate of 750 GPM.
- B. The system shall consist of (1) pressure pre-coat media filter tank(s) with a total effective filter surface area of 519.4 square feet and operate at a maximum rate of 1.60 gallons per minute per square foot of filter area.

#### TANK CONSTRUCTION

- A. The filter tank shall be of welded construction using separate head and body components. The two shall be bolted together and made watertight by using an O-ring seal. The tank shall be passivated to Fed. Spec QQ-P-35D following fabrication.
- B. The filter shell, heads, support legs, pre-coat tank and external brackets shall be fabricated from extra low carbon stainless steel type 304 ELC.

- C. Tank heads (filter head and body) shall be ASME Code type flanged and dished. Filter head shall incorporate internal control baffles for uniform tube nest flow distribution in all filters above 24" in diameter.
- D. Tank connections shall incorporate connections for 6" filter influent 6" effluent, 4" drain; 2" vacuum transfer inlet; and 1-1/2" pressure relief port.
- E. The tank shall be designed for an operating pressure of 50 PSI, with a 4 to 1 safety factor.

#### INTERNAL COMPONENTS

- A. Internally, the filter shall consist of Flex-Tube™ filter elements, tube sheet, holdown plate, stainless steel lift shaft and inlet distributor.
- B. The filter elements shall be flexible tubes that provide support structure for the precoat media filter. The outer wall of each element shall be fabricated of mono-filament polyester braid. Each element shall have an internal stainless-steel core which acts a support structure for the braided filament.
- C. All Flex-Tube™ stainless steel cores shall be fully annealed and passivated to Fed. Spec. QQP-35D prior to fabrication.
- D. All Flex-Tube™ filter elements shall be limited to a maximum length of 38" to ensure uniform precoating and maximum lifespan.
- E. The tube sheet and holdown plate assembly shall be fabricated of stainless steel and provide both support for the tube nest, as well as the tube sheet seal.
- F. The lift shaft shall be fabricated from stainless steel and provide the internal connection between the holdown plate and the external bump mechanism.

#### BUMP MECHANISM

- A. The bump mechanism shall include a pneumatically actuated Airstroke™ actuator mounted externally on the filter tank head. The Airstroke™ actuator is alternately pressurized then depressurized causing the connected filter element assembly to move in a downward then upward fashion. This movement shall provide the means of dislodging the media and accumulated solids.

#### VACUUM TRANSFER SYSTEM

- A. The vacuum transfer system shall consist of a high capacity 500 SCFM regenerative air pump, 1-1/2 HP TEFC Motor, Suction filter canister and associated valves, piping and pickup wand.
- B. The vacuum transfer system shall be permanently installed on the filter assembly using a welded 304 ELC stainless steel bracket.
- C. The vacuum transfer system shall be capable of loading the filter pre-coat media charge at a rate of 25 lbs. per minute minimum.

#### REMOTE CONTROL VALVES

- A. The remote-control valves shall be cast iron body construction with EPDM seat, stainless steel disc, stainless steel shaft and acetal bushing.
- B. Each valve shall be operated by a bi-directional pneumatic rotary actuator mounted to the valve bonnet.
- C. Each valve assembly shall incorporate an electrically actuated pneumatic 4-way solenoid valve with integral flow controls for valve speed adjustments and manual overrides. Located on filter body.
- D. The valves supplied shall be (1) 4" and (1) 6" as shown on the drawings.

#### AUTOMATIC FILTER CONTROLLER

- A. SCOPE - The Filter Controller provide semi-automatic management of the filter system during the On-Stream, Regeneration and Precoat Recycle operations. The infrequently performed Demucking and Recharging procedures are manually attended when needed. Controller shall be Filtrex, Incorporated Model MOD 1 SSC.

While the entire program is normally accomplished without operator intervention, manual control alternatives shall be provided for all of the functions.

- B. PROGRAM - The Controller shall use a keypad programmable 1-10 hour microprocessor timing circuit for establishing the duration of the Filtration or "On-Stream" cycle. This timing circuit, used to initiate regenerations, typically every 6 hours, shall be designed to automatically reset on power interruption.

When the signal to start a regeneration occurs, the Controller automatically:

1. Switches off the Transfer Pump; closes the On-Stream Valve.
2. Initiates and completes the "Bump" cycle (regeneration).
3. Opens the Precoat Recycle Valve; briefly maintains the system in a static condition (to vent air).

4. Switches on the Transfer Pump (to recycle the pre-coat).
5. Opens the On-Stream Valve; closes the Precoat Recycle Valve (to return the filter to service).
6. Resets the circuit for the next cycle.

The average time for completing the program shall be six minutes.

- C. The controller shall feature a 2 x 20 character back lit LCD Display, (10) 3-amp relay outputs, (2) 4-20 Ma current loop inputs, (2) 0-10 VDC Analog inputs and (16) Digital 24 VDC inputs. In addition, the controller shall be capable of sending and receiving text messages (GSM format) to 6 telephone numbers (when connected to an appropriate GSM modem).
- D. DESIGN - The Filter Controller shall utilize a single door, UL rated, steel enclosure. The enclosure conforms to the NEMA standard for Type 12 Industrial Use and is equipped with quick opening latches.

The Controller shall be powered by a UL rated 1 A 24-volt fused output DC power supply. Input power to the Controller shall be overload protected via a cartridge fuse. Construction of the Controller shall be modular, consisting of the door assembly and cabinet assembly. The controller panel is provided with quick-disconnect cables for easy separation and maintenance via a factory exchange program.

- E. SELECTORS - The Power, Control Mode (Automatic-Manual), and Bump selectors shall be surface mounted on the enclosure door. Hand-Off-Automatic operation of the transfer pump starter is accomplished via an auxiliary control station (see Transfer Pump Motor Control) or Variable Speed Drive Interface document.
- F. ANNUNCIATOR - The annunciator panel shall display Controller status. Power, Control Mode (Automatic-Manual), Filter Cycle, and Lo-Air Pressure warning conditions shall be illuminated in the display.
- G. TRANSFER PUMP MOTOR CONTROL - (by others) A remote Hand-Off-Automatic selector controlled magnetic starter with overload protection is required for pump motor control. It shall also incorporate a 100VA 120VAC control circuit transformer, used to power the MOD 1 SSC Controller; and, three N.O. auxiliary contacts for switching. The starter is functionally interlocked with the program at times both the Controller and Starter Automatic Modes are selected. Operation of the starter in the Hand position, de-energizes the MOD 1 SSC Controller. The system may thus be operated using the manual control alternatives provided.
- H. LO-AIR CUTOFF MODULE - The system air supply pressure shall be monitored downstream of the Filter/Regulator/Lubricator. In the event the air-supply pressure falls below minimum operating value, the Controller will shut down the filter and blink

the Lo-Air annunciator. When the air-supply pressure has been restored, the controller will automatically reset and restart filter operation.

The air-supply sensor is factory set to react at approximately 44 psi.

- I. EZ BUMP CIRCUIT\_- The EZ Bump Circuit is a filter maintenance enhancement built into the MOD 1 SSC Controller circuitry. Operator initiated at times of filter maintenance, it automatically cycles the Bump mechanism through 12 to 15 strokes per hour. Effective mixing and contact of the filter cleaning solutions is thus accomplished without operator supervision.
- J. AUXILIARY OUTPUTS – (4) auxiliary outputs shall be provided for the integrated control of accessory equipment. These outputs are switched off for approximately 20 minutes during a typical filter cycle. The off period begins 18 minutes before the end of the On-Stream cycle and continues for 2 minutes after the On-Stream valve reopens for the start of the next filter cycle.

#### AIR COMPRESSOR

- A. The Granger Model 4YW09 Air Compressor shall include: one sixty-gallon tank • 3 horse power electric motor • air pressure gauge • pressure relief valve • belt guard • pressure switch • air filter • automatic tank drain

#### RATE OF FLOW INDICATOR

- A. The Rate of Flow Indicator shall consist of a magnetic type sensor and digital display indicator as shown on the drawings.
- B. The magnetic sensor shall be of PVDF Body and titanium electrodes with a 4-20 ma/.
- C. The installation fitting shall consist of a PVC saddle with wet-tap assembly to allow servicing of the sensor while onstream.
- D. The indicator shall be a 4-digit digital display housed in a NEMA Type 12 enclosure.
- E. Accuracy shall be > 1% of full-scale indication.

#### MANUFACTURER QUALIFICATIONS

- A. Manufacturer shall have a minimum of (50) United States installations and a minimum of (20) installations in continuous operation for a period of not less than (20) years.
- B. Manufacturer shall supply engineer services to the extent of (2) trips (4) days for consultation with project engineers/contractors and instruction of operating personnel at system startup.

#### MANUFACTURER WARRANTY

A. All components supplied by Manufacturer will be warranted as follows:

- a. All components - (1) year unlimited.
- b. Filter: Tank and Head - (15) years non-prorated
- c. Filter Internals (Includes filter elements) (10) years non-prorated
- d. Electrical components - 5 year limited
- e. Pneumatic components and valves - 5 year limited

## **2.9 SANITATION & MAINTENANCE EQUIPMENT**

A. Chemical sanitizer: The chemical sanitizer shall be a calcium hypochlorite tablet system and shall operate in a non-pressurized manner, as manufactured by Axill, LLC.

- 1. The feeder shall be the erosion type; no soaking-type feeders shall be acceptable.
- 2. Tablets shall have a nominal strength of 68% available chlorine (65% minimum) and shall be EPA registered for swimming pool use. The system shall be listed under NSF Standard 50.
- 3. The system shall be supplied as a complete package including chlorinator, balance tank, and booster pump and shall be assembled by PurAqua Products, Model 3140AT, 1 required.

B. Water chemistry controller: Chemtrol PC 2100 Water Chemistry Programmable Controller. The controller shall continuously monitor water chemistry (ORP, PPM, and pH), Langelier Saturation Index, and temperature.

- a. It shall automatically control the chemical feed system, heater, main recirculation pump, and filter backwash (time and/or pressure based).
- b. The controller shall include all the Standard Features offered by Santa Barbara Control Systems.
- c. The optional feature of the remote computer operation to be included.

C. Acid-Rite® pH Adjustment System 2500

### 1.01 General Description .

The system shall be designed to erode *Acid-Rite* tablets, creating an acid solution, and feeding the solution intermittently or continuously as required for pool applications. The system shall be a single pre-assembled, package unit with a welded aluminum frame consisting of an *Acid-Rite* AR 2500 feeder, electrical box, centrifugal pump, and balance tank for ease of installation and operation. The system shall be the Acid-Rite® pH Adjustment System 2500 by Axiall, a Westlake Company. Only *Acid-Rite* Tablets by Axiall shall be used with a red colorant added for safety (to help prevent accidental mixing with other chemicals).

The base proposal requires furnishing equipment as specified herein, though substitutions will be considered. The bidder is cautioned that substitutions must meet the quality and operational requirements of each feature specified in Section 1.02 below.

Any system offered shall use an NSF Standard 50 listed erosion feeder and tablet combination and shall be capable of meeting all requirements of the Health Department having jurisdiction over the installation.

### 1.02 System Features.

- a. Delivery shall be by erosion feed technology for accurate control of acid addition. Soaking type, spray and/or vortex technology systems shall not be acceptable.
- b. The acid feed system shall automatically and continuously feed a limited quantity of acid solution as needed. When the system is not running, no more acid solution than that amount which can be fed in 2 minutes or less shall be left in the tank to prevent dilution. Batch systems preparing excess quantities of solution for delivery over an extended period shall not be acceptable.
- c. A centrifugal pump wired to the system electrical box shall feed freshly mixed acid solution only as required for maximum efficiency. Batch systems requiring the use of a metering pump or pumps to feed pre-prepared standing solution shall not be acceptable.
- d. All piping in the acid feed system shall be Schedule 40 PVC. Systems with flexible tubing shall not be acceptable.

### 1.03 System Components.

- a. Acid Feeder. *Acid-Rite* feeders by Axiall are designed exclusively for *Acid-Rite* tablets by Axiall. Tablets are placed on a sieve plate inside the feeder; as water flows across the sieve plate, the tablets erode at a rate proportional to the flow rate.

- b. Inlet Water Supply Connection. 1" Socket (water supply of 10 GPM required)
- c. Solution Tank. Made of polyethylene. Capacity: 22 gallons
- d. Primary Solution Tank Level Control. Made from Schedule 80 PVC and 316L stainless steel, this 1" float valve meters the flow through the feed system. The float valve opens or closes to maintain the pump rate as it is manually throttled.
- e. Solution Delivery Pump. Delivers acid solution to the aquatic system return line. A single-stage centrifugal pump is provided for systems with pressures up to 20 PSIG.
- f. Solution Injection Pump Air Bleed. Used to prime the pump at start-up, or at any time, if necessary.
- g. Flow Meter. A flow meter, measuring the flow of the water-dissolving stream through the feed system.
- h. Primary Backflow Prevention. A PVC check valve prevents reverse flow of water into the system.
- i. Discharge Flow Control Valve (manual). PVC gate valve allows operator to adjust flow of solution to the pool system.
- k. Outlet Connection. 1" Socket
- l. Nema 4X *Electrical Enclosure*.
- m. Aluminum Frame, Type 6061-T.

#### 1.04 Optional Equipment.

- a. Larger Pump. On systems requiring system discharge pressures greater than 20 PSIG.

#### 1.05 Electrical Requirements.

Two electrical circuits are required for operation: (1) 110v 20-amp power, and (1) 110v control circuit from a pool controller.

#### 1.06 Warranty.

The manufacturer shall guarantee in writing that this unit, if operated in accordance with written instructions given and accepted by the Owner, will perform in complete accord with the specifications. All components will be



warranted against manufacturers' defects for twelve (12) months from its original installation date.

D. Ultraviolet de-chlorination and disinfection system:

1. It is the intent of these specifications that the swimming pool water be routinely monitored and treated by UV sterilization in the range of 220nm to 400nm to kill bacteria, viruses, molds and their spores and to continuously remove chloramines. The concentration of free chlorine residual shall meet the requirements of the Health Department authority having jurisdiction over the swimming pool.
2. The bidder is cautioned that any substitution must meet the quality and operational requirements of these specifications. Any proposed UV system must have a UL listing on the complete system and be listed under NSF Standard 50. Any substitute system shall have Health Department approval for this project prior to being offered.
3. Equipment General Description: The UV System shall be a complete unit with all necessary controls. The control panel and UV chamber shall be capable of being installed up to 200 feet apart. The system shall be delivered assembled, and controls packaged for ease of installation at the job site and shall include:
  - a. the UV chamber with flow and output safety control;
  - b. a UV medium pressure arc tube modified to emit UV light from 220nm to 400nm;
  - c. an automatic, adjustable, electric motor-driven quartz sleeve cleaning system;
  - d. operational and power controls.
  - e. the ability to dose controls the UV delivered to the pool water.
  - f. The system shall be sized for a swimming pool recirculation rate of 750 GPM and a turnover rate of 6 hours, model number UV Swim U-200-6E, 1 required.
4. UV Chamber: The UV chamber shall be pressure rated for continuous operation at 150psi tested to 225psi and constructed of type 316L stainless steel. It shall be designed for an internal pressure drop not to exceed 2psi at maximum flow.
  - a. The chamber shall incorporate:
    - 1) a temperature sensor to shut off the UV arc tube when there is inadequate flow in the chamber;
    - 2) an UV intensity monitor which alarms when the UV arc tube output drops below the dosing level required for proper operation. The monitor shall be of the wet probe type wavelength specific to 240nm - 280nm with a 4-20mA output. It shall display actual lamp intensity (mW/cm<sup>2</sup>) on the control cabinet door display. (NOTE: *Relative* type UV

monitors shall not be acceptable.) Dry probe monitors shall not be acceptable, as this type cannot be wiped during the automatic wiping action. Direct line of site monitors (ie those types that have the sensor directly exposed to UV light) shall not be permitted. The monitor shall use offset filters to extend monitor life and to ensure only a limited band of wavelengths is measured.

- 3) a stainless-steel terminal cover fastened to the chamber end plate, to which is affixed the electrical conduit, to protect the lamps and electrical leads. NOTE: plastic terminal covers/caps shall not be permitted.)
  - 4) a design for laminar flow to provide maximum efficiency in the transfer of UV to the water. (NOTE: baffle plates or similar devices create turbulent flow and dead spots which reduce the efficiency of UV transfer into the water and are therefore not permitted.)
  - 5) Limit switches shall be located to position the wiper, and to prevent the wiper parking over the active arc tube. The switches shall be magnetic type and shall include visual indication of the wiper position. The wiper mechanism shall be failed safe and shall shut the system down in the event of failure, as described below.
  - 6) The chamber shall contain a quartz sleeve, which is sealed at both ends by a UV shrouded O ring. The quartz must be annealed for durability and against breakage. Systems that contain a quartz thimble shall not be permitted. The thimble is inherently buoyant and poses a safety risk to operators during annual maintenance.
  - 7) The wetter surfaces shall be chemically passivated and all welds ground to eliminate any potential corrosion mechanisms. Crevices (as found behind a quartz thimble) shall not be permitted under any circumstance.
5. Automatic Wiper System: For periodic cleaning of the quartz sleeves and the UV monitor probe, the chamber shall be fitted with an automatic cleaning mechanism.
- a. It shall consist of a single SS yoke with Teflon bosses and replaceable molded viton wiper rings which travel the full length of the quartz sleeve twice per cleaning cycle.
  - b. The frequency of the wiper cycle shall be adjustable from 15 to 720 minutes and set for job conditions.

- c. The mechanism shall be driven by a two-pole bi-directional electric motor and acme lead screw.
  - d. Reed type limit switches shall control the length of travel.
  - e. The wiper mechanism wiper rings in the "parked" position shall not be over the lamp, blocking the transfer of UV light, or creating a "hot" spot on the arc tube.
6. Ultra Violet Lamp: The UV lamp shall be a high intensity, *medium-pressure* UV arc tube modified to emit a continuous UV spectrum from 220nm to 400nm into the water.
- a. Full output must be available from 0 to 200 degrees.
  - b. The lamp shall be UL approved with one electrical lead at each end.
  - c. Lamps with metal frames shall not be permitted.
  - d. Each lamp shall be individually numbered, and the manufacturing process shall permit full audit and traceability of assembly. In addition to an individual serial number, the part number shall be displayed on the lamp.
7. UV System Control: The system control cabinet shall be epoxy coated steel, NEMA 12, fan cooled with louvers and replaceable filters.
- a. The control system shall be de-energized when the cabinet door(s) are open.
  - b. All wiring shall be harnessed in DIN channels. The power supply to the UV arc tubes shall be from a constant wattage transformer.
  - c. The entire system shall be UL listed and there shall be a decal clearly showing this listing displayed in the cabinet.
  - d. The control cabinet shall display via a back lit liquid-plasma display the following information:
    - 1) Power on
    - 2) UV intensity (% and mW/cm<sup>2</sup>)
    - 3) UV dose (mJ/cm<sup>2</sup>)
    - 4) Flow rate in GPM
    - 5) Arc tube ready indicator
    - 6) Any alarm condition
    - 7) Wiper status and alarm
    - 8) Consumable spare parts list with part numbers
    - 9) Local/remote operation switch, door mounted
    - 10) Data logging of UV dose, lamp hours, lamp intensity for regulatory audit.

- e. The control panel shall contain an Earth Leakage detector, which shall provide fail-safe protection for bathers and those working on the equipment within the pool environment.
- f. The control panel shall be UL LISTED, and in addition shall conform to EN 50081 and EN 61000.
  - 1) The panel and all UV components shall be manufactured to ISO 9001-2000.

## 2.10 MAINTENANCE EQUIPMENT:

- a. Vacuum Set: Paddock Vacuum Set, Model 3163, or equal (1) required.
- b. Portable Vacuum Pump: Paddock Portable Vacuum Pump, Model 3180-E, or equal (1) required.
- c. Pool Brush and Holder: Paddock Pool Brush and Holder, Model 3330, or equal (1) required.
- d. Skimmer: Paddock Leaf Skimmer, Model 3348, or equal (1) required.
- e. Telescoping Handle: Paddock Telescopic Handle, Model 3367, or equal (1) required.

## 2.11 DECK EQUIPMENT

- A. Grab rails: The stainless steel "Pretzel Bend" grab rails shall be fabricated from 1.90" OD X .120" wall, Type 304 stainless steel tubing polished to a high luster finish and supplied with anchors and escutcheons.
  - 1. Top of rails to be 32" above deck.
  - 2. Exposed surfaces shall be polished to a 320grit finish. Paddock No. 4497, Paddock No. 4801, or equal deck anchors with Paddock No. 4837, or equal escutcheons shall be supplied.
- B. Recessed steps: The recessed steps shall be fabricated from 14- gauge, Type 304 stainless steel. All exposed welds shall be ground and all exposed surfaces shall be polished to a 320-grit finish.
  - 1. A non-skid tread shall be installed in the foot contact area on the lower surface.
  - 2. Paddock No. 4501-3, or equal.
- C. Stainless steel handrails: Stair handrails shall be of stainless-steel construction and furnished with necessary anchors.

1. Handrails shall have an outside diameter of 1.90" and a wall thickness of .120".
2. Handrails shall be constructed of Type 304 stainless steel polished to a 320grit finish.
3. Handrails shall be Paddock No. 4718, or equal.

D. Portable Lift

This specification identifies a standard of quality for a portable swimming pool lift as provided by the Spectrum Aquatics ADA compliant model, Portable Motion Trek BP 350 Deluxe lift, or equal.

The portable lift shall consist of the following components:

Anchor Superstructure

Constructed from 304L stainless steel, 2" x 2" x .120" square tubing, 3/8" 304L stainless steel plate, 12-gauge 304L stainless steel plate. Precision joined and welded.

Wheel Assembly

There shall be two stainless steel ball bearing Tente locking casters and two Tente stainless steel fixed casters.

Stabilizer System

There shall be two 1 1/2" x 1 1/2" x .120" 304 stainless steel stabilizer arms with a non-marring rubber padded foot. Each unit shall include a stabilizer arm anchor kit allowing the unit to comply with ADA permanent mounting requirement.

Weights

Ballast shall consist of proprietary compound mental pellets sealed inside watertight weigh compartment.

Handle

Constructed of 1" x .120" 304 stainless steel tubing with TIG welded 304 stainless steel stops.

Cover

Anchor cover constructed of precision injection molded UV protected PVC.

Lift

The lift shall be designed for use on aboveground or in-ground swimming pools and/or spas and shall accommodate installation at a range of 6" - 28" from the pool wall to centerline of the lift mast (depending on water draft). The lift shall be user-operated, battery powered - requiring no more than a 24-VCD, rechargeable, capable of transferring (rotating) payload over a wall height of 10" (without footrest) and shall be rated for a 300 lb. load capacity. The lift shall be

securely connected to the anchor unit using 3/8" stainless steel hardware.

#### Linear Actuator

The battery-powered ram shall bolt to the lift superstructure and shall have a Maximum in push thrust of 7000 N. The driver shall be a permanent magnet motor, 24-VDC. The unit shall have built in mechanical limit switches and shall operate at 60-bd noise level or less. The actuator shall be powered in push (extend) direction only.

#### Rotational Actuator

The 24-VDC rotational motor direct drive system allows for continuous mast rotation in either direction (360°).

#### Operating Controls and Power Source

Wired handset shall be operable from pool or deck and shall be designed for ease of use. Wired handset shall be of molded plastic and be sealed to prevent water intrusion. Control buttons for up, down, right, and left directional control shall be provided.

The power source is to be a 24-VDC rechargeable battery. A battery charger, wall current to charge, with mounting bracket and electrical power cord, for remote installation, shall be provided with the lift.

#### Lift Superstructure

The boom arm shall be constructed of 1.90" O.D. x 1.50" I.D., 304L stainless steel tube. The mast arm shall be constructed of 2.375" O.D. x 2.067" I.D. 304L stainless steel tube.

#### Seat Assembly

The seat shall be constructed of a 304L stainless steel frame attached to a polymer seat assembly with removable armrests and an adjustable padded headrest. This assembly shall be attached to the lift superstructure by a 1.9" x 0.145" 304L stainless steel tube.

#### Armrest

Two-fold down armrests constructed of 1.00" x .083" 304L stainless steel shall be included with the lift. Each armrest shall have a 6.00" vinyl handle.

#### Headrest

A foam headrest shall be included with each lift. Each headrest includes 304L stainless steel mounting brackets and hardware.

#### Footrest

A vertically self-adjusting flip up footrest is provided.

#### Warranty

Standard manufacturer's terms and conditions

## 2.12 SAFETY EQUIPMENT

A. Portable Lifeguard Chair:

The life guard chair shall provide maximum visibility across a wide area and extra space for uninterrupted lifeguard station changes.

1. Dimensions shall be 48" x 85" x 69" with a welded Type 316 stainless steel frame and molded fiberglass seat 6'-1 1/2" above the pool deck.
2. The rigid 60" wide slip-resistant PVC "I" beam platform shall allow room for more than one lifeguard and shall be reached via two side-mounted 15-degree sloping ladders, each with two 19" stainless steel treads.
3. Provide curved handrails that permit safe access and descent and provide security for lifeguards standing on the platform.
4. A fixed cross brace shall be placed directly behind the seat for added protection.
5. Rubber bumpers shall protect the deck when the chair is in place.
6. Wheels shall be secured to the frame to allow for easy positioning at various poolside locations.
7. Provide an umbrella socket on one side behind the seat integral to the chair frame.
8. Paddock Catalog No. 4707-6, or equal.

B. Ring buoy:

1. The 24" Life Rescue Tubes, with 55 feet of 1/4" Throw Rope
  - a. Paddock Model 350, or equal.

C. Life hook:

1. The life hook with one-piece 16" aluminum handle shall be supplied,
  - a. Paddock Model 4723, or equal

## 2.14 MISCELLANEOUS EQUIPMENT

A. Flow Sensor: 6" Signet model 2551 W/9000 Transmitter equal.

B. Spine Board:

1. Lifetime Warranty
2. No seams
3. Extra Large handholds
4. Pins molded into board
5. Radiolucent
6. Latex free
7. BaXstrap spineboard, by Laerdal, or equal, [www.laerdal.com](http://www.laerdal.com)

C. Test kit: Taylor Commercial model K-2006C, or equal.

D. 80 feet of 3/4" Polyethylene Rope, Paddock Model No. 4747, or equal

- E. 3/4" Rope Hook Terminals, Paddock Model No. 4774, or equal. 2 required.
- F. Small recessed stainless-steel lifeline anchor, Paddock Model No. 9026-S, or equal. 2 required.
- G. 5" x 9" Lifeline Floats, Paddock Model No. 4778, or equal. 14 required
- D. Model 735 Spine Board with straps & head immobilizer

### **3 PART 3 EXECUTION**

#### **3.1 GENERAL REQUIREMENTS**

- A. All systems and subsystems shall be installed in accordance with that systems manufacturer's recommendations and instructions.
  - 1. In the event of a discrepancy between these specifications and the manufacturer's recommendations, price the most stringent approach for bidding but call the issue to the attention of the engineer in the form of a Request for Information and wait for an answer.
  - 2. Provide all accessories and supplemental equipment necessary to provide a complete working installation of all materials, equipment and systems specified or shown on drawings, as part of the base bid.
- B. Utilize manufacturer's certified installers or have the work inspected by a manufacturer's technical representative, as called for in sub-sections of this specification.
- C. Existing Conditions: Each contractor is responsible for verifying that existing conditions meet the requirements for the installation of their materials or systems.
  - 1. Start of work signifies that the Contractor accepts existing conditions, substrates and working conditions and will be fully responsible for warranting their own work as required herein.
  - 2. Do not begin work if existing conditions can not provide durable base for an acceptable permanent installation. Inform construction manager immediately of any defects requiring correction, in writing, and wait for remedy or instructions on how to proceed, before beginning work.
- D. Ground all materials, equipment and systems as required by local codes and the most recent version of the National Electric Code.



### **3.2 SITE CLEARING:**

- A. Prior to the start of pool construction, the site shall have been cleared by the Site Contractor.

### **3.3 LAYOUT OF WORK:**

- A. Before any excavation or construction shall be commenced the Contractor, under the supervision of the Engineer, shall place batter boards permanently locating the perimeter of all structures. The site shall be excavated to an even grade by the Pool Contractor and templates installed demoting the exterior line of the pool shell.

### **3.4 DIMENSION AND DESIGNS:**

- A. Structural designs shown on the pool drawings shall govern.
  - 1. Any concrete surfaces against which new gunite is to be placed shall be thoroughly cleaned and slushed with neat cement.
  - 2. All horizontal or vertical steel shall pass through construction joints in such a manner that the full strength of the reinforcing will be developed.
- B. Tolerances:
  - 1. Depth - 0 to 1/4";
  - 2. Vertical; walls - +/- 1/8" in 10 feet.

### **3.5 EXCAVATION AND GRADING:**

- A. The machine excavation and hand trim by the Contractor shall be carried on as one operation to aid in eliminating over excavation.
  - 1. To obtain an even wall line, radius templates shall be used.
  - 2. The floor area shall be fine graded by placing screeds at intervals.
- B. Any minor voids which may occur due to over-excavation, or from boulders removed, shall be filled with flowable fill; the design of which shall be provided by the structural engineer.
  - 1. Any major deformations in the excavation caused by the removal of large boulders, collapse of earth of inadequate bearing capacity or cave-ins, caused by subsurface water conditions, shall be reviewed with the structural engineer and shall be remedied utilizing recommendations from the structural engineer.

- a. Stop work immediately; inform the construction manager of the conditions encountered and wait for instructions before proceeding.
- C. Before completion of the pool excavation, the beam at the top of the pool wall, which is a monolithic portion of the pool shell, shall be formed to the dimensions as shown on the drawings. A header shall be installed completely around the pool, the inside face of which shall be properly anchored in place. A taut cutting wire shall be anchored to ensure the dimensional integrity of the gunite structure. Cutting wires shall be placed at all intersections of pool radius and vertical walls and on floor elevation pins to ensure dimensional accuracy of the structure.
- D. Pool pipe excavation and backfill: Special backfill and bedding materials.
  - 1. Existing subsoil materials shall not be used for pipe bedding.
  - 2. All piping shall be bedded with a minimum of 6" clear stone material and a minimum of 2'-0" clear stone material top cover. The balance may be existing site material, provided no organic material, clay or topsoil is used.

### **3.6 PIPING INSTALLATION**

- 1. Piping must be laid on grade,
  - 2. so it will drain completely by gravity. In all instances where gravity drainage is not provided, the contractor shall install drain valves so that all lines can be drained completely. Shop drawings will be required on any such installation.
- B. Cut all pipe with mechanical cutter without damage to the pipe.
- C. Placing and laying: Inspect pipe for defects before installation. Clean the interior of the pipe thoroughly of foreign matter and keep clean during laying operation. Pipe shall not be laid in water or when trench conditions are unstable. Water shall be kept out of the trench until the pipe is installed. When work is not in progress, open ends of the pipe and fittings shall be securely closed so that no trench water, earth, or other substance will enter the pipes or fittings.
- D. Threaded joints: After cutting and before threading, the pipe shall be reamed and shall have burrs removed.
  - 1. Screw joints shall be made with graphite or inert filler and oil or with an approved graphite compound applied to male threads only.
  - 2. Threads shall be full-cut and not more than 3 threads on the pipe remained exposed.
  - 3. Use Teflon ii tape on the male threads of all threaded pipe joints. Caulking of threaded joints to stop or prevent leaks will not be permitted. Unions shall be provided where required for disconnection of exposed piping.

4. Unions will be permitted only where access is provided.
- E. Solvent welded joints shall be made in accordance with the manufacturer's printed instructions and the following minimum standards:
1. All fittings shall fit easily on the pipe before applying cement. The outer surface area of pipe and inner wall of fitting shall be dry and clean. Cleaner is to be applied to the outer surface of the pipe and to the inner surface of the fitting. Cement is to be applied to the outer surface of the pipe, or on the male section of fittings only. When the outside surface area of the pipe is satisfactorily covered with cement allow ten (10) seconds open time to lapse before inserting the pipe end into fittings. After full insertion of pipe into fitting, turn fitting about the pipe end approximately 1/8 to 1/4 of a turn. Wipe off excess cement at the joint in a neat cove bead. Follow manufacturer's instructions on solvents.
  2. All joints shall remain completely undisturbed for a minimum of ten (10) minutes from the time of jointing the pipe and fitting. If necessary to apply pressure to a newly made joint, limit to 10% of rated pipe pressure, during the first 24 hours after the joint has been made.
  3. Full working pressure shall not be applied until the joints have set for a period of 24 hours.
  4. Make provisions for expansion and contraction by way of swing joints or snaking.
  5. Protect plastic pipe from exposure to aromatic hydro-carbons, halogenated hydro-carbons, and most of esters and ketones that attack the material. Protect all pipe from mechanical damage and long exposure to sunlight during storage.
  6. PVC welding is not allowed without prior approval of the Engineer.
- F. No installation shall be made that will provide a cross connection or inter-connection between distribution supply for drinking purposes and the swimming pool that will permit a backflow of water into the potable water supply. Pipe openings shall be closed with caps or plugs during installation. Equipment and pool fittings shall be tightly covered and protected against dirt, water and chemical or mechanical injury. At the completion of work the fittings, materials and equipment shall be thoroughly clean and adjusted for proper operation.

### **3.7 PIPE IDENTIFICATION**

- A. Provide identification on all piping located in the mechanical equipment, chlorine, acid rooms, heater courts, etc.
- B. Identify the contents and direction of flow.

- C. Mark at least once on each line and at 5-foot intervals minimum. Consult Health Department Code for minimum marking requirements.
- D. Color code per Health Department requirements. If code does not identify color coding requirement consult the Engineer.

### **3.8 IMBEDDED ACCESSORIES:**

- A. The Contractor shall place, before commencing the gunite work, all special pool fittings and receptacles that are to be embedded in the gunite and shall be responsible for their positioning in accordance with the drawings.

### **3.9 INSTALLATION OF STAINLESS-STEEL PERIMETER RECIRCULATING SYSTEM**

- A. General Requirements:

- 1. Welding: All installation is to be performed by a welder with at least five years experience in field welding stainless steel recirculation systems that incorporate an automatic surge recovery channel. The Contractor shall submit the installer's experience in writing to the Architect for approval prior to ordering the recirculation system. All work is to be performed in accordance with the manufacturer's technical bulletins. Should the requirements of these bulletins contradict this or any other section of the specifications, the procedures called for in the bulletin shall govern. All grout and caulking between the gutter system and any concrete or grout surfaces required in the installation of the system shall be performed by the Contractor installing the pool structure.

- B. Engineering Services: The Contractor shall supply the services of a competent and experienced field engineer to test and inspect the completed installation, place it in operation, and give operating instructions relative to its care and use.
- C. Installation: All work covered under this section shall be performed by an authorized licensee of the manufacturer or by the manufacturer acting as a subcontractor to the Contractor.
- D. Anchorage: The entire perimeter overflow system section shall be anchored to the pool structure with commercial quality "U" bolts made from reinforcing steel and fastened to the pool reinforcing steel, thus forming a continuous perimeter section as shown on the plans. These anchors shall be placed at the corners and on a maximum of 4-foot centers around the pool.

### **3.10 SANITATION AND MAINTENANCE SYSTEM INSTALLATION**

- A. A qualified factory trained representative of the manufacturer shall install this equipment, put it into operation and instruct the owner's representative in the operation and maintenance of all such equipment.

### **3.11 GUNITE INSTALLATION**

- A. Gunite shall be mixed at one-part cement to four parts gunite sand by volume mixed dry for a period of not less than one (1) minute after materials have been added.
- B. Hydration shall occur at the nozzle of the cement gun using just enough water so that no slump shall occur in the gunite.
- C. The cement gun shall be equipped with an air pressure gauge and the air pressure at the end of the gun shall not be less than forty-five (45) pounds nor more than seventy (70) pounds when the hose is two hundred (200) feet in length or less.
- D. Air pressure shall increase five (5) pounds for each additional fifty (50) feet of material hose used but not more than three hundred (300) feet of material hose shall be used unless previously approved in writing by the Architect.
- E. Water pressure at the nozzle shall be maintained at not less than fifteen (15) pounds greater than the air pressure at the gun.
- F. The structural gunite shall be applied against original undisturbed soil, thoroughly compacted earth or suitable forms that will not yield during applications of the gunite.
- G. Surfaces upon which the gunite is to be applied shall be shot at a right angle to the surface, starting at the bottom and continuing upward.
  - 1. It will be built up in layers of thicknesses that will not slump, allowing enough time between the placing of layers for initial set to take place.
  - 2. All loose fine aggregate or rebound shall be removed from the surface being gunited before placing succeeding layers and, whenever possible, the first layer shall entirely cover the reinforcing steel to secure it in its proper position.

### **3.12 POOL STEPS:**

- A. Pool steps, ladders and/or recessed stairwells shall be incorporated into the pool as shown on the drawings.

### **3.13 INSTALLATION OF DECK EQUIPMENT**

- A. Furnish and install all custom cables, connectors, scoreboard mounting brackets, and fasteners.
- B. Furnish and install equipment in accordance with the manufacturer's drawings and instructions.

C. Job conditions:

1. Confirm that all embedded items are compatible with the installation of their respective systems.
2. Manufacturers shall review the construction documents and shall notify the Engineer 10 days prior to the bid date of conflicts or additions to the work of other subcontractors for the proper installation of their system.

**END OF SECTION**