



**REND LAKE CONSERVANCY DISTRICT**  
**PROJECT MANUAL**  
for  
**INFRASTRUCTURE RELIABILITY PROGRAM**  
**18” WATERMAIN**

**Project Number: 19-02**

**DATE: October 09, 2024**

**PROJECT MANUAL PREPARED BY**

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

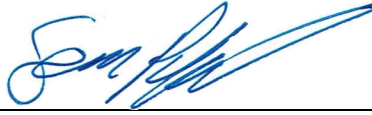
Design Firm: \_\_\_\_\_

Certification Number: \_\_\_\_\_

**DESIGN ENGINEERS'S SEAL**

Date: October 9<sup>th</sup>, 2024

Engineer: \_\_\_\_\_



Engineer's Printed Name: Sean Pickford, P.E.

Seals Expire 11/30/2025

**DISTRICT ENGINEERS'S RECOMMENDATION TO BID:**

Date: October 9<sup>th</sup>, 2024

District Engineer: \_\_\_\_\_



Engineer's Printed Name: Sean Pickford, P.E.

**GENERAL MANAGER'S APPROVAL TO BID:**

Date: October 9<sup>th</sup>, 2024

General Manager: \_\_\_\_\_



General Manager's Printed Name: Gary Willams

The Rend Lake Conservancy District  
11231 Marcum Branch Road  
Benton, IL 62812  
(618) 439-4321

PROJECT MANUAL FOR:  
Infrastructure Reliability Program – 18” Watermain

PROJECT NUMBER  
19-02

DATE:  
October 08, 2024

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PROJECT MANUAL - Infrastructure Reliability Program – 18” Watermain  
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END 000115

**THE REND LAKE CONSERVANCY DISTRICT  
BENTON, IL  
INFRASTRUCTURE RELIABILITY PROGRAM - 18" WATERMAIN**

ADVERTISEMENT FOR BIDS

Sealed Bids for the construction of the **INFRASTRUCTURE RELIABILITY PROGRAM - 18" WATERMAIN, RLCD Project Number 19-02** will be received, by **The Rend Lake Conservancy District**, at the office of the **RLCD Administration Office 11231 Marcum Branch Road, Benton, IL 62812**, until **2:00pm** local time on **November 21<sup>st</sup>, 2024**, at which time the Bids received will be **publicly** opened and read. The Project consists of the **construction approximately 18,055 linear feet of 18" watermain, valves, fittings, and all related appurtenances generally located along Taft Road from Game Farm Road to the intersection of Woodland Drive and the Union Pacific Railroad on the south side of Mt. Vernon in Jefferson County Illinois.**

Bids will be received for a single prime Contract. Bids shall be on a lump sum and unit price basis, with additive alternate bid items as indicated in the Bid Form.

The Issuing Office for the Bidding Documents is: **Sean Pickford, P.E. District Engineer at The Rend Lake Conservancy District, 11231 Marcum Branch Rd, Benton IL 62812, 618-439-4321, [spickford@rendlake.org](mailto:spickford@rendlake.org)**. Prospective Bidders may examine the Bidding Documents at the Issuing Office on Mondays through Fridays between the hours of **8:00am thru 4:00pm**, and may obtain copies of the Bidding Documents from the Issuing Office as described below.

Bidding Documents also may be examined at **Southern Illinois Builders Association, 1468 North Green Mount Road, O'Fallon, IL, 62269 or 1519 East Deyoung Steet, Suite B Marion, IL 62959**; online at **rendlake.org**.

Bidding Documents may be obtained in a pdf format by emailing [spickford@rendlake.org](mailto:spickford@rendlake.org). Paper copies can be obtained from the Issuing Office during the hours indicated above for a nonrefundable fee of \$100.00 dollars. The bidder must register issuing office to considered a valid bidder. The date that the Bidding Documents are transmitted by the Issuing Office will be considered the prospective Bidder's date of receipt of the Bidding Documents. Partial sets of Bidding Documents will not be available from the Issuing Office. Neither Owner nor Engineer will be responsible for full or partial sets of Bidding Documents, including Addenda if any, obtained from sources other than the Issuing Office.

A pre-bid conference will be held at **2:00pm** local time on **November 14<sup>th</sup>, 2024** at the **11231 Marcum Branch Road, Benton, IL 62812**. Attendance at the pre-bid conference is highly encouraged but is not mandatory.

Bid security shall be furnished in accordance with the Instructions to Bidders.

Bidders shall submit proof of qualifications to perform the Work as described in the Instructions to Bidders.

Owner: **The Rend Lake Conservancy District**

By: **Sean Pickford, P.E.**

Title: **District Engineer**

Date: **October 10, 2024**

END OF ADVERTISEMENT FOR BIDS

1. BID PROCEDURE

1.1 BID SUBMISSION

- A. Bids must be submitted in a sealed envelope marked as follows:
  - 1. RLCD 19-02: Infrastructure Reliability Program – 18” Watermain, Bid Opening
- B. Bids are to be submitted on the provided bid form to:
  - 1. Rend Lake Conservancy District Administrative Office  
Attention: Sean Pickford, P.E.  
11231 Marcum Branch Road  
Benton, Illinois 62812

2. BID AWARD

- 2.1 The bid will be awarded to the lowest, responsive, responsible bidder. The Rend Lake Conservancy District reserves the right to reject any or all bids, to waive any informalities in the bid procedure, and to accept the bid considered to be in the best interest of the District.

3. BID BOND

- 3.1 See Section 006110
- 3.2 A Bid Bond or Cashier’s Check in an amount of not less than 5 percent of the bid price is required to be submitted with the bid. Bid Surety for the successful bidder will be returned after execution of the Contract. The Bid Sureties for the remaining bidders will be returned after the bid award is announced.

4. CONTRACT BOND

- 4.1 A Contract Bond is required. Blank forms will be provided by the District. The Contract and Bonds are to be completed and returned to the Rend Lake Conservancy District by the successful bidder within 15 days of the bid award and prior to the start of any work activities.

5. INSURANCE CERTIFICATE

- 5.1 See the Supplementary Conditions as provided in the Bid Documents

6. CONTRACT LENGTH AND ANTICIPATED SCHEDULE

- 6.1 The bid award is expected to be made **November 26<sup>th</sup>, 2024**. **PLEASE NOTE THAT DISTRICT IS STILL SECURING PERMITS** and the securing of said permits will affect the start of the project. After the permits have been secured, a Notice to Proceed will be issued after receipt of an executed Contract, Contract bonds, and insurance certificate.
- 6.2 The project shall be substantially complete within **365 calendar days** from the date of the issued Notice to Proceed. Substantial completion shall be defined as the water main and all appurtenances installed and tested and all IEPA operating permit standards met and documented.

Liquidated damages in the amount of \$1,000 per calendar day will be assessed for failure to achieve substantial completion by the specified date, the District will obtain the Construction Permit.

- 6.3 The project shall be 100 percent complete including cleanup within **395** calendar days from the date of the issued Notice to Proceed. However, if approved by the Engineer final grading and seeding may be completed at a later date. Liquidated damages in the amount of \$1,000 per calendar day will be assessed for failure to complete the project by the specified date.

## 7. PAYMENT AND RETAINAGE

- 7.1 Payment will be made on a monthly basis. A 10 percent retainage will be withheld until final acceptance of the work by the District. When work is substantially complete the retained amount may be reduced at the Owner's discretion. Payments for stored materials will be allowed. Change orders must be signed by Rend Lake Conservancy District's General Manager prior to performing work. Final payment will be made once 75 percent grass growth is achieved.

## 8. PREVAILING WAGE RATES

- 8.1 This Contract calls for the construction of a "public work," within the meaning of the Illinois Prevailing Wage Act, 820 ILCS 130/.01 et seq. ("the Act"), the Act requires Contractors and Subcontractors to pay laborers, workers and mechanics performing services on public works projects no less than the "prevailing rate of wages" (hourly cash wages plus fringe benefits) in the county where the work is performed. For information regarding current prevailing wage rates, please refer to the Illinois Department of Labor's website at:

A. <http://www.illinois.gov/idol/Laws-Rules/CONMED/Pages/Rates.aspx>

- 8.2 All Contractors and Subcontractors must comply with all requirements of the Act, including but not limited to, all wage, notice and record keeping duties.

## 9. QUALIFICATIONS AND REFERENCES

- 9.1 All bidders are required to submit 3 references with their bid for projects of similar, or greater, size and scope.
- 9.2 Bidders that have been disqualified by the District and placed on the District's Disqualified Bidders List will not be allowed to bid. It is the Bidder's responsibility to determine placement on the list before bid is prepared and submitted.

## 10. TAXES

- 10.1 The materials included in this bid are exempt from Illinois State Sales Tax. The District will supply a copy of the Tax Exemption Letter if requested.

## 11. QUESTIONS

- 11.1 Bidders may contact the District Engineer, Sean Pickford, at (618)439-4321 with questions about the bid. Only those questions addressed in a written addendum to all bidders shall be considered to modify these bid specifications.

END 002113



1. STANDARD DOCUMENTS FOR CONSTRUCTION

1.1 REFERENCED STANDARD DOCUMENTS

- A. The following documents are to be included as part of the Standard Documents for Construction.
1. Illinois Department of Transportation Standard Specifications for Road and Bridge Construction
    - a. Latest edition at the time the Contract Documents were issued for Bid
    - b. Only technical portions of said standards that referenced by the Contract Documents or as required by required permits.
  2. Illinois Standard Specifications for Water Sewer Construction
    - a. Latest edition at the time the Contract Documents were issued for Bid
    - b. Only technical portions of said standards that referenced by the Contract Documents or as required by required permits.

1.2 HIERARCHY AND CONFLICT

- A. In the case of conflict, the provided Drawings and Contract Documents are to be held over any Standard Documents for Construction referenced.

END 002218

## BID FORM

TO THE OWNER, REND LAKE CONSERVANCY DISTRICT

1. Bid of \_\_\_\_\_  
(Name and Address of Bidder)  
for the WORK, designated in Paragraph 2 below.
2. The Plans for the proposed WORK are those prepared by Rend Lake Conservancy District in which Plans are designated as **RLCD 19-02 Infrastructure Reliability Program – 18” Watermain** which covers the WORK generally described by **construction approximately 18,715 linear feet of 18” watermain, valves, fittings, and all related appurtenances generally located along Taft Road from Game Farm Road to the intersection of Woodland Drive and the Union Pacific Railroad on the south side of Mt. Vernon in Jefferson County Illinois.**
3. In submitting this Bid, the undersigned declares that the only persons or parties interested in the Bid as principals are those named herein, and that the Bid is made without collusion with any other person, firm or corporation.
4. The undersigned further declares that he/she has carefully examined the Bid Documents, form of CONTRACT and the Contract Bond; and that he/she has inspected in detail the site of the proposed WORK; and that he/she has familiarized himself/herself with all of the local conditions affecting the CONTRACT and the detailed requirements of construction, and the understands that in making this Bid he/she waives all right to plead any misunderstanding regarding the same.
5. The undersigned further understands and agrees that if this Bid is accepted, he/she is to furnish and provide all necessary machinery, tools, apparatus, and other means of construction, and to do all of the WORK, and to furnish all of the materials specified in the CONTRACT, except such materials as are to be furnished by the OWNER, in the manner and at the time therein prescribed, and in accordance with the requirements therein set forth.
6. The undersigned declares that he/she understands that the quantities mentioned are approximate only and that they are subject to increase or decrease; that he/she will take in full payment therefore the amount and the summation of the actual quantities, as finally determined, multiplied by the unit prices shown in the schedule of prices contained herein.
7. The undersigned further agrees that the unit prices submitted herewith are for the purpose of obtaining a gross sum, and for use in computing the value of extras and deductions; that if there is a discrepancy between the gross sum bid and that resulting from the summation of the quantities multiplied by their respective unit prices the latter shall apply.
8. The undersigned further agrees that if the OWNER declares to extend or shorten the WORK, or otherwise alter it by extras or deductions, including the elimination of any one or more of the

items, as provided in the Specification, he/she will perform the WORK as altered, increased or decreased.

9. The undersigned further agrees that the OWNER may, at any time during the progress of the WORK covered by this CONTRACT, order other WORK or materials. All such WORK and materials that do not appear in the proposal or CONTRACT as a specific item accompanied by a unit price, and which are not included under the bid price for other items in the CONTRACT, shall be performed as Extra Work, per Article 9-4 in the Standard Specifications for Water and Sewer Construction in Illinois. Compensation will be paid in accordance with Article 9-4.
10. The undersigned further agrees to execute a CONTRACT for this WORK and present same to the OWNER within fifteen days after the receipt of Notice of Award of the CONTRACT.
11. The undersigned further agrees that he/she and his/her surety will execute and present within fifteen days after receipt of Notice of Award, a Contract Bond satisfactory to and in the form prescribed by the OWNER, in the penal sum of the full amount of the CONTRACT, guaranteeing the faithful performance of the WORK in accordance with the terms of the CONTRACT.
12. The undersigned further agrees to begin WORK not later than the date specified in the Notice to Proceed, and to prosecute the WORK in such manner and with sufficient materials, equipment and labor as will ensure its completion within the Contract Time specified herein, it being understood and agreed that the completion within the Contract Time is an essential part of the CONTRACT. Undersigned agrees to complete the WORK within the time period stated in the Bidding Requirements, unless additional time shall be granted by the ENGINEER in accordance with the provisions of the Specification. In case of failure to complete the WORK within the time named herein or within such extra time as may have been allowed by the extensions, the undersigned agrees that the OWNER, shall withhold, from such sums as may be due him/her under the terms of the CONTRACT, the costs set forth in the Specification, which costs shall be considered and treated not as a penalty but as liquidated damages due the OWNER from the undersigned by reason of inconvenience to the public, added cost of engineering and supervision, maintenance of detours, and other items which have caused an expenditure of funds resulting from the failure of the undersigned to complete the WORK within the CONTRACT Time.
13. Accompanying this Bid is a bank draft, bank cashier's check, certified check or bid bond, complying with the requirements of the Specifications made payable to Rend Lake Conservancy District. The amount of the check or draft is \_\_\_\_\_(\$\_\_\_\_\_). If this Bid is accepted and the undersigned shall fail to execute a CONTRACT and Contract Bond as required herein, it is hereby agreed that the amount of the check or draft or bidder's bond substituted in lieu thereof, shall become the property of the OWNER, and shall be considered as payment of damages due to delay and other causes suffered by the OWNER because of the failure to execute said CONTRACT and Contract Bond; otherwise said check or draft, or bidder's bond substituted in lieu thereof shall be returned to the undersigned. **ATTACH BID BOND, BANK DRAFT, BANK CASHIER'S CHECK OR CERTIFIED CHECK HERE.** In the event that one check or draft is intended to cover two or more Bids, the amount must be equal to the sum of the Bid guarantees of the individual section covered.
14. The undersigned submits herewith his/her schedule of prices covering the WORK to be performed under this CONTRACT. He/she understands that he/she must show in the schedule the unit prices for which he/she proposed to perform each item of WORK and that the extensions must be made by him/her. If not so done, his/her proposal may be rejected as irregular.

## SCHEDULE OF PRICES

*(For complete information covering these items, see Plans and Specifications)*

<b>Bid Item</b>	<b>Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Cost</b>
1	PVC C-905 DR18 WATERMAIN OPEN CUT 18"	16,595	LF	\$	\$
2	PVC C-905 DR18 WATERMAIN DIRECTIONAL BORE 18"	1,450	LF	\$	\$
3	PVC C-905 DR18 WATERMAIN IN CASING 18"	670	LF	\$	\$
4	HDPE C-906 DR 32.5 CASING PIPE DIRECTIONAL BORE 30"	650	LF	\$	\$
5	D.I. M.J. C-153 FITTING 90 DEG 18"	6	EA	\$	\$
6	D.I. M.J. C-153 FITTING 45 DEG 18"	4	EA	\$	\$
7	D.I. M.J. C-153 FITTING TEE 18"X6"	5	EA	\$	\$
8	D.I. M.J. C-153 FITTING REDUCER 18"X16"	1	EA	\$	\$
9	D.I. M.J. C-153 FITTING SOLID SLEEVE 18"	18	EA	\$	\$
10	S.S. C-223 TAPPING SLEEVE W/ TAPPING VALVE 16"	1	EA	\$	\$
11	S.S. C-223 TAPPING SLEEVE W/ TAPPING VALVE 18"X16"	1	EA	\$	\$
12	FLUSHING FIXTURE	5	EA	\$	\$
13	COMBINATION AIR RELEASE VALVE	2	EA	\$	\$
14	WATER SERVICE ¾"	7	EA	\$	\$
15	HDPE C-901 SDR9 WATER SERVICE OPEN CUT	350	LF	\$	\$
16	FERTILIZE & SEED	16,705	LF	\$	\$
17	CA-7 TRENCH BACKFILL	75	CY	\$	\$
18	RR-7 RIP RAP	34	CY	\$	\$
19	ROCK EXCAVATION	20	CY	\$200.00	\$4,000

<b>Bid Item</b>	<b>Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Cost</b>
20	VEGETATION & TREE CLEARING	8.5	AC	\$	\$
21	24' METAL FIELD FENCE GATE	5	EA	\$	\$
<b>TOTAL BID</b>					\$

(If an Individual)

Signature of Bidder \_\_\_\_\_

Business Address \_\_\_\_\_

\_\_\_\_\_

---

(If a Partnership)

Firm Name \_\_\_\_\_

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

Business Address \_\_\_\_\_

\_\_\_\_\_

(Insert Names and  
Addresses of all  
Partners of the Firm)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

---

(If a Corporation)

Corporate Name \_\_\_\_\_

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

(President)

Business Address \_\_\_\_\_

\_\_\_\_\_

(Insert Names of  
Officers)

President \_\_\_\_\_

Secretary \_\_\_\_\_

Treasurer \_\_\_\_\_

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

(Secretary)

(If a Joint Venture)

Corporate Name \_\_\_\_\_

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

(President)

Business Address \_\_\_\_\_

\_\_\_\_\_

Corporate Name \_\_\_\_\_

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

(President)

Business Address \_\_\_\_\_

\_\_\_\_\_

Corporate Name \_\_\_\_\_

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

(President)

Business Address \_\_\_\_\_

\_\_\_\_\_

Corporate Name \_\_\_\_\_

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

(President)

Business Address \_\_\_\_\_

\_\_\_\_\_

1. GENERAL

1.1 Illinois Labor Requirements

- A. This contract calls for the construction of a “public work,” within the meaning of the Illinois Prevailing Wage Act, 820 ILCS 130/.01 *et seq.* (“the Act”), the Act requires contractors and subcontractors to pay laborers, workers and mechanics performing services on public works projects no less than the “prevailing rate of wages” (hourly cash wages plus fringe benefits) in the county where the work is performed. For information regarding current prevailing wage rates, please refer to the Illinois Department of Labor’s website at: <http://www.state.il.us/agency/idol/rates/rates.HTM>. All contractors and subcontractors must comply with all requirements of the Act, *including but not limited to*, all wage, notice, and record keeping duties.
- B. In addition to the aforementioned “Act”, Contractor is to adhere to all Illinois Labor Laws.

1.2 Reporting and Payment

- A. Before progress payments for the construction of the project will be released for payment to the Contractor, the Contractor will be required to submit wage records including all subcontractors on required on State accepted forms.

END 004343



# Notice of Award

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

Project: Infrastructure Reliability Program – 18” Watermain

Owner: The Rend Lake Conservancy District

Owner's Contract No.: 19-02

Contract: Infrastructure Reliability Program – 18” Watermain

Engineer's Project No.:

Bidder:

Bidder's Address: *[send Notice of Award Certified Mail, Return Receipt Requested]*

You are notified that your Bid dated \_\_\_\_\_ for the above Contract has been considered. You are the Successful Bidder and are awarded a Contract for \_\_\_\_\_

*[Indicate total Work, alternates, or sections of Work awarded.]*

The Contract Price of your Contract is \_\_\_\_\_ Dollars (\$\_\_\_\_\_).

*[Insert appropriate data if unit prices are used. Change language for cost-plus contracts.]*

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

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

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

1. Deliver to the Owner [4] fully executed counterparts of the Contract Documents.
2. Deliver with the executed Contract Documents the Contract security [Bonds] as specified in the Instructions to Bidders (Article 20), General Conditions (Paragraph 5.01), and Supplementary Conditions (Paragraph SC-5.01).
3. Other conditions precedent:  
Deliver the Certificate of Insurance

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

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

\_\_\_\_\_  
Owner  
By: \_\_\_\_\_  
Authorized Signature  
Board Engineer  
\_\_\_\_\_  
Title

Copy to Engineer

## AGREEMENT

1. THIS AGREEMENT, made and concluded on \_\_\_\_\_, between the Rend Lake Conservancy District, known as the District and \_\_\_\_\_, its/their executors, administrators, successors, or assigns, known as Contractor.
2. For and in consideration of the payments and agreements provided for in the **Bid Form**, hereto attached, to be paid by the District, the Contractor agrees with the District to do all work, furnish all materials and all labor necessary to complete the work in accordance with the plans and specifications hereinafter described.
3. It is understood and agreed that the Bid Forms, Contracts, Drawings, and Project Manual titled **RLCD 19-02 Watermain Reliability Program – 18” Watermain**, are essential documents of this contract and are a part hereof and include the following:
  - a. Project Manuel 19-02 Watermain Reliability Program – 18” Watermain, including but not limited to:
    - i. Section 001113 Advertisement for Bidders
    - ii. Section 002113 Instructions to Bidders
    - iii. Section 002118 Standard Documents for Construction
    - iv. Section 004143 Bid Form
    - v. Section 004343 Prevailing Wage Rates
    - vi. Section 005100 Notice of Award
    - vii. Section 005200 Agreement
    - viii. Section 005500 Notice to Proceed
    - ix. Section 006110 Bid Bond
    - x. Section 006113 Contract Bond
    - xi. Section 006349 Work Change Directive (*EJCDC Form C-940*)
    - xii. Section 006336 Field Order (*EJCDC Form C-942*)
    - xiii. Section 006363 Change Order (*EJCDC Form C-941*)
    - xiv. Section 007200 Standard General Conditions (*EJCDC Form C-700 Rev 1*)
    - xv. Section 007300 Supplementary Conditions
  - b. Drawings Titled 19-02 Watermain Reliability Program – 18” Watermain
  - c. Standard Specifications for Water Sewer Construction in Illinois *Latest Edition* (by reference)
  - d. Addenda:
    - i. No. \_\_\_\_\_, dated \_\_\_\_\_, 20\_\_
    - ii. No. \_\_\_\_\_, dated \_\_\_\_\_, 20\_\_
    - iii. No. \_\_\_\_\_, dated \_\_\_\_\_, 20\_\_
    - iv. No. \_\_\_\_\_, dated \_\_\_\_\_, 20\_\_

This Contract is for the installation of approximately 18,715 feet of 18” PVC watermain and related appurtenances to provide a working watermain.

4. This contract calls for the construction of a “public work,” within the meaning of the Illinois Prevailing Wage Act, 820 ILCS 130/01 *et seq.* (“the Act”), the Act requires contractors and subcontractors to pay laborers, workers and mechanics performing services on public works projects no less than the “prevailing rate of wages” (hourly cash wages plus fringe benefits) in the county where the work is performed. For information regarding current prevailing wage rates, please refer to the Illinois Department of Labor’s website at: <http://www.state.il.us/agency/idol/rates/rates.HTM>. All contractors and subcontractors must comply with all requirements of the Act, *including but not limited to*, all wage, notice, and record keeping duties.
5. Contractor shall abide by all conditions of the latest version of the Standard General Conditions of the Construction Contract prepared by Engineers Joint Contract Documents Committee.
6. The Contract agrees to provide 1 year Contractors Warranty per the General Conditions and all manufacturers warranties as provided.
7. The project shall be substantially complete within **365** calendar days from the date of the issued Notice to Proceed. The project shall be 100% complete including cleanup within **395** calendar days from the date of the issued Notice to Proceed.
8. Contracts documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy in the following order: 1) Contract 2) Special Provisions 3) Standard General Conditions of the Construction Contract *EJCDC Form C-700 Rev 1* 4) Standard Specifications for Water Sewer Construction in Illinois latest edition.
9. IN WITNESS WHEREOF, the said parties have executed these presents on the date above mentioned.

\_\_\_\_\_  
Gary Williams  
General Manager  
Rend Lake Conservancy District

\_\_\_\_\_  
Jonathan Cantrell  
Legal Counsel  
Rend Lake Conservancy District

Contractor Name: \_\_\_\_\_

ATTEST:

\_\_\_\_\_  
Contractor President

\_\_\_\_\_  
Contractor Secretary

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**NOTICE TO PROCEED**

---

Owner: Owner's Contract No.:

Contractor: Contractor's Project No.:

Engineer: Engineer's Project No.:

Project: Contract Name:

Effective Date of Contract:

---

**TO CONTRACTOR:**

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on [\_\_\_\_\_, 20\_\_]. [see Paragraph 4.01 of the General Conditions]

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work shall be done at the Site prior to such date. In accordance with the Agreement, [the date of Substantial Completion is \_\_\_\_\_, and the date of readiness for final payment is \_\_\_\_\_] **or** [the number of days to achieve Substantial Completion is \_\_\_\_\_, and the number of days to achieve readiness for final payment is \_\_\_\_\_].

Before starting any Work at the Site, Contractor must comply with the following:  
[Note any access limitations, security procedures, or other restrictions]

---

Owner:

Authorized Signature

By:

Title:

Date Issued:

Copy: Engineer

## 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*):

BID

Bid Due Date:

Description (*Project Name— Include Location*):

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**

\_\_\_\_\_  
(Seal)

\_\_\_\_\_  
(Seal)

Bidder'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

*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.

**CONTRACT BOND**

**Project: RLCD 19-02 Infrastructure Reliability Program – 18” Watermain**

We, \_\_\_\_\_ as PRINCIPAL and \_\_\_\_\_

as SURETY, are held and firmly bound unto the Rend Lake Conservancy District in the penal sum of

\_\_\_\_\_ Dollars

( \_\_\_\_\_ ), lawful money of the United States, well and truly

to be paid unto the Rend Lake Conservancy District, for the payment of which we bind ourselves, our heirs, executors, administrators, and successors, jointly to pay to the Rend Lake Conservancy District this sum under the conditions of this instrument.

WHEREAS THE CONDITION OF THE FOREGOING OBLIGATION IS SUCH that, the Principal has entered into a written contract with the Rend Lake Conservancy District for the construction of work on the above project, which contract is hereby referred to and made part hereof, as if written herein at length, and whereby the said Principal has promised and agreed to perform said work in accordance with the terms of said contract, and has promised to pay all sums of money due for any labor, materials, apparatus, fixtures or machinery furnished to such Principal for the purpose of performing such work and has further agreed to pay all direct and indirect damages to any person, firm company, or corporation suffered or sustained on account of the performance of such work during the time thereof and until such work is completed and accepted; and has further agreed that this bond shall inure to the benefit of any person, firm, company, or corporation, to whom any money may be due from the Principal, subcontractor or otherwise, for any such labor, materials, apparatus, fixtures or machinery so furnished and that suit may be maintained on such bond by any such person, firm, company, or corporation, for the recovery of any such money,

NOW THEREFORE, if the said Principal shall well and truly perform said work in accordance with the terms of said contract, and shall pay all sums of money due onto become due for any labor, materials, apparatus, fixtures or machinery furnished to him for the purpose of constructing such work, and shall commence and complete the work within the time prescribed in said contract, and shall pay and discharge all damages, direct and indirect, that may be suffered or sustained on account of such work during the time of the performance thereof and until the said work shall have been accepted, and shall hold the Rend Lake Conservancy District harmless on account of any such damages and shall in all respects fully and faithfully comply with all the provisions, conditions, and requirements of said contract, then this obligation to be void; otherwise to remain in full force and effect,

IN TESTIMONY WHEREOF, the said Principal and the said Surety have caused this instrument to be signed by their respective officers this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_.





PROJECT MANUAL - Infrastructure Reliability Program – 18” Watermain  
Section 006113 – CONTRACT BOND

OWNER  
The Rend Lake Conservancy District

ATTEST:

BY:

\_\_\_\_\_  
Jonathan Cantrell  
Legal Counsel

\_\_\_\_\_  
Gary Williams  
General Manager

Date of Issuance: \_\_\_\_\_ Effective Date: \_\_\_\_\_  
Owner: \_\_\_\_\_ Owner's Contract No.: \_\_\_\_\_  
Contractor: \_\_\_\_\_ Contractor's Project No.: \_\_\_\_\_  
Engineer: \_\_\_\_\_ Engineer's Project No.: \_\_\_\_\_  
Project: \_\_\_\_\_ Contract Name: \_\_\_\_\_

Contractor is hereby directed to promptly execute this Field Order, issued in accordance with General Conditions Paragraph 11.01, for minor changes in the Work without changes in Contract Price or Contract Times. If Contractor considers that a change in Contract Price or Contract Times is required, submit a Change Proposal before proceeding with this Work.

Reference: \_\_\_\_\_  
Specification(s) \_\_\_\_\_ Drawing(s) / Detail(s) \_\_\_\_\_

Description: \_\_\_\_\_

Attachments: \_\_\_\_\_

ISSUED: \_\_\_\_\_ RECEIVED: \_\_\_\_\_  
By: \_\_\_\_\_ By: \_\_\_\_\_  
Engineer (Authorized Signature) Contractor (Authorized Signature)  
Title: \_\_\_\_\_ Title: \_\_\_\_\_  
Date: \_\_\_\_\_ Date: \_\_\_\_\_

Copy to: Owner

**Work Change Directive No.**

Date of Issuance: \_\_\_\_\_ Effective Date: \_\_\_\_\_  
 Owner: \_\_\_\_\_ Owner's Contract No.: \_\_\_\_\_  
 Contractor: \_\_\_\_\_ Contractor's Project No.: \_\_\_\_\_  
 Engineer: \_\_\_\_\_ Engineer's Project No.: \_\_\_\_\_  
 Project: \_\_\_\_\_ Contract Name: \_\_\_\_\_

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

Description:

Attachments: *[List documents supporting change]*

**Purpose for Work Change Directive:**

Directive to proceed promptly with the Work described herein, prior to agreeing to changes on Contract Price and Contract Time, is issued due to: *[check one or both of the following]*

- Non-agreement on pricing of proposed change.
- Necessity to proceed for schedule or other Project reasons.

**Estimated Change in Contract Price and Contract Times (non-binding, preliminary):**

Contract Price \$ \_\_\_\_\_ [increase] [decrease].  
 Contract Time \_\_\_\_\_ days [increase] [decrease].

**Basis of estimated change in Contract Price:**

- Lump Sum  Unit Price
- Cost of the Work  Other

RECOMMENDED:

AUTHORIZED BY:

RECEIVED:

By:	By:	By:
Engineer (Authorized Signature)	Owner (Authorized Signature)	Contractor (Authorized Signature)
Title:	Title:	Title:
Date:	Date:	Date:

Approved by Funding Agency (if applicable)

By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Title: \_\_\_\_\_

Date of Issuance: \_\_\_\_\_ Effective Date: \_\_\_\_\_  
 Owner: \_\_\_\_\_ Owner's Contract No.: \_\_\_\_\_  
 Contractor: \_\_\_\_\_ Contractor's Project No.: \_\_\_\_\_  
 Engineer: \_\_\_\_\_ Engineer's Project No.: \_\_\_\_\_  
 Project: \_\_\_\_\_ Contract Name: \_\_\_\_\_

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

**Description:** The following Change Order is for the line items as described:

**Attachments:**

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES <i>[note changes in Milestones if applicable]</i>
Original Contract Price: \$ _____	Original Contract Times: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
[Increase] [Decrease] from previously approved Change Orders No. 0 to No.1 : \$ _____	[Increase] [Decrease] from previously approved Change Orders No. 0 to No. 1 : Substantial Completion: _____ Ready for Final Payment: _____ days
Contract Price prior to this Change Order: \$ _____	Contract Times prior to this Change Order: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
[Increase] [Decrease] of this Change Order: \$ _____	[Increase] [Decrease] of this Change Order: Substantial Completion: _____ Ready for Final Payment: _____ days or dates
Contract Price incorporating this Change Order: \$ _____	Contract Times with all approved Change Orders: Substantial Completion: _____ Ready for Final Payment: _____ days or dates

<b>RECOMMENDED:</b>	<b>ACCEPTED:</b>	<b>ACCEPTED:</b>
By: _____ Engineer (if required)	By: _____ Owner (Authorized Signature)	By: _____ Contractor (Authorized Signature)
Title: _____	Title _____	Title _____
Date: _____	Date _____	Date _____

Approved by Funding Agency (if applicable)

By: \_\_\_\_\_ Date: \_\_\_\_\_  
 Title: \_\_\_\_\_

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.

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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.
- 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.

PROJECT MANUAL - Infrastructure Reliability Program – 18” Watermain  
007300 – SUPPLEMENTARY CONDITIONS

1. GENERAL

1.1 The following pages are to be included as the Supplementary Conditions

END 007300

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## I. GENERAL

A. Theses Supplementary Conditions to amend the General Conditions C-700'

### ARTICLE 1 - DEFINITIONS AND TERMINOLOGY

SC-1.01 *Replace the defined term 1.01.A.28*

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. The Owner is the Rend Lake Conservancy District. It is to be understood that the word "District" also means "Owner".

### ARTICLE 2 - PRELIMINARY MATTERS

SC--2.02 *Delete Paragraph 2.02.A in its entirety and insert the following new paragraph in its place:*

- A. Owner shall furnish to Contractor 2 copies of conformed Contract Documents incorporating and integrating all Addenda and any amendments negotiated prior to the Effective Date of the Contract (including one fully executed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies of the conformed Contract Documents will be furnished upon request at the cost of reproduction.

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

SC-5.03 *Delete Paragraphs 5.03.A and 5.03.B in their entirety and insert the following:*

- A. No reports of explorations or tests of subsurface conditions at or adjacent to the Site, or drawings of physical conditions relating to existing surface or subsurface structures at the Site, are known to Owner.

SC- 5.06 *Delete Paragraphs 5.06.A and 5.06.B in their entirety and insert the following:*

- A. No reports or drawings related to Hazardous Environmental Conditions at the Site are known to Owner.
- B. Not Used.

### ARTICLE 6 - BONDS AND INSURANCE

SC-6.01 *Delete Paragraphs 6.01.A in their entirety and insert the following:*

- A. Contractor shall furnish a contract bond, 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. This bond 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.

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

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

**SC-6.03** Add the following new paragraph immediately after Paragraph 6.03.J:

**K. The limits of liability for the insurance required by Paragraph 6.03 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:**

1. Workers' Compensation, and related coverages under Paragraphs 6.03.A.1 and A.2 of the General Conditions:

State:	Statutory
Federal, if applicable (e.g., Longshoreman's):	Statutory
Jones Act coverage, if applicable:	
Bodily injury by accident, each accident	\$ 1,000,000
Bodily injury by disease, aggregate	\$ 1,000,000
Employer's Liability:	
Bodily injury, each accident	\$ 1,000,000
Bodily injury by disease, each employee	\$ 1,000,000
Bodily injury/disease aggregate	\$ 1,000,000
Foreign voluntary worker compensation	Statutory

2. Contractor's Commercial General Liability under Paragraphs 6.03.B and 6.03.C of the General Conditions:

General Aggregate	\$ 2,000,000
Products - Completed Operations Aggregate	\$ 2,000,000
Personal and Advertising Injury	\$ 1,000,000
Each Occurrence (Bodily Injury and Property Damage)	\$ 1,000,000



3. Automobile Liability under Paragraph 6.03.D. of the General Conditions:

**Bodily Injury:**

Each person	\$ <u>1,000,000</u>
Each accident	\$ <u>1,000,000</u>

**Property Damage:**

Each accident	\$ <u>1,000,000</u>
---------------	---------------------

[or]

Combined Single Limit of	\$ <u>1,000,000</u>
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4. Excess or Umbrella Liability:

Per Occurrence	\$ <u>5,000,000</u>
General Aggregate	\$ <u>5,000,000</u>

[See Paragraph 6.03.E of the General Conditions.]

[If Owner revises the standard terms by deleting the requirement that Contractor provide Excess or Umbrella liability insurance, then Owner should consider requiring (in SC-6.03.K.2) that "The aggregate limits under SC-6.03.K.2 (Commercial General Liability) be maintained fully available for this Contract by obtaining and maintaining a Designated Construction Project General Aggregate Limit endorsement, or equivalent."]

5. Contractor's Pollution Liability:

Each Occurrence	\$ _____
General Aggregate	\$ _____

If box is checked, Contractor is not required to provide Contractor's Pollution Liability insurance under this Contract

6. Additional Insureds: In addition to Owner and Engineer, include as additional insureds the following:

Resident Project Representative

7. Contractor's Professional Liability:

Each Claim	\$ _____
Annual Aggregate	\$ _____

## ARTICLE 7 – CONTRACTOR’S RESPONSIBILITIES

*SC-7.02.B. Add the following new subparagraphs immediately after Paragraph 7.02.B:*

1. Regular working hours will be 7:00am to 5:00pm Monday through Friday
2. Owner's legal holidays are the same as observed by the State of Illinois

*SC-7.09 Add a new paragraph immediately after Paragraph 7.09.A:*

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

## ARTICLE 9 – OWNER’S RESPONSIBILITIES

*SC-9.13 Owner’s Site Representative*

- A. Paragraph 10.03 of the General Conditions indicates that the Owner may designate a representative or agent who is not Engineer’s consultant, agent, or employee, to represent Owner at the Site (“Owner’s Site Representative”). In such case the Owner typically would not have the Engineer furnish a Resident Project Representative, hence the second version of SC-10.03.B below would be used to indicate there is no Engineer’s Resident Project Representative.

The following should be used for the identification of the Owner’s Site Representative. Note that the following must be supplemented by customized text that explains the responsibilities of the Owner’s Site Representative, so far as such are relevant to Contractor. The content of Paragraphs SC-10.03.B and C below may be a helpful starting point in drafting such supplemental text. In addition, if Owner’s retention of an Owner’s Site Representative will affect other aspects of Engineer’s status during construction, other portions of Article 10 and many other parts of the General Conditions will need to be revised. In such cases it is typical for (and Laws and Regulations may require) the design engineer (as engineer of record) to at least retain a role with respect to design-intent reviews of submittals and similar aspects of the Work.

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

**SC-9.13 Owner will furnish an “Owner’s Site Representative” to represent Owner at the Site and assist Owner in observing the progress and quality of the Work. The Owner’s Site Representative is not Engineer’s consultant, agent, or employee. Owner’s Site Representative will be “to be determined”. The authority and responsibilities of Owner’s Site Representative follow: Observation of construction to assure conformance with the Contract Documents, taking of measurements and documentation of the work, recording of installed quantities of materials, notification to the Contractor when non conformance the Contract Documents is observed or recorded.**

## ARTICLE 10 – ENGINEER’S STATUS DURING CONSTRUCTION

**SC--10.01** *Add the following new paragraphs immediately after Paragraph 10.01.A:*

- B.** The Engineer is a direct employee of the Owner under this Contract. The duties and limitations are unchanged. The Engineer may change during the Contract and the Owner will assign a New Engineer.

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

- B.** The Resident Project Representative (RPR) will be Engineer's representative at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions.
  - 1.** General: RPR's dealings in matters pertaining to the Work in general shall be with Engineer and Contractor. RPR's dealings with Subcontractors shall only be through or with the full knowledge and approval of Contractor. RPR shall generally communicate with Owner only with the knowledge of and under the direction of Engineer.
  - 2.** Schedules: Review the progress schedule, schedule of Shop Drawing and Sample submittals, and Schedule of Values prepared by Contractor and consult with Engineer concerning acceptability.
  - 3.** Conferences and Meetings: Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings, and prepare and circulate copies of minutes thereof.
  - 4.** Liaison:
    - a.** Serve as Engineer’s liaison with Contractor. Working principally through Contractor’s authorized representative or designee, assist in providing information regarding the provisions and intent of the Contract Documents.
    - b.** Assist Engineer in serving as Owner’s liaison with Contractor when Contractor’s operations affect Owner’s on-Site operations.
    - c.** Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.
  - 5.** Interpretation of Contract Documents: Report to Engineer when clarifications and interpretations of the Contract Documents are needed and transmit to Contractor clarifications and interpretations as issued by Engineer.
  - 6.** Shop Drawings and Samples:
    - a.** Record date of receipt of Samples and Contractor-approved Shop Drawings.
    - b.** Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.

- c. Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which RPR believes that the submittal has not been approved by Engineer.
- 7. **Modifications:** Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, if any, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.
- 8. **Review of Work and Rejection of Defective Work:**
  - a. Conduct on-Site observations of Contractor's work in progress to assist Engineer in determining if the Work is in general proceeding in accordance with the Contract Documents.
  - b. Report to Engineer whenever RPR believes that any part of Contractor's work in progress is defective, will not produce a completed Project that conforms generally to the Contract Documents, or will imperil the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.
- 9. **Inspections, Tests, and System Start-ups:**
  - a. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.
  - b. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.
- 10. **Records:**
  - a. Prepare a daily report or keep a diary or log book, recording Contractor's hours on the Site, Subcontractors present at the Site, weather conditions, data relative to questions of Change Orders, Field Orders, Work Change Directives, or changed conditions, Site visitors, deliveries of equipment or materials, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to Engineer.
  - b. Record names, addresses, fax numbers, e-mail addresses, web site locations, and telephone numbers of all Contractors, Subcontractors, and major Suppliers of materials and equipment.
  - c. Maintain records for use in preparing Project documentation.

**11. Reports:**

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

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

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

**14. Completion:**

- a. Participate in Engineer's visits to the Site to determine Substantial Completion, assist in the determination of Substantial Completion and the preparation of a punch list of items to be completed or corrected.
- b. Participate in Engineer's final visit to the Site to determine completion of the Work, in the company of Owner and Contractor, and prepare a final punch list of items to be completed and deficiencies to be remedied.
- c. Observe whether all items on the final list have been completed or corrected and make recommendations to Engineer concerning acceptance and issuance of the notice of acceptability of the work.

**C. The RPR shall not:**

1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).
2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.
3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.

4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of Contractor's work.
  5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
  6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
  7. Accept Shop Drawing or Sample submittals from anyone other than Contractor.
  8. Authorize Owner to occupy the Project in whole or in part.
- 

#### ARTICLE 13 - COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

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

- E. The unit price of an item of Unit Price Work shall be subject to reevaluation and adjustment under the following conditions:
  1. if the extended price of a particular item of Unit Price Work amounts to 15 percent or more of the Contract Price (based on estimated quantities at the time of Contract formation) and the variation in the quantity of that particular item of Unit Price Work actually furnished or performed by Contractor differs by more than 30 percent from the estimated quantity of such item indicated in the Agreement; and
  2. if there is no corresponding adjustment with respect to any other item of Work; and
  3. if Contractor believes that Contractor has incurred additional expense as a result thereof, Contractor may submit a Change Proposal, or if Owner believes that the quantity variation entitles Owner to an adjustment in the unit price, Owner may make a Claim, seeking an adjustment in the Contract

1. GENERAL

1.1 STANDARD DOCUMENTS FOR CONSTRUCTION

- A. The documents provided as part these Contract Documents shall apply to this project. Standard Specifications shall also apply as referenced.

1.2 GENERAL PROJECT INFORMATION

A. DESCRIPTION

1. The Work to be performed under these Contract Documents, generally consists of the replacement of approximately installation of 18,715 lineal feet of 18” watermain, including fittings, services, and related appurtenances necessary to provide a complete and working watermain.

B. EXISTING CONDITIONS

1. The existing conditions and utilities are shown to best knowledge of the District. This information was derived from topographic surveys, District records, and District maps.
2. Underground structures and utilities have been plotted from available survey and records and therefore, their locations must be considered approximate only and not all inclusive. The verification of the location of all underground facilities, structures and utilities either shown or not shown on these plans, shall be the responsibility of the Contractor.

C. RELATED WORK

1. N/A

1.3 GOVERNING STANDARDS

- A. The latest edition of the Standard Specifications for Water and Sewer Main Construction in Illinois, herein referred to as the Standard Specifications, shall govern the construction of the proposed WORK.
- B. Copies of these standard specifications can be purchased from any of the following associations.

Illinois Society of Professional Engineers  
100 East Washington St.  
Springfield, IL 62701  
[www.IllinoisEngineer.com](http://www.IllinoisEngineer.com)

Illinois Municipal League  
500 East Capitol Avenue  
PO Box 3387 (mailing address)  
Springfield, IL 62708-5 180

- C. The provided Special Provisions supplement these specifications and in case of conflict the Special Provisions shall take precedence and govern:

#### 1.4 SUBSTITUTES AND "OR-EQUAL" ITEMS

- A. Whenever a material or article is specified or described by using the name of a proprietary product or the name of a particular manufacturer or vendor, the specified item shall be understood as establishing the type, function, and quality desired. Requests for review of equivalency will not be accepted from anyone except Contractor. Such requests shall be submitted 15 days before the date of the bid opening to allow time for the Engineer to review the request. The Engineer's decision shall be considered final in terms of equivalency. Other manufacturers' products will be accepted, provided sufficient information is submitted to allow Engineer to determine that the products proposed are equivalent to those named. Such items shall be submitted for review by the procedure set forth in the submittals section.
- B. Whenever the names of proprietary products or the names of particular manufacturers or vendors are used, it shall be understood that the words "or equal" following the enumeration, if not specifically stated, are implied.

#### 1.5 PREPARATION FOR SHIPMENT

- A. All materials shall be suitably packaged to facilitate handling and protect against damage during transit and storage. Painted surfaces shall be protected against impact, abrasion, discoloration, and other damage. All painted surfaces which are damaged prior to acceptance of equipment shall be repainted to the satisfaction of Engineer.
- B. Each item, package, or bundle of material shall be tagged or marked as identified in the delivery schedule or on the Shop Drawings. Complete packing lists and bills of material shall be included with each shipment.

#### 1.6 SALVAGE

- A. Existing materials and equipment removed, and not reused as a part of the Work, shall become Contractor's property, except for the following, which shall remain the property of the District:
  - 1. N/A
- B. Contractor shall carefully remove, in a manner to prevent damage, all materials and equipment specified or indicated to be salvaged and reused or to remain the property of District. Contractor shall store and protect salvaged items specified or indicated to be reused in the Work.
- C. Any items damaged in removal, storage, or handling through carelessness or improper procedures shall be replaced by Contractor in kind or with new items.
- D. Contractor may furnish and install new items instead of those specified or indicated to be salvaged and reused, in which case such removed items will become Contractor's property.
- E. Existing materials and equipment removed by Contractor shall not be reused in the Work except where so specified or indicated.



## 1.7 LAND FOR CONSTRUCTION PURPOSES

- A. Contractor will be permitted to use available land belonging to The District, on or near the site of the Work, for construction purposes and for storage of materials and equipment.
- B. The locations and extent of the areas so used shall be as indicated on the Drawings, and/or as directed by the District's representative.
- C. Contractor shall immediately move stored materials or equipment if any occasion arises, as determined by The District, requiring access to the storage area. Materials or equipment shall not be placed on the property of The District until The District has agreed to the location to be used for storage.

## 1.8 NOTICES TO OWNERS AND AUTHORITIES

- A. Contractor shall, as provided in the General Conditions, notify owners of adjacent property and utilities when prosecution of the Work may affect them.
- B. When it is necessary to temporarily deny access to property, or when any utility service connection must be interrupted, Contractor shall give notices sufficiently in advance to enable the affected persons to provide for their needs. Notices shall conform to any applicable local ordinance and, whether delivered orally or in writing, shall include appropriate information concerning the interruption and instructions on how to limit inconvenience caused thereby.
- C. Utilities and other concerned agencies shall be notified at least 48 hours prior to cutting or closing streets or other traffic areas or excavating near underground utilities or pole lines.

## 1.9 CONNECTIONS TO EXISTING FACILITIES

- A. Contractor shall make all necessary connections to existing facilities as shown on the plans. In each case, Contractor shall receive permission from the District prior to undertaking connections. Contractor shall protect facilities against deleterious substances and damage.
- B. Connections to existing facilities which are in service shall be thoroughly planned in advance, and all required equipment, materials, and labor shall be on hand at the time of undertaking the connections. Work shall proceed continuously (around the clock) if necessary to complete connections in the minimum time. Operation of valves or other appurtenances on existing utilities, when required, shall be by or under the direct supervision of the District.

## 1.10 UNSUITABLE CONSTRUCTION CONDITIONS

- A. During unfavorable weather, wet ground, or other unsuitable construction conditions, Contractor shall confine its operations to work which will not be affected adversely by such conditions. No portion of the Work shall be constructed under conditions which would affect adversely the quality or efficiency thereof, unless special means or precautions are taken by Contractor to perform the Work in a proper and satisfactory manner.

## 1.11 CUTTING AND PATCHING

- A. Contractor shall perform all cutting and patching required for the Work and as may be necessary in connection with uncovering Work for inspection or for the correction of defective Work.
- B. Contractor shall perform all cutting and patching required for and in connection with the

work, including but not limited to removal of improperly timed work, removal of samples of installed materials for testing, alteration of existing facilities, and installation of new work in existing facilities.

- C. Contractor shall provide all shoring, bracing, supports, and protective devices necessary to safeguard all work and existing facilities during cutting and patching operations.
- D. Materials shall be cut and removed to the extent indicated on the Drawings or as required to complete the Work. Materials shall be removed in a careful manner, with no damage to adjacent facilities or materials. Materials which are not salvable shall be removed from the site by Contractor.
- E. All Work and existing facilities affected by cutting operations shall be restored with new materials, or with salvaged materials acceptable to Engineer, to obtain a finished installation with the strength, appearance, and functional capacity required. If necessary, entire surfaces shall be patched and refinished.

#### 1.12 SITE ADMINISTRATION

- A. Contractor shall be responsible for all areas of the site used by it, by other Contractors, and by all Subcontractors in the performance of the Work. Contractor will exert full control over the actions of all employees and other persons with respect to the use and preservation of property and existing facilities, except such controls as may be specifically reserved to the District or others.

#### 1.13 MATERIALS AND EQUIPMENT

- A. Contractor shall be fully responsible for all materials and equipment which it has furnished.

#### 1.14 PUBLIC UTILITIES

- A. No separate construction of other public utilities is anticipated with this Contract other than as shown in the Plans and negotiation of existing utilities that are within the public Rights of Way.

#### 1.15 MATERIALS AND EQUIPMENT

- A. Contractor shall be fully responsible for all materials and equipment which it has furnished

END 011100

1. GENERAL

- A. The scope of this section defines the items included in each bid item in the SCHEDULE OF PRICES section of Contract Documents. Payment will be made based on the specified items included in the description in this section for each bid item.
- B. All contract prices included in the SCHEDULE OF PRICES section will be full compensation for all labor, materials, tools, equipment and incidentals necessary to complete the construction as shown on the Drawings and /or specified in the Contract Documents to be performed under this contract. Actual quantities of each item bid on a unit price basis will be determined upon completion of the construction on the manner set up for each item in this section of the specifications. Payment for all items listed in the Bide Schedule will constitute full compensation for all work shown and/or specified and required to accomplish the intent of this Contract.
- C. No separate construction of other public utilities is anticipated with this Contract other than as shown in the Drawings and negotiation of existing utilities that are within the public Rights of Way.
- D. The following items at a minimum shall be considered incidental to project in addition to other items listed with the Contract Documents
  - 1. Tree removal and tunneling through tree roots
  - 2. Erosion control as required unless specified as Bid Item
  - 3. Protection of existing structures and utilities
  - 4. Disposal of surplus material and debris
  - 5. Repairs inside and outside of the construction area due to construction activities
  - 6. Temporary and permanent fence restoration
  - 7. Location and verification of existing utilities
- E. EASEMENTS
  - 1. The Contractor acknowledges by submitting a bid for this project that certain special requirements exist on some property easements for the proposed project. If such requirements are part of this project, they will be listed in the Drawings, and if necessary, provided as an attachment to the Contract Documents.
  - 2. These special requirements shall be the responsibility of the Contractor and no additional compensation will be allowed for compliance. All equipment, materials, fittings and labor required to complete and satisfy these special requirements shall be incidental to the Contractors bid unless stated otherwise on the Drawings.

2. UNIT PRICE LIST

2.1 PVC C-905 DR 18 WATERMAIN OPEN CUT 18”

- A. Measurement & Payment
  - 1. Payment for furnishing and installing the **PVC C-905 DR 18 WATERMAIN OPEN CUT** will be made for the applicable unit price in the SUMMARY OF QUANTITIES for the nominal diameter of PVC watermain installed, which price and payment shall be full compensation for:

- a. Supply and installation of new pipe materials by approved open cut method
- b. Installation of watermain in casing pipe as required
- c. Supply and installation of tracer wire materials
- d. Excavation, backfill, shoring, dewatering
- e. Cleaning, testing, and water quality maintenance including any temporary water flushing testing points installed
- f. Water needed flushing and testing
- g. Installation, use of, removal of sample testing sites
- h. Solid sleeves not shown on the Drawings
- i. Pressure testing and related

and all work and materials required for a full, operable and complete installation. This payment shall fully compensate the Contractor for furnishing all labor, supervision, materials, equipment, incidentals, overhead and profit required to complete the work as specified in the Contract Documents.

2. Payment shall also fully compensate the Contractor for any other work which is not specified or shown but which is required to complete the work as shown on the Drawings and as specified herein, and shall also include coordination with the District for making connections to the existing water distribution system.
3. Solid Sleeves not shown on the Drawings and used per the Contractor's choice shall not be paid for separately but shall be paid for per linear foot of watermain installed.
4. Measurement will be made per linear foot of PVC C905 DR 18 Watermain installed in the size shown in the SUMMARY OF QUANTITIES.

#### B. Rock Excavation

1. Should rock excavation become necessary, it shall be done in accordance with Section 20 of the Illinois Standard Specification for Sewer Water Construction Latest Edition with special emphasis placed on the definition of "rock".
2. A rock chain must be used for the rock removal unless permission for removal by other methods is granted by the Engineer. The minimum width of rock excavation shall be the outside diameter of the pipe plus 8 inches.
3. The rock material is to be removed from the site and CA-7 aggregate shall be installed in the trench.
4. If such situation arises removal of said rock will be paid at \$200 per cubic yard of rock removed with no other compensation allowed. The maximum width will be the trench width.

### 2.2 PVC C-905 DR 18 WATERMAIN DIRECTIONAL BORE 18"

#### A. Measurement & Payment

1. Payment for furnishing and installing the **PVC C-905 DR 18 WATERMAIN DIRECTIONAL BORE** will be made for the applicable unit price in the SUMMARY OF QUANTITIES for the nominal diameter of PVC watermain installed, which price and payment shall be full compensation for:
  - a. Supply and installation of new pipe materials installed by directional boring
  - b. Supply and installation of tracer wire materials
  - c. Excavation, backfill, shoring, dewatering
  - d. Cleaning, testing, and water quality maintenance including any temporary water flushing testing points installed
  - e. Water needed flushing and testing
  - f. Installation, use of, removal of sample testing sites
  - g. Solid sleeves not shown on the Drawings

h. Pressure testing and related

and all work and materials required for a full, operable and complete installation. This payment shall fully compensate the Contractor for furnishing all labor, supervision, materials, equipment, incidentals, overhead and profit required to complete the work as specified in the Contract Documents.

2. Payment shall also fully compensate the Contractor for any other work which is not specified or shown but which is required to complete the work as shown on the Drawings and as specified herein, and shall also include coordination with the District for making connections to the existing water distribution system.
3. Solid Sleeves not shown on the Drawings and used per the Contractor's choice shall not be paid for separately but shall be paid for per linear foot of watermain installed.
4. Measurement will be made per linear foot of watermain installed by directional boring of the size shown in the SUMMARY OF QUANTITIES.

2.3 PVC C-905 DR 18 WATERMAIN IN CASING 18"

A. Measurement & Payment

1. Payment for furnishing and installing the **PVC C-905 DR 18 WATERMAIN IN CASING** will be made for the applicable unit price in the SUMMARY OF QUANTITIES for the nominal diameter of PVC watermain installed, which price and payment shall be full compensation for:
  - a. Supply and installation of new pipe materials installed in casing
  - b. Supply and installation of tracer wire materials
  - c. Excavation, backfill, shoring, dewatering
  - d. Cleaning, testing, and water quality maintenance including any temporary water flushing testing points installed
  - e. Water needed flushing and testing
  - f. Installation, use of, removal of sample testing sites
  - g. Solid sleeves not shown on the Drawings
  - h. Pressure testing and related

and all work and materials required for a full, operable and complete installation. This payment shall fully compensate the Contractor for furnishing all labor, supervision, materials, equipment, incidentals, overhead and profit required to complete the work as specified in the Contract Documents.

2. Payment shall also fully compensate the Contractor for any other work which is not specified or shown but which is required to complete the work as shown on the Drawings and as specified herein, and shall also include coordination with the District for making connections to the existing water distribution system.
3. Solid Sleeves not shown on the Drawings and used per the Contractor's choice shall not be paid for separately but shall be paid for per linear foot of watermain installed.
4. Measurement will be made per linear foot of watermain installed in casing of the size shown in the SUMMARY OF QUANTITIES.

2.4 HDPE C-906 DR32.5 CASING PIPE DIRECTIONAL BORE 30"

A. Measurement & Payment

1. Payment for furnishing and installing the **HDPE C-906 DR32.5 CASING PIPE DIRECTIONAL BORE** will be made for the applicable unit price in the SUMMARY OF QUANTITIES for the nominal diameter of Steel Casing installed, which price and payment shall full compensation be for:

- a. Supply and installation of new HDPE pipe materials installed by the directional bore method and fused
- b. Casing end seals as required
- c. Excavation, backfill, shoring, dewatering,

and all work and materials required for a full, operable and complete installation. This payment shall fully compensate the Contractor for furnishing all labor, supervision, materials, equipment, incidentals, overhead and profit required to complete the work as specified in the Contract Documents.

- 2. Payment shall also fully compensate the Contractor for any other work which is not specified or shown but which is required to complete the work as shown on the Drawings and as specified herein.
- 3. Measurement will be made per linear foot of HDPE pipe installed by the directional bore method in the size shown in the SUMMARY OF QUANTITIES.

2.5 D.I. M.J. C-153 FITTINGS (*Various Size and Type*)

A. Measurement & Payment

Payment for furnishing and installing the **D.I. M.J. C-153 FITTINGS** will be made for the applicable unit price in the SUMMARY OF QUANTITIES for the nominal diameter and type of fitting installed, which price and payment shall be full compensation for:

- a. Supply and installation of ductile iron fittings
- b. Supply and installation of restrained mechanical joints, nut and bolts
- c. Supply and installation of concrete, polyethylene wrap
- d. Excavation, backfill, shoring, dewatering
- e. Cleaning, testing, and water quality maintenance
- f. Water needed flushing and testing

and all work and materials required for a full, operable and complete installation. This payment shall fully compensate the Contractor for furnishing all labor, supervision, materials, equipment, incidentals, overhead and profit required to complete the work as specified in the Contract Documents.

- 2. Payment shall also fully compensate the Contractor for any other work which is not specified or shown but which is required to complete the work as shown on the Drawings and as specified herein.
- 3. **Unless specifically shown on the Drawings and Bid Form, D.I. Solid Sleeves shall be considered incidental to watermain construction.**
- 4. Patio blocks will not be accepted for watermain  $\geq$  8-inch diameter.
- 5. Measurement will be made per each fitting installed in the size shown in the SUMMARY OF QUANTITIES.

2.6 S.S. C-223 TAPPING SLEEVE W/ TAPPING VALVE 18" & 16"

A. Measurement & Payment

- 1. Payment for furnishing and installing the **S.S. C-223 TAPPING SLEEVE W/ TAPPING VALVE** will be made for the applicable unit price in the SUMMARY OF QUANTITIES for the nominal diameter of the stainless-steel tapping sleeve, gate valve, and related installed, which price and payment shall be full compensation for:

- a. Supply and installation of tapping sleeve
- b. Supply and installation of gate valve in the size specified including valve box and related

- c. Supply and installation of restrained mechanical joints, nut and bolts
- d. Supply and installation of concrete, polyethylene wrap
- e. Excavation, backfill, shoring, dewatering
- f. Cleaning, testing, and water quality maintenance
- g. Water needed flushing and testing
- h. Pressure testing including the testing of the tapping valve

and all work and materials required for a full, operable and complete installation. This payment shall fully compensate the Contractor for furnishing all labor, supervision, materials, equipment, incidentals, overhead and profit required to complete the work as specified in the Contract Documents.

- 2. Payment shall also fully compensate the Contractor for any other work which is not specified or shown but which is required to complete the work as shown on the Drawings and as specified herein.
- 3. Measurement will be made per each valve and sleeve installed in the size shown in the SUMMARY OF QUANTITIES.

## 2.7 FLUSHING FIXTURE

### A. Measurement & Payment

- 1. Payment for furnishing and installing the **FLUSHING FIXTURE** will be made for the applicable unit price in the SUMMARY OF QUANTITIES for the nominal diameter of fitting installed, which price and payment shall be full compensation for:
  - a. Supply and installation of ductile iron fittings, and valves, as detailed, **NOTE M.J. x FL Tee that will be installed on the mainline shall NOT be considered part of this bid item including all ancillary items**
  - b. Supply and installation of restrained mechanical joints, nut and bolts
  - c. Supply and installation of concrete, polyethylene wrap
  - d. Excavation, backfill, shoring, dewatering
  - e. Cleaning, testing, and water quality maintenance
  - f. Water needed flushing and testing

and all work and materials required for a full, operable and complete installation. This payment shall fully compensate the Contractor for furnishing all labor, supervision, materials, equipment, incidentals, overhead and profit required to complete the work as specified in the Contract Documents.

- 2. Payment shall also fully compensate the Contractor for any other work which is not specified or shown but which is required to complete the work as shown on the Drawings and as specified herein.
- 3. Unless specifically shown on the Drawings and Bid Form, D.I. Solid Sleeves shall be considered incidental to watermain construction.
- 4. Patio blocks will not be accepted for watermain  $\geq$  8-inch diameter.
- 5. Measurement will be made per each fixture installed in the size shown in the SUMMARY OF QUANTITIES.

## 2.8 COMBINATION AIR RELEASE VALVE

### A. Measurement & Payment

- 1. Payment for furnishing and installing the **COMBINATION AIR RELEASE VALVE** will be made for the applicable unit price in the SUMMARY OF QUANTITIES for the water service reconnected, which price and payment shall be full compensation for:

- a. Supply and installation of vault, combination air release valve, concrete vault with hatch, and all materials as shown in detail provided with the Drawings
- b. Supply and installation of new tapping saddle service sized for the watermain that the tap will be made, corporation stop, brass compression connection fittings, including fittings needed to reconnect the water service, and all related material sized as required
- c. Supply and installation of HDPE C-901 SDR-9 PIPE needed to connect the existing air release valve to the proposed watermain
- d. Excavation, backfill, shoring, dewatering
- e. Cleaning, testing, and water quality maintenance
- f. Water needed flushing and testing

and all work and materials required for a full, operable and complete installation. This payment shall fully compensate the Contractor for furnishing all labor, supervision, materials, equipment, incidentals, overhead and profit required to complete the work as specified in the Contract Documents.

2. Payment shall also fully compensate the Contractor for any other work which is not specified or shown but which is required to complete the work as shown on the Drawings and as specified herein.
3. Measurement will be made per each Combination Air Release Valve installed in the size and type shown in the SUMMARY OF QUANTITIES.

## 2.9 WATER SERVICE ¾"

### A. Measurement & Payment

1. Payment for furnishing and installing the **WATER SERVICE ¾"** will be made for the applicable unit price in the SUMMARY OF QUANTITIES for the nominal diameter of water service installed, which price and payment shall be full compensation for:
  - a. Supply and installation of
    - i. Meter Pit as in the diameter noted on the details
    - ii. Brass dual check with shut off meter setter of the nominal diameter
    - iii. Brass tapping saddle with corporation stop to be installed on the watermain and of the nominal diameter of the watermain installed
    - iv. Brass connection accessories
    - v. Cast iron meter pit and lid
  - b. Excavation, backfill, shoring, dewatering
  - c. Cleaning, testing, and water quality maintenance including any temporary water flushing testing points installed
  - d. Water needed flushing and testing
  - e. Pressure testing and related

and all work and materials required for a full, operable and complete installation. This payment shall fully compensate the Contractor for furnishing all labor, supervision, materials, equipment, incidentals, overhead and profit required to complete the work as specified in the Contract Documents.

2. Payment shall also fully compensate the Contractor for any other work which is not specified or shown but which is required to complete the work as shown on the Drawings and as specified herein, and shall also include coordination with the District for making connections to the existing water distribution system.



3. Solid Sleeves not shown on the Drawings and used per the Contractor's choice shall not be paid for separately but shall be paid for per linear foot of watermain installed.
4. Measurement will be made per linear foot of WATER SERVICE ¾" installed in the size shown in the SUMMARY OF QUANTITIES.

B. Rock Excavation

1. Should rock excavation become necessary, it shall be done in accordance with Section 20 of the Illinois Standard Specification for Sewer Water Construction Latest Edition with special emphasis placed on the definition of "rock".
2. A rock chain must be used for the rock removal unless permission for removal by other methods is granted by the Engineer. The minimum width of rock excavation shall be the outside diameter of the pipe plus 8 inches.
3. The rock material is to be removed from the site and CA-7 aggregate shall be installed in the trench.
4. If such situation arises removal of said rock will be paid at \$200 per cubic yard of rock removed with no other compensation allowed. The maximum width will be the trench width.

2.10 HDPE C-901 SDR9 WATER SERVICE OPEN CUT ¾"

A. Measurement & Payment

1. Payment for furnishing and installing the **PVC C-905 DR 18 WATERMAIN OPEN CUT** will be made for the applicable unit price in the SUMMARY OF QUANTITIES for the nominal diameter of PVC watermain installed, which price and payment shall be full compensation for:
  - a. Supply and installation of new pipe materials by approved open cut method
  - b. Installation of water service in casing pipe as required
  - c. Supply and installation of tracer wire materials
  - d. Excavation, backfill, shoring, dewatering
  - e. Cleaning, testing, and water quality maintenance including any temporary water flushing testing points installed
  - f. Water needed flushing and testing
  - g. Pressure testing and related

and all work and materials required for a full, operable and complete installation. This payment shall fully compensate the Contractor for furnishing all labor, supervision, materials, equipment, incidentals, overhead and profit required to complete the work as specified in the Contract Documents.

2. Payment shall also fully compensate the Contractor for any other work which is not specified or shown but which is required to complete the work as shown on the Drawings and as specified herein, and shall also include coordination with the District for making connections to the existing water distribution system.
3. Solid Sleeves not shown on the Drawings and used per the Contractor's choice shall not be paid for separately but shall be paid for per linear foot of watermain installed.
4. Measurement will be made per linear foot of HDPE C-901 SDR9 WATER SERVICE OPEN CUT installed in the size shown in the SUMMARY OF QUANTITIES.

B. Rock Excavation

1. Should rock excavation become necessary, it shall be done in accordance with Section 20 of the Illinois Standard Specification for Sewer Water Construction Latest Edition with special emphasis placed on the definition of "rock".

2. A rock chain must be used for the rock removal unless permission for removal by other methods is granted by the Engineer. The minimum width of rock excavation shall be the outside diameter of the pipe plus 8 inches.
3. The rock material is to be removed from the site and CA-7 aggregate shall be installed in the trench.
4. If such situation arises removal of said rock will be paid at \$200 per cubic yard of rock removed with no other compensation allowed. The maximum width will be the trench width.

## 2.11 FERTILIZE & SEED

### A. Measurement & Payment

1. Payment for furnishing and installing the **FERTILIZE & SEED** will be made for the applicable unit price in the SUMMARY OF QUANTITIES for the surface restoration of the proposed project site, which price and payment shall be full compensation for:
  - a. Rough and final grading of disturbed grassed areas
  - b. Site Clearing and clean up
  - c. Installation of fertilizer, seed, and mulch as specified
  - d. Stockpiling of existing topsoil, or providing topsoil for restoration of the disturbed grass areas
  - e. Removal of deleterious substances as required
  - f. Temporary removal and replacement of signs, landscaping, and related as necessary for the completion of the proposed Work
  - g. Restoration of any area that was disturbed due to construction of the proposed Work

and all work and materials required for a full, operable and complete installation. This payment shall fully compensate the Contractor for furnishing all labor, supervision, materials, equipment, incidentals, overhead and profit required to complete the work as specified in the Contract Documents.

2. Payment shall also fully compensate the Contractor for any other work which is not specified or shown but which is required to complete the work as shown on the Drawings and as specified herein.
3. Measurement will be made per linear feet of watermain installed for the seed, fertilize, and mulch work that will be required. This is for measurement purposes only and will not dictate the actual quantity of material needed and the work required.

## 2.12 TRENCH BACKFILL

### A. Measurement & Payment

1. Payment for furnishing and installing the **TRENCH BACKFILL** will be made for the applicable unit price in the SUMMARY OF QUANTITIES for the CA-7 or CA-11 Aggregate installed, which price and payment shall full compensation be for:
  - a. Supply, installation, and compaction of IDOT approved CA-7 or CA-11 aggregate where this a permanent type street, sidewalk, driveway, curb or within two feet of such structures as shown the Drawings and as directed by the Engineer.
  - b. Excavation, backfill, shoring, dewatering,

and all work and materials required for a full, operable and complete installation.

This payment shall fully compensate the Contractor for furnishing all labor, supervision, materials, equipment, incidentals, overhead and profit required to complete the work as specified in the Contract Documents.

2. Payment shall also fully compensate the Contractor for any other work which is not specified or shown but which is required to complete the work as shown on the Drawings and as specified herein.
3. Measurement will be made per cubic yard installed of CA-7 or CA-11 aggregate.
4. For payment purposes the maximum trench width shall be as follows: For trench depths of 5 feet or less and when shoring is not required, the maximum trench width shall be 18 inches wider than the nominal diameter of the pipe, and for trench depths greater than 5 feet and when sheeting or shoring are required, the maximum trench width shall be 3 feet wider than the nominal diameter of the pipe, unless otherwise directed by the Engineer.
5. Measurement of trench backfill shall be made by the cubic yard in place. It shall be computed from the field measurement of trench width, depth, and length. The volume that the pipe takes up shall be deducted from the previous calculations.
6. All quantities must be substantiated by signed and receipted rock tickets and must be submitted to the Engineer daily.
7. Where the trench width is greater than the maximum specified, additional trench backfill shall be furnished and placed by the Contractor at his expense. The depth for trench backfill computations is measured from the bottom of the pipe to the elevation designated by the Engineer.

## 2.13 RIP RAP

### A. Measurement & Payment

1. Payment for furnishing and installing the **RIP RAP** will be made for the applicable unit price in the SUMMARY OF QUANTITIES for the RR-7 RIP RAP installed, which price and payment shall full compensation be for:
  - a. Supply, installation, and compaction of IDOT approved RR-7 RIP RAP as shown the Drawings and as directed by the Engineer.
  - b. Excavation, backfill, shoring, dewatering,

and all work and materials required for a full, operable and complete installation. This payment shall fully compensate the Contractor for furnishing all labor, supervision, materials, equipment, incidentals, overhead and profit required to complete the work as specified in the Contract Documents.

2. Payment shall also fully compensate the Contractor for any other work which is not specified or shown but which is required to complete the work as shown on the Drawings and as specified herein.
3. Measurement will be made per cubic yard installed of RR-7 RIP RAP.
4. Measurement of RR-7 RIP RAP shall be made by the cubic yard in place. It shall be computed from the field measurement of trench width, depth, and length. The volume that the pipe takes up shall be deducted from the previous calculations.
5. All quantities must be substantiated by signed and receipted rock tickets and must be submitted to the Engineer daily.

## 2.14 ROCK EXCAVATION

### A. Measurement & Payment

1. Payment for furnishing and installing the **ROCK EXCAVATION** will be made for the applicable unit price in the SUMMARY OF QUANTITIES for the rock

excavated, which price and payment shall full compensation be for:

- a. Removal of buried rock that **REQUIRES** the use of equipment designed for the sole purpose of rock removal such as rock chains on trenchers or similar.
- b. Instances where existing equipment onsite can still be used for rock removal but has slowed progress, the Contractor will be required to prove that production has been slowed by greater than 15%.

and all work and materials required for a full, operable and complete installation. This payment shall fully compensate the Contractor for furnishing all labor, supervision, materials, equipment, incidentals, overhead and profit required to complete the work as specified in the Contract Documents.

2. Payment shall also fully compensate the Contractor for any other work which is not specified or shown but which is required to complete the work as shown on the Drawings and as specified herein.
3. Measurement will be made per cubic yard of rock removed.
4. Measurement of ROCK EXCAVATION shall be made by the cubic yard removed in place. It shall be computed from the field measurement of trench width, depth, and length.
5. All quantities must be substantiated and approved by the Engineer on a daily basis.

## 2.15 VEGETATION AND TREE CLEARING

### A. Measurement & Payment

1. Payment for **VEGETATION AND TREE CLEARING** will be made for the applicable unit price in the SUMMARY OF QUANTITIES for the removal and clearing of vegetation of the proposed project site, which price and payment shall be full compensation for:
  - a. Tree and stump removal and disposal offsite
  - b. vegetation removal and disposal offsite
  - c. Material removal offsite
  - d. Site Clearing

and all work and materials required to clear the site of vegetation and trees. This payment shall fully compensate the Contractor for furnishing all labor, supervision, materials, equipment, incidentals, overhead and profit required to complete the work as specified in the Contract Documents.

2. Payment shall also fully compensate the Contractor for any other work which is not specified or shown but which is required to complete the work as shown on the Drawings and as specified herein.
3. Measurement will be made per acre of site cleared and disposed.

## 2.16 24' METAL FIELD FENCE GATE

### A. Measurement & Payment

1. Payment for furnishing and installing the **24' METAL FIELD FENCE GATE** will be made for the applicable unit price in the SUMMARY OF QUANTITIES for the installation of 24' metal field gates, which price and payment shall be full compensation for:
  - a. Installation of 24' metal field gate w/ two 12' leaves per landowners satisfaction.
  - b. Modification of the existing fence for the installation of the gates including

but not limited to driving posts of the same quality of the existing fence, modification of the barbed wire, and related items.

c. Any and all ancillary work to provide landowner with working gate.

and all work and materials required to provide and install gates. This payment shall fully compensate the Contractor for furnishing all labor, supervision, materials, equipment, incidentals, overhead and profit required to complete the work as specified in the Contract Documents.

2. Payment shall also fully compensate the Contractor for any other work which is not specified or shown but which is required to complete the work as shown on the Drawings and as specified herein.
3. Measurement will be made per gate installed.
4. Gates are to be installed to the satisfaction of the landowners.

END 012200

## 1.GENERAL

### 1.1 Preconstruction Conference

- A. Preconstruction Conference will be scheduled within 14 days after delivery of the executed Agreement by Owner to Contractor, but before starting the Work, at the site or other location designated by the Owner. The Engineer will make arrangements for the meeting and notify participants in advance of the meeting date and location. Required attendees include the Engineer, Contractor, subcontractors, and the Owner or his representative. Significant proceedings of this meeting will be recorded by the Engineer and copies distributed to the participants.
- B. At the meeting, submit a preliminary Construction Progress Schedule, Schedule of Submittals (including name, type and specification section), Schedule of Values (per Section 01990) and a list of subcontractors and suppliers if a list was not previously submitted with the Contractor’s bid, or if subcontractors and suppliers have changed.

### 1.2 Monthly Progress Meetings

- A. A monthly Progress Meeting will be conducted on a specific day of every month at the job site. A supervisory representative, able to make management decisions, from the Contractor shall attend the meeting. The date, time and location of said meeting will be determined at the Preconstruction Conference.
- B. Present a written status report, neatly prepared, at each meeting. The status report shall include at least the following information: Construction progress, update of schedule, delays, changes, status of RFIs, RFPs, problems, differing conditions, anticipated payment requests, personnel changes, and regulatory compliance updates. The status report shall cover all subcontractors.
- C. Require the attendance of subcontractors' supervisory personnel, as necessary, to assist in the presentation of the status report.
- D. Five copies of the status report shall be prepared for distribution to the Owner's and Engineer's representatives.
- E. If the Contractor fails to have a supervisory representative attend the Progress Meeting or if the Contractor fails to distribute a written status report as specified in paragraph B above, the Owner may withhold approval of a Partial Payment Application until such time as the Progress Meeting can be rescheduled at the convenience of the Owner and the Engineer.
- F. Significant proceedings of this meeting will be recorded by the Engineer Owner and copies distributed to the participants.

### 1.3 Special Meetings

- A. Special Meetings may be called by the Engineer or Contractor as progress of the work dictates.
- B. If additional or routine construction meetings are required by Owner, funding agency, or others add a description and requirements here)

2.PRODUCTS

Not Used.

3.EXECUTION

Not Used.

END 013119

## 1. GENERAL

### 1.1 REQUIREMENTS INCLUDE

- A. Each Contractor make submittals to Coordinating Contractor. Coordinating Contractor shall maintain a master list of submittals.

### 1.2 Coordinating Contractor:

- A. Review Assigned Contractors' submittals within 5 business days.
  - 1. Verify field dimensions.
  - 2. Verify compliance with Contract requirements.
- B. Certify review.
- C. Transmit reviewed submittals to Engineer for review.

### 1.3 RELATED REQUIREMENTS

- A. Specified elsewhere:
  - 1. Section 017839 Project Record Documents

### 1.4 DEFINITIONS

- A. Shop drawings: Shop drawings are original drawings prepared by Contractor, subcontractor, sub-subcontractor, supplier or distributor, which illustrate some portion of the work, showing fabrication, layout, setting or erection details.
  - 1. Prepared by qualified detailer.
  - 2. Identify details by reference to sheet and detail numbers shown on contract drawings.
  - 3. Maximum sheet size: (\*36" x \*24".)
  - 4. Reproductions for submittals: Reproducible transparency, full size reproducible transparencies which do not require any special equipment for reproduction and copying are specified.
  - 5. Submit 8 copies.
- B. Product data:
  - 1. Manufacturer's standard schematic drawings, edited to fit this project.
  - 2. Manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations and other standard descriptive data.
    - a. Clearly mark each copy to identify pertinent materials, products or models.
    - b. Show dimensions and clearances.
    - c. Show wiring diagrams and controls.
- C. Samples: Physical samples to illustrate materials, equipment or workmanship. Approved samples establish standards by which complete work is judged. Maintain at site as directed. Protect until no longer needed.



1. Office samples: Of sufficient size to clearly illustrate:
  - a. Functional characteristics of product or material.
  - b. Full range of color samples.
  - c. After review, samples may be used on construction of project.
2. Field samples and mock-ups:
  - a. Erect at project site at location approved by Engineer.
  - b. Construct each sample or mock-up complete, including work of all crafts required in finished work.
  - c. Remove as directed.

## 1.5 SCHEDULE SUBMITTAL

- A. Submit schedule of all exhibits to Engineer within 10 business days after preconstruction meeting.
  1. Prepare schedule in bar chart format. Include:
    - a. Exhibit identification.
    - b. Specification section and page number.
    - c. Date of submittal to General Contractor.
    - d. Latest date for final approval.
    - e. Fabrication time.
    - f. Date of installation.
  2. Engineer will review and comment on exhibit schedule and will advise the contractor as to which submittals require longer review durations.
  3. Submit number of copies of shop drawings, product data and samples which contractor requires for distribution plus 3 copies which will be retained by Engineer.
- B. Accompany submittals with transmittal letter, in duplicate, containing:
  1. Date.
  2. Project title and number.
  3. Contractor's name and address.
  4. The number of shop drawings, product data and samples submitted.
  5. Notification of deviations from Contract.
  6. Other pertinent data.
- C. Submittals shall include:
  1. Date and revision dates.
  2. Project title and number.
  3. Names of:
    - a. Subcontractor.
    - b. Sub-subcontractor.
    - c. Supplier.
    - d. Manufacturer.
    - e. Separate detailer when pertinent.
  4. Identification of product or material.
  5. Relation to adjacent structure or material.
  6. Field dimensions, clearly identified as such.

7. Specification section and page number.
8. Specified standards, such as ASTM number or ANSI.
9. A blank space, (\*6" x \*6"), for Engineer's stamp.
10. Identification of previously approved deviation(s) from contract documents.
11. Contractor's stamp, initialed or signed, certifying to review of submittal, verification of field measurements and compliance with Contract.
12. Space for Contractor's approval stamp.

## 1.6 RESUBMISSION REQUIREMENTS

- A. Resubmit all shop drawings, product data, and samples as requested by the contractor and/or A/E.

## 1.7 RESPONSIBILITIES

- A. Review shop drawings, product data and samples prior to submission to the next level of authority.
- B. Verify:
  1. Field dimensions.
  2. Field construction criteria.
  3. Catalog numbers and similar data.
- C. Coordinate each submittal with requirements of:
  1. The work.
  2. The contract documents.
  3. The work of other contractors.
- D. Contractor's responsibility for errors, omissions or deviation from contract documents in submittals is not relieved by Engineer's review of submittals.
- E. Prior to submission, notify Engineer in writing of all proposed deviations in submittals from contract requirements. Substitution of materials or equipment may only be approved by change order.
- F. Do not begin any work which requires submittals without Engineer's approval.
- G. After Engineer's review, make response required by Engineer's stamp and distribute copies. Indicate by transmittal that copy of approved data has been delivered to installer.
- H. When the other contracts are assigned to the Coordinating Contractor:
  1. Assigned contractors send their submittals to Coordinating Contractor.
  2. Coordinating Contractor reviews and initials assigned contractors' submittals for compliance with scope, coordination and integration with the work of all other contractors.
  3. Coordinating Contractor transmits his reviewed copies of assigned contractors' submittals to Engineer.
  4. Coordinating Contractor retains copy of submittals after review by Engineer and distributes copies to submitting contractor and to other contractors for coordination and integration.
  5. Coordinating Contractor: Enforce resubmission requirements.

1.8 ENGINEER'S DUTIES

- A. Review submittals within 10 business days.
- B. Review for:
  - 1. Design concept of project.
  - 2. Compliance with contract documents.
- C. Review all requests for proposed deviations. Respond to Contractor's request.
- D. Affix stamp, date and initials or signature certifying to review of submittal, and with instructions for contractor response.
- E. Return submittals to sender for response or distribution.

1.9 Schedule:

- A. Provide a summary schedule of submittals in spec section order required of each contractor. Completely specify all submittals in each technical Project Manual section.)

END 013323

1. GENERAL

1.1 REQUIREMENTS INCLUDE

- A. Each Contractor shall comply with all laws, rules and regulations governing the work.
1. When Contractor observes that contract documents are at variance with specified codes, notify Engineer in writing immediately. Engineer will process changes in accord with General Conditions.
  2. When Contractor performs any work knowing or having reason to know that the work is contrary to such laws, rules and regulations and fails to so notify the Architect/Engineer, Contractor shall pay all costs arising therefrom. However, it will not be the Contractor's primary responsibility to make certain that the contract documents are in accord with such laws, rules and regulations.

1.2 DEFINITIONS & ABBREVIATIONS

A. Definitions:

1. Dates: Reference Codes, Regulations and Standards are the issue current at date of bidding documents unless otherwise specified.
2. Codes: Codes are rules, regulations or statutory requirements of government agencies.
3. Standards: Standards are requirements set by authorities, custom or general consent and established as accepted criteria.

B. Abbreviations:

- |     |      |   |
|-----|------|---|
| 1.  | ADA  | Americans with Disabilities Act.                |
| 2.  | AGCI | Associated General Contractors in Illinois.     |
| 3.  | ANSI | American National Standards Institute.          |
| 4.  | ASTM | American Society for Testing and Materials.     |
| 5.  | AWWA | American Waterworks Association.                |
| 6.  | BOCA | Building Officials & Code Administrators        |
| 7.  | FED  | Federal Agencies.                               |
| 8.  | FM   | Factory Mutual Engineering Corp.                |
| 9.  | IAGO | Illinois Attorney General's Office              |
| 10. | IDHS | Illinois Department of Human Services.          |
| 11. | IDOL | Illinois Department of Labor.                   |
| 12. | IDOT | Illinois Department of Transportation.          |
| 13. | IDPH | Illinois Department of Public Health.           |
| 14. | IEPA | Illinois Environmental Protection Agency.       |
| 15. | IDPR | Illinois Department of Professional Regulation. |
| 16. | ISBE | Illinois State Board of Education.              |
| 17. | ISPE | Illinois Society of Professional Engineers.     |
| 18. | UBC  | Uniform Building Code                           |
| 19. | UL   | Underwriters Laboratories, Inc.                 |

1.3 QUALITY ASSURANCE

A. Contractor:

1. Ensure that copies of specified codes and standards are readily available to Contractor's personnel. Copies are available at Contractor's expense from source or publisher.
2. Ensure that Contractor's personnel are familiar with workmanship and installation requirements of specified codes and standards.

#### 1.4 REGULATORY REQUIREMENTS

##### A. Source and requirements:

1. State of Illinois:
  - a. Illinois Steel Products Procurement Act, as amended (30 ILCS 565/1 et seq.).
2. IDOT:
  - a. Standard Specifications for Road and Bridge Construction, including all supplements, April 1, 2016, except where otherwise specified.
    - i. References to "Method of Measurement" and "Basis of Payment" do not apply.
  - b. National Manual on Uniform Traffic Control Devices, including the Illinois supplement.
  - c. Policy for Permits for Access Driveways to State Highways.
3. IDPH:
  - a. Illinois State Plumbing Code.
4. IEPA (Current editions at date of bidding documents.)
  - a. Air Pollution Standards.
  - b. Noise Pollution Standards.
  - c. Water Pollution Standards.
  - d. Public Water Supplies.
  - e. Solid Waste Standards.
  - f. Illinois Recommended Standards for Sewage Work.
  - g. Hazardous Waste Crane and Hoisting Equipment Operators Licensing Act, 225 ILCS 220/1 et. seq.
  - h. Hazardous Waste Laborers Licensing Act, 225 ILCS 221/1 et. seq.
  - i. Toxic Substance Control Act.
5. STANDARDS:
  - a. AGCI/ISPE: Standard Specifications for Water and Sewer Main Construction in Illinois, Revised.
  - b. ANSI No. C-2, National Electrical Safety Code,
  - c. AWWA: Water and Sewer Main Construction.
  - d. NFPA: National Fire Codes
    - i. No. 70-96, National Electrical Code.
6. ISBE:
  - a. Building Officials and Code Administrators (BOCA)

b. International Building Code (IBC) “Latest Edition”

- B. The Architect/Engineer may reference other codes or standards throughout the Project Manual when deemed appropriate for proper compliance with regulatory requirements.

1.5 PERMITS

- A. The following permits have or will be secured by the District and are to be adhered to as part of this project:

1. Army Corps or Engineers Waterway Crossing Permit
2. IEPA Public Water Supply Construction Permit
3. IDOT Utility Crossing Permit
  - a. Contractor will be responsible for any required fees, bonding/insurance for this permit.
4. The City of Mt Vernon
  - a. Contractor will be responsible for any required fees, bonding/insurance for this permit.
5. The Jefferson County Highway Department and Township Road Commission
  - a. Contractor will be responsible for any required fees, bonding/insurance for this permit.

END 014100

## 1. GENERAL

### 1.1 REQUIREMENTS INCLUDE

- A. Make arrangements with Using District’s Representative for storage of materials and equipment to be installed in project. Protection and security for stored materials and equipment, on and off site is solely contractor's responsibility.

### 1.2 OFF-SITE AUTHORIZATION

- A. Payment for materials/equipment stored off-site will be permitted only on Owners prior written authorization, per Standard Document for Construction.

## 2. PRODUCTS

### 2.1 STORAGE SHEDS

- A. N/A

### 2.2 PROTECTIVE MATERIALS

- A. For duration of storage period, provide materials which will provide proper protection against the elements or other harmful environmental conditions.

## 3. EXECUTION

### 3.1 LOCATION

- A. Where shown on drawings, or where authorized by Engineer.
- B. Coordinating Contractor will resolve conflicts in storage requirements of all contractors.

### 3.2 PREPARATION. Fill and grade sites for temporary storage sheds to provide drainage.

### 3.3 INSTALLATION

- A. Construct storage sheds on adequate foundations, with connections for utilities.
  - 1. Raise portable buildings, when used.
  - 2. Provide steps, landings or ramps at entrances.
- B. Mount fire extinguishers in prominent locations with clear access to use.
- C. Mount identifying signs adjacent to entrance doors, in conspicuous locations.

### 3.4 PROTECTION

- A. Provide and maintain protective materials as needed during the duration of the project.

3.5 MAINTENANCE AND CLEANING

- A. Provide continuous maintenance for all temporary structures.

3.6 REMOVAL

- A. Remove all temporary storage sheds, contents and utilities, at completion of construction activities, or as directed by the Architect/Engineer.

END 016600



## 1. GENERAL

### 1.1 REQUIREMENTS INCLUDE

- A. Contractor layout of work under the contract.
  - 1. Establish all working lines, levels, grades, elevations, and measurements.

### 1.2 RELATED REQUIREMENTS

- A. Specified elsewhere:
  - 1. Section 312219 - Finish Grading
  - 2. Section 312333 – Trenching and Backfilling
  - 3. Section 312500 - Erosion & Sedimentation Controls
  - 4. Section 331411 – Water Utility Transmission Piping
- B. By others:
  - 1. District will furnish:
    - a. Stakeout of the alignment of the watermain, valves, and related appurtenances
    - b. Vertical benchmark elevations

### 1.3 QUALITY ASSURANCE

- A. Qualifications of Engineer/Surveyor:
  - 1. Experienced in layout work of similar complexity.
  - ~~2. Illinois Licensed Professional Surveyor or Illinois Licensed Professional Engineer.~~
- B. It is the responsibility of the Contractor to maintain the stakes set by the District until the item is installed. Stakes that have been destroyed or removed by the Contractor due to negligence as deemed by the District must be replaced at the expense of the Contractor as defined on a time and material basis.

### 1.4 SUBMITTALS

- A. District may at any time require written verification of grades, lines, and levels as work progresses.

END 017124

1. GENERAL

1.1 REQUIREMENTS INCLUDE

A. Each Contractor:

1. Execute cutting (including excavating), filling or patching of work to:
  - a. Install specified work.
  - b. Remove samples of installed work specified for testing.
  - c. Remove and replace defective work.
2. In addition, upon written instructions of Architect/Engineer or CDB:
  - a. Uncover work to provide for observation of covered work.
  - b. Remove samples of installed materials for testing.
  - c. Remove work to provide for alteration of existing work.
3. Do not cut or alter work of another contractor without written consent of Architect/Engineer.

1.2 RELATED REQUIREMENTS

A. Specified elsewhere:

1. Section 331411 - Water Utility Transmission Piping
2. Section 331419 - Valves and Hydrants for Water Utility Service
3. Section 331420 - Tapping Sleeve and Valve for Water Utility Service

1.3 SUBMITTALS

A. Prior to cutting which affects structural members or work of another contractor, submit written notice to Architect/Engineer requesting consent to proceed with cutting, including:

1. Project identification.
2. Description of affected work.
3. Necessity for cutting.
4. Effect on other work, on structural integrity of project.
5. Description of proposed work. Designate:
  - a. Scope of cutting and patching.
  - b. (\*Contractor and) Crafts to execute the work.
  - c. Products proposed to be used.
  - d. Extent of refinishing.
6. Alternatives to cutting and patching.
7. Designation of party responsible for cost of cutting and patching.

B. Prior to cutting and patching done on instruction of Architect/ Engineer, submit cost estimate.

C. When conditions of work, or schedule, indicate change of materials or methods, submit

recommendation to Architect/Engineer, including:

1. Condition indicating change.
2. Recommendation for alternative materials or methods.
3. Submittals specified for substitutions.

D. Submit written notice to Architect/Engineer, designating time work will be uncovered, to provide for observation.

#### 1.4 PAYMENT FOR COSTS

- A. Costs caused by ill-timed or defective work, or work not conforming to contract documents, including costs for additional services of Architect/Engineer: Party responsible for ill-timed, rejected or non-conforming work.
- B. Work done on instructions of Architect/Engineer (by change order), other than defective or non-conforming work: CDB.

### 2. PRODUCTS

#### 2.1 MATERIALS

- A. For replacement of work removed: Comply with specifications for type of work to be performed.

### 3. EXECUTION

#### 3.1 INSPECTION

- A. Inspect existing conditions of work, including elements subject to movement or damage during:
  1. Cutting and patching.
  2. Excavating and backfilling.
- B. After uncovering work, inspect conditions affecting installation of new products.

#### 3.2 PREPARATION

- A. Prior to cutting:
  1. Provide shoring, bracing and support to maintain structural integrity of project.
  2. Provide protection for other portions of the project.
  3. Provide protection from elements.

#### 3.3 PERFORMANCE

- A. Execute fitting and adjustment of products to provide finished installation to comply with specified tolerances, finishes.
- B. Execute cutting and demolition by methods which will prevent damage to other work, and will provide proper surfaces to receive installation of repairs and new work.
- C. Restore work which has been cut or removed; install new products to provide completed

work in accord with contract documents.

D. Refinish entire surfaces to provide an even finish.

1. Continuous surfaces: To nearest intersection(s).
2. Assembly: Entire refinishing.

END 017329

1. GENERAL

1.1 Summary

A. Section Includes

1. Intermediate Cleaning During Construction
2. Final Cleaning
3. Final Inspection

1.2 Quality Assurance

A. Requirements of Regulatory Agencies

1. Maintain project in accordance with Occupational Safety and Health Act of 1970 as amended, in terms of cleanup.

1.3 Project/Site Conditions

A. Environmental Requirements

1. Conduct cleaning and disposal operations in accordance with local ordinances, state and federal regulations and anti-pollution laws.
2. Do not burn or bury rubbish and waste materials on project site. Do not dispose of volatile wastes; such as, mineral spirits, oil or paint thinner in storm or sanitary drains.

2. PRODUCTS

2.1 Cleaning Materials

- A. Use only cleaning materials recommended by manufacturer of surface to be cleaned.
- B. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

3. EXECUTION

3.1 General

- A. All cleaning shall be the responsibility of the Contractor unless specifically noted otherwise. If rubbish and debris are not removed from the work areas as specified, or cleaning of the buildings, structures and site are not completed as specified, the Owner reserves the right to have the cleaning done at the expense of the Contractor.
- B. Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly painted surfaces.
- C. Provide on-site containers for collection of waste materials, debris and rubbish.

### 3.2 Intermediate Cleaning During Construction

- A. Execute cleaning to ensure that all structures and buildings, grounds, roadways and property are maintained free from accumulations of waste materials, debris and rubbish caused by construction activities. Remove all surplus materials from the job site on a daily basis.
- B. ~~Prior to placing tanks, filters, and other equipment and work areas into service, perform intermediate cleaning as follows:~~
  - 1. ~~Remove and dispose of all temporary structures and debris, including dirt, sand, gravel, rubbish, and waste material from the tanks, filters, and work areas.~~
  - 2. ~~Thoroughly clean, sweep, and wash down all tanks, filters, and work areas.~~
  - 3. ~~Thoroughly clean, and when so directed, disinfect all materials and equipment being modified, rehabilitated, and or replaced.~~
  - 4. ~~Direct all Subcontractors to similarly clean all tanks, filters, and areas in which they have worked, and to thoroughly clean all materials and equipment provided under their contracts.~~

### 3.3 Final Cleaning

- A. General: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit of Work to the condition expected from a commercial building cleaning and maintenance program. Comply with manufacturer's cleaning instructions.
- B. At the completion of work and immediately prior to final inspection, clean the entire Project as follows:
  - 1. Clean the project site, yard and grounds, in areas disturbed by construction activities, including landscape development areas, of waste materials, debris, rubbish and foreign substances.
  - 2. Sweep paved areas broom clean. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
  - 3. Remove tools, construction equipment, machinery, and surplus material from the site.
  - 4. Thoroughly clean, sweep, wash, and polish all work and equipment under the Contract, including finishes.
  - 5. Remove all dirt, sand, gravel, and other material.
  - 6. Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials from sight exposed interior and exterior finished surfaces; polish surfaces so designated to shine finish.
  - 7. Remove labels that are not permanent labels.
  - 8. Repair, patch and touch up marred surfaces to specified finish, to match adjacent surfaces.
  - 9. Remove snow and ice from access to all buildings and structures, new or existing, affected by the work.
  - 10. Replace air-handling filters, new and existing, if units were operated during construction.
  - 11. Clean new and existing ducts, blowers, and coils, if air-handling units were operated without filters during construction.
  - 12. Vacuum clean all interior spaces, including inside cabinets.
  - 13. Clean transparent materials, including mirrors and glass in doors and windows.
  - 14. Clean interior of all panels, cabinets, pull boxes, and other equipment enclosures.
  - 15. Wash and wipe clean all lighting fixtures, lamps, and other electrical equipment which may have become soiled during construction.

- 16. Perform touch-up painting.
  - C. Leave the structures and site in a complete and finished condition to the satisfaction of the Engineer and Owner.
  - D. At completion of work, remove tools, equipment, machinery and surplus materials, and clean all sight exposed surfaces; leave project clean and ready for occupancy or operation as applicable.
- 3.4 Final Inspection
- A. In preparation for substantial completion or occupancy, conduct inspection of sight exposed interior and exterior finished surfaces, and of concealed spaces.
  - B. After cleaning is complete the final inspection may be scheduled. The inspection will be done with the Owner and Engineer.

END 017423

## 1. GENERAL

### 1.1 REQUIREMENTS INCLUDE

#### A. Contractor:

1. At project site, maintain one record copy of:
  - a. Contract drawings, including separate volume(s) of details.
  - b. Project Manual.
  - c. Interpretations and supplemental instructions.
  - d. Addenda.
  - e. Reviewed, approved shop drawings and product data.
  - f. Other modifications to contract.
  - g. Field test records.
  - h. All schedules.
  - i. Correspondence file.
2. Store documents apart from documents used for field construction.
3. File documents in format in accord with Project Manual Table of Contents.
4. Maintain documents in clean, dry, legible condition.
5. Do not use record documents for field construction purposes.
6. Make documents available at all times for inspection by Engineer

### 1.2 RELATED REQUIREMENTS

#### A. Specified elsewhere:

1. 013323 - Shop Drawings, Product Data & Samples.

### 1.3 RECORDING

- A. Label each document "PROJECT RECORD DOCUMENTS" in 2-inch-high printed letters.
- B. Keep record documents current.
- C. Do not permanently conceal any work until specified information has been recorded.
- D. Contract drawings: Legibly mark to record actual construction:
  1. Depths of various elements of foundation in relation to MSL elevations
  2. Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements.
  3. Location of internal utilities and appurtenances concealed in construction referenced to visible and accessible features of structure.
  4. Field changes of dimension and detail.
  5. Changes made by change order.
  6. Details not on original contract drawings.
- E. Specifications and addenda: Legibly mark up each section to record:
  1. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.



2. Changes made by change order or field order.
  3. Other matters not originally specified.
- F. Shop drawings: Maintain as record documents; legibly annotate drawings to record changes made after review.
- G. A/E will periodically review documents to confirm they are up-to-date. Contractor payment may be withheld or reduced if record documents are not current.

1.4 SUBMITTAL

- A. At completion of project, deliver record documents to Engineer.
- B. Accompany submittal with transmittal letter, in duplicate, containing:
1. Date.
  2. Project title and number.
  3. Contractor's name and address.
  4. Title and number of each record document.
  5. Certification that each document submitted is complete and accurate.
  6. Signature of contractor, or his authorized representative.

END 017839

## 1. GENERAL

### 1.1 WORK INCLUDES

- A. Base Bid:
  - 1. General Contractor:
    - a. Clear site of plant life and grass.
    - b. Remove and dispose of:
      - i. Root system of trees and shrubs.
      - ii. Surface debris.

### 1.2 RELATED WORK

- A. Specified elsewhere:
  - 1. Section 312213 - Rough Grading
  - 2. Section 312333 - Trenching and Backfilling
  - 3. Section 312500 - Erosion & Sedimentation Controls

### 1.3 REGULATORY REQUIREMENTS

- A. Conform to IEPA, City of Carbondale and State of Illinois laws and codes for disposal of debris.
- B. Conform to IEPA requirements for site erosion and sediment control.

### 1.4 REFERENCES

- A. Specified references, or cited portions thereof, current at date of bidding documents unless otherwise specified, govern the work.
- B. Illinois Department of Transportation (IDOT): Standard Specifications for Road and Bridge Construction latest edition, including all addenda.
- C. All clearing and removal work shall be completed to the Property Owner and the District's Satisfaction.

## 2. PRODUCTS (Not Applicable)

## 3. EXECUTION

### 3.1 CLEARING

- A. Clear designated areas for access to site and execution of work.
- B. Remove trees and shrubs within marked areas. Grub out stumps, roots, surface rock, and other debris.
- C. Limbs removed from trees to remain in place shall be saw-cut neatly at the face of the tree.

D. Clear undergrowth and deadwood, without disturbing subsoil.

3.2 PROTECTION

A. Protect plant growth and features remaining for final landscaping.

B. Protect bench marks and existing work from damage or displacement.

C. Maintain designated site access for vehicle and pedestrian traffic.

3.3 REMOVAL

A. Remove debris from site.

3.4 DISPOSAL

A. Dispose of removed in materials in accordance with all State and Federal regulations including the securing of any required permits.

B. Dispose of all surplus material; earth, bituminous concrete, pipe, oil and chip, trees, brush, concrete, etc.

END 311000

## 1. GENERAL

### 1.1 WORK INCLUDES

#### A. Base Bid

##### 1. General Contractor:

- a. Remove topsoil and stockpile for later reuse.
- b. Excavate subsoil and stockpile for later reuse.
- c. Grade and rough contour site.
- d. Provide off site soils as necessary.

### 1.2 RELATED WORK

#### A. Specified elsewhere:

1. Section 017124 - Grades, Lines and Levels
2. Section 312333 - Trenching and Backfilling

### 1.3 SUBMITTALS

- A. Submit Project Record Documents in accord with Section 01720.
- B. Accurately record location of utilities remaining, rerouted utilities, new utilities by horizontal dimensions, elevations or inverts, and slope gradients.

### 1.4 PROTECTION

- A. Protect trees, shrubs, lawns, and other features remaining as portion of final landscaping.
- B. Protect benchmarks, existing structures, fences, and roads.
- C. Protect above or below grade utilities which will remain.
- D. Repair damage.

## 2. PRODUCTS

### 2.1 MATERIALS

- A. Topsoil: Excavated material, graded free of roots, rocks larger than 1 inch, subsoil, debris and large weeds.
- B. Subsoil: Excavated material, graded free of lumps larger than 6 inches, rocks larger than 3 inches and debris.

### 3. EXECUTION

#### 3.1 PREPARATION

- A. Identify specified lines, levels, contours and data. Coordinate with Section 017124.
- B. Identify known below grade utilities. Stake and flag locations.
- C. Identify and flag above grade utilities.
- D. Maintain and protect existing utilities remaining which pass through work area.
- E. Notify all utility companies to remove and/or to relocate utilities as necessary.
- F. Upon discovery of unknown utility or concealed conditions, discontinue affected work; notify Architect/Engineer immediately. Confirm notification in writing.

#### 3.2 TOPSOIL EXCAVATION

- A. Excavate topsoil from areas to be further excavated, relandscaped or regraded and stockpile in area designated on site.
- B. Do not excavate wet topsoil.
- C. Stockpile topsoil to depth not exceeding 8 feet. Cover to protect from erosion. Provide environmental protection.

#### 3.3 SUBSOIL EXCAVATION

- A. Excavate subsoil from areas to be relandscaped or regraded and stockpile in area designated on site.
- B. Do not excavate wet subsoil.
- C. Stockpile to depth not exceeding 8 feet.
- D. When excavating through roots, perform work by hand and cut roots with a sharp axe.

#### 3.4 TOLERANCES

- A. Top surface of subgrade: Plus or minus 1 inch.

END 312213

## 1. GENERAL

### 1.1 WORK INCLUDES:

#### A. Base Bid:

1. General Contractor provide:
  - a. Finish grade subsoil.
  - b. Cut out areas to receive stabilizing base course materials for paving and sidewalks.
  - c. Place, finish grade and compact topsoil in all seeded areas and in planting beds.
  - d. Provide off site top soils as necessary.

### 1.2 RELATED WORK

#### A. Specified elsewhere:

1. Section 312333 - Trenching and Backfilling
2. Section 312500 - Erosion & Sedimentation Controls
3. Section 331411 - Water Utility Transmission Piping
4. Section 329219 - Seeding

### 1.3 PROTECTION.

- #### A. Prevent damage to existing fencing, bench marks, and utility lines.

### 1.4 REFERENCES.

- #### A. Specified references, or cited portions thereof, current at date of bidding documents unless otherwise specified, govern the work.
1. Illinois Department of Transportation (IDOT): Standard Specifications for Road and Bridge Construction, latest edition including all addenda.

## 2. PRODUCTS

### 2.1 MATERIALS

- #### A. Topsoil: Friable loam free from subsoil, roots, grass, excessive amount of weeds, stones and foreign matter; acidity range (pH) of 5.5 to 7.5; containing a minimum of 4 percent and a maximum of 25 percent organic matter. Use topsoil on site conforming to these specifications.

## 3. EXECUTION

### 3.1 SUBSOIL PREPARATION

- A. Prepare subgrade in accord with IDOT Specification, Section 301, Articles 301.01 through 301.10.
- B. Cut areas, to subgrade elevation, which are to receive stabilizing base for paving and sidewalks.
- C. Bring subsoil to indicated levels, profiles and contours. Make changes in grade gradual. Blend slopes into level areas.
- D. Slope grade away from building minimum 2.5 inches in 10 feet, unless indicated otherwise on the drawings.
- E. Cultivate subgrade to a depth of 3 inches, where topsoil will be placed. Repeat cultivation in areas where equipment, used for hauling and spreading topsoil, has compacted subsoil.
- F. Compact subsoil:
  - 1. 88 percent where topsoil will be placed.
  - 2. 95 percent where stabilizing base for paving will be placed.
  - 3. 95 percent where stabilizing base for concrete sidewalks will be placed.

### 3.2 PLACING TOPSOIL

- A. Place topsoil in accord with IDOT Specification, Section 211, Articles 211.01 through 211.06.
- B. Use topsoil in relatively dry state. Place during dry weather.
- C. Place 6 inches uncompacted thickness in all seeded areas and 12 inches uncompacted thickness in all planted beds.
- D. Fine grade topsoil in accordance with IDOT Specification Section 212, eliminating rough and low areas to ensure positive drainage. Maintain levels, profiles and contours of subgrades.
- E. Remove stone, roots, grass, weeds, debris and other foreign material while spreading.
- F. Manually spread topsoil around trees, plants and buildings and paved areas to prevent damage which may be caused by grading equipment.
- G. Lightly compact placed topsoil.

### 3.3 SURPLUS MATERIAL

- A. Remove surplus subsoil and topsoil from site.
- B. Leave stockpile areas and entire job site clean and raked, ready to receive landscaping.

END 312219

## 1. GENERAL

### 1.1 WORK INCLUDES

#### A. Base Bid:

##### 1. Contractor provide:

- a. Excavate trenches for site utilities, including: electric lines, waterlines, sanitary sewers, storm sewers, and other public or private utility service extensions.
- b. Compacted bed and compacted fill over site utilities to subgrade elevations.
- c. Compaction.
- d. Dewater excavations
- e. Shore and brace excavations.

### 1.2 RELATED WORK

#### A. Specified elsewhere:

1. Section 331411 - Watermain Utility Transmission Piping
2. Section 331419 - Valves and Hydrants for Water Utility Service
3. Section 329219 - Seeding

### 1.3 TESTS

#### A. Tests and analysis of fill materials will be performed in accord with ANSI/ASTM (D698).

1. The District at its discretion will employ and pay for an independent testing laboratory to perform specified trench backfill and earth compaction tests for excavations backfilled for respective utility work.

### 1.4 REFERENCES.

#### A. Specified references, or cited portions thereof, current at date of bidding documents unless otherwise specified, govern the work.

1. American National Standards Institute/American Society for Testing and Materials (ANSI/ASTM).
  - a. D698 - Test for Moisture-Density Relationship of Soils and Soil--Aggregate Mixtures Using 5.5-pound rammer and 12 inches Drop.
  - b. Illinois Department of Transportation (IDOT): Standard Specifications for Road and Bridge Construction latest edition, including all addenda.

### 1.5 SUBMITTALS

#### A. Submit written compaction test reports performed by the testing laboratory to Engineer prior to initiation of replacement of any paved surfaces.

### 1.6 PROTECTION

#### A. When working within one foot of existing Rend Lake Conservancy District facilities hand



digging is required and a representative of Rend Lake Conservancy District shall be present onsite. This requirement will not apply to District watermain that has been abandoned.

- B. Protect excavations by shoring, bracing, sheet piling, underpinning or other methods to prevent cave-in or loose soil from falling into excavation.
- C. Underpin adjacent structures which may be damaged by excavation work, including service utilities and pipe chases.
- D. Notify Engineer immediately of unexpected subsurface conditions. Confirm notification in writing. Discontinue work until Engineer issues written notification to resume work.
- E. Protect bottom of excavations and soil adjacent to and beneath foundations from frost.
- F. Grade excavation top perimeter to prevent surface water runoff into excavation.

#### 1.7 CONSTRUCTION SAFETY STANDARDS

- A. Each Contractor shall comply with Occupational Safety and Health Administration (OSHA) Excavation and Trenching Safety Standards, 29 CFR, Part 1926.

### 2. PRODUCTS

#### 2.1 SELECT BED AND FILL MATERIALS

- A. POROUS GRANULAR BACKFILL. Comply with IDOT Specification, Article 1003.04, Fine Aggregate, and Article 1004.05, Coarse Aggregate.

#### 2.2 COMMON FILL MATERIALS

- A. Subsoil: Reused: free of gravel larger than 3-inch size, and debris.

### 3. EXECUTION

#### 3.1 INSPECTION

- A. Verify stockpiled fill to be reused as approved in writing by Engineer.

#### 3.2 PREPARATION

- A. Identify specified lines, levels, contours and data. Coordinate with Section 01051.
- B. Compact subgrade surfaces to density specified for backfill materials.

#### 3.3 UTILITIES

- A. Before starting excavation, establish location and extent of underground utilities occurring in work area. Contact Joint Utility Locating Information for Excavators (J.U.L.I.E.) (800)892-0123.
- B. Maintain, reroute or extend existing utility lines to remain which pass through work area.
- C. Protect utility services uncovered by excavation.
- D. Remove abandoned utility service lines from areas of excavation; cap, plug, or seal such lines and identify at grade.

- E. Accurately locate and record abandoned and active utility lines rerouted or extended on Project Record documents in accord with Section 01720.

3.4 EXCAVATION

- A. Excavate subsoil: For conduit, water, sewer, gas lines, and installation of other underground work as shown on drawings.
- B. Cut trenches at the minimum width as shown on the details or as necessary for the proposed construction.
- C. Hand trim excavation and leave free of loose matter. Hand trim for bell and spigot pipe joints.
- D. Remove lumped subsoil, boulders and rocks.
- E. Excavation shall not interfere with normal 45 degree bearing splay of foundations.
- F. Correct unauthorized excavation.
- G. Fill over-excavated areas under pipe or conduit bearing surfaces in accord with Engineer's directions.
- H. Stockpile excavated material in area designated on site and remove excess subsoil not being reused, from site.

3.5 BACKFILLING

- A. Comply with IDOT Standards, Section 208 - Trench Backfill and Section 209 - Porous Granular Backfill; disregarding any references to measurement and payment.

3.6 TOLERANCES

- A. Top surface of backfilling: Plus or minus 1 inch.

3.7 FILL TYPES AND COMPACTION

- A. Compact all fill and backfill to specified values based on Standard Proctor Test.
- B. Existing Ground in Place:

<u>Area / Condition</u>	<u>% of Compaction</u>
1. Overlot - landscaped areas.	85%
2. Footings and foundations.	95%
3. Pavements.	95%

- C. Backfill Materials:

<u>Area / Condition</u>	<u>Fill Type</u>	<u>Max. Lift</u>	<u>% of</u>
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## Compaction

1. Pavements, roads, parking lots, and sidewalks:
    - a. Top 8 in. under slab                      IDOT: CA-6    8 in.            95%
    - b. 8 in. & more below slab                IDOT: CA-6    8 in.            95%
  
  2. Trenches:
    - a. Under footings                            IDOT: CA-6    8 in.            95%
    - b. Under pavements:
      - i. Top 8 in. under slab                    IDOT: CA-6    8 in.            95%
      - ii. 8 in. & more below slab               IDOT: CA-6    12 in.          95%
    - c. Cross lot landscaping                    Common Fill    12 in.          85%
- D. Moisture Content: Not less than 2 percent below optimum moisture content determined in accord with:
1. Standard Proctor Test: ASTM D698 or AASHTO T-99.

### 3.8 COMPACTION TESTING.

- A. Testing will be performed in accord with ANSI/ASTM D1556-64 and with IDOT Standard Specification requirements.

### 3.9 SURPLUS MATERIALS

- A. Remove surplus materials from site.
- B. Leave stockpile areas completely free of all excess fill materials.

END 312333

## 1. GENERAL

### 1.1 WORK INCLUDES

#### A. Base Bid

##### 1. Contractor Provide:

- a. Provide soil erosion and sediment control.
- b. Provide all material, equipment and labor for soil erosion and sediment control as shown on the plans and as necessary or required to comply with the Illinois Environmental Protection Agency (IEPA) and associated National Pollution Discharge Elimination System (NPDES) permits.
- c. Provide temporary seeding as necessary & required throughout construction.
- d. Remove temporary control structures after completion of construction and stabilization of all distributed soils pursuant to successful establishment and growth of vegetative or other specified ground covers.

### 1.2 RELATED WORK

#### A. Specified Elsewhere:

1. All sections related to SITE WORK.
2. Project Drawings: Erosion and Sediment Control Plan, Details, and General Notes.

### 1.3 REFERENCES

#### A. Specified references or cited portions thereof, current at date of bidding documents unless otherwise specified, govern the work.

#### B. Illinois Environmental Protection Agency (IEPA)

1. Standards and Specifications for Soil Erosion and Sediment Control, latest edition.
2. Illinois Urban Manual, 1995 or latest Edition
3. IEPA General NPDES Permit #ILR10 or other NPDES permit as issued for this construction.

#### C. Illinois Department of Transportation (IDOT): Standard Specifications for Bridge Construction, adopted April 1, 2016 including any addenda.

### 1.4 SUBMITTALS

#### A. Submit an itemized summary of soil erosion and sediment control procedures, materials and practices contractor intends to use at specific locations on this particular project.

### 1.5 ATTACHMENTS (NOT USED)

## 2. PRODUCTS

- 2.1 All material used shall be new unless specifically approved by Engineer in writing.
- 2.2 Materials shall be as specified and shown on the drawings or in the referenced specifications.

### 3. EXECUTION

#### 3.1 GENERAL REQUIREMENTS

- A. Prior to project bidding and prior to beginning any construction activities the contractor shall familiarize their self with actual job site conditions.

#### 3.2 PREPARATION AND PLANNING

- A. Prior to initiation of any excavation or construction activities on the construction site:
- B. Prepare a written Storm Water Pollution Prevention Plan (SWPPP) for the construction site to comply with all regulatory agency requirements; properly sign and certify this plan. This plan shall be maintained at the job site and updated as necessary throughout construction.
- C. Submit all information as specified above.

#### 3.3 IMPLEMENTATION

- A. Implement and carry out the SWPPP plan as prepared by the contractor as per article 3.2-A of these specifications.
- B. Perform and document weekly inspections of all Erosion and Sediment control.
- C. Immediately remedy any deficiencies found in any Erosion and Sediment controls or any noncompliance issues with respect to the project.
- D. Provide temporary seeding (IDOT Class 7) as necessary on all completed areas or on areas that will not be worked for 7 days or more.
- E. Remove temporary control structures and mechanisms after completion of construction and full stabilization of all disturbed soils pursuant to successful establishment and growth of vegetative or other specified ground covers.

END 312500

1. GENERAL

1.1 WORK INCLUDES

A. Base Bid:

1. General Contractor: The work under this section includes furnishing all labor, material, equipment and incidental items required to furnish and install a multi-layer rip rap and filter fabric at the locations and to the grades and thicknesses shown on the plans.

1.2 RELATED WORK

A. Specified Elsewhere:

1. Section 331411 -Water Utility Transmission Piping
2. Section 329219 - Seeding

1.3 QUALITY ASSURANCE

- A. The Contractor shall deliver one full truck load of rip rap and one truck load of bedding stone to the job site for inspection and approval by Architect/Engineer and shall obtain written approval from the Engineer for the source of the material before any additional rip rap or bedding crushed stone is delivered to the job site.

1.4 REFERENCES: Specified references, or cited portion thereof, current at date of bidding documents unless otherwise specified, govern the work.

1.5 SUBMITTALS

- A. Submit product data for rip rap, crushed stone and filter fabric.
- B. Illinois Department of Transportation(IDOT): Standard Specifications for Road and Bridge Construction, latest edition including all addenda, hereinafter referred to as “IDOT Specification” except any reference to payment does not apply.

2. PRODUCTS

2.1 MATERIALS

A. Rip Rap

1. Rip rap shall be comprised of a two-layer system consisting of various thickness layers and gradation of crushed stone bedding and rip rap stone as shown on drawings. Crushed rock or gravel shall meet specifications for Illinois Department of Transportation rip rap bedding stone. The rip rap stone layer shall conform to Section 281, Rip Rap and article 1005.01 of IDOT Standard Specifications for Road and Bridge Construction with gradation and thicknesses as shown on the drawings.

B. Filter Fabric for Rip Rap

1. Filter Fabric material shall comply with Article 282, Filter Fabric for Use with Rip Rap of IDOT Standard Specifications.

3. EXECUTION

3.1 INSTALLATION

A. Rip Rap and Crushed Stone

1. Install in accordance with Article 281 of IDOT Specifications.

B. Filter Fabric

1. Install in accordance with Article 282 of IDOT Standard Specifications.

END 313713

## 1. GENERAL

### 1.1 WORK INCLUDES

#### A. Base Bid:

##### 1. General Contractor:

- a. Finish grade all disturbed excavated, and backfilled areas on the entire construction site in accordance with the project specifications.
- b. Prepare subgrade to receive topsoil.
- c. Spread topsoil.
- d. Prepare seed beds, landscape beds, & seeded landscaped beds as shown on the plans.
- e. Provide lime, fertilizer, seed and mulch as specified.
- f. Maintain seeded areas.
- g. Provide seed protection in areas specified.
- h. Provide temporary & erosion and sediment control seeding as necessary and as specified.

### 1.2 RELATED WORK

#### A. Specified elsewhere:

1. Section 312219 - Finish Grading.
2. Section 312333 - Trenching and Backfilling.

### 1.3 REFERENCES

- A. Illinois Department of Transportation (IDOT); Standard Specifications for Road and Bridge Construction, latest edition, including all addenda.
- B. Illinois Environmental Protection Agency (IEPA): Illinois Urban Manual, latest edition.

### 1.4 WARRANTY

- A. Supply Owner with warranty in accordance with General Conditions for a period of one year plus one growing season.

### 1.5 SUBMITTALS

- A. Submit samples in accordance with Section 013323.
- B. Submit material supplier written certification of content and composition of seed and fertilizer.
- C. Submit 10 pound. sample of imported fill to testing laboratory, in air-tight container.
- D. Sample submission may be disregarded when recent satisfactory test results are available for type of fill.

## 2. PRODUCTS



## 2.1 GROWING MEDIA

- A. Topsoil: Friable loam free from subsoil, roots, grass, excessive amount of weeds, stones and foreign matter and agricultural herbicide; acidity range (pH) of 5.5 to 7.5; containing a minimum of 4 percent and a maximum of 25 percent organic matter. Use topsoil from on or off site as necessary that conforms to these specifications.
- B. Fertilizer: Comply with IDOT Specification; Article 1081.08.
- C. Agriculture Ground Limestone: Comply with IDOT Specification; Article 1081.07.
- D. Mulching Material: Straw shall be air dried stalks of wheat, rye, or oats straw, reasonably free from weeds and foreign matter detrimental to plant life. Hay is not permissible or acceptable.
- E. Special Erosion Control Materials: Comply with IDOT Specification; Article 1081.10.
  - 1. Excelsior blanket: min. 0.63 lb/sq yd (plus or minus 10 percent).
  - 2. Knitted straw mat: min. 0.50 lb/ sq yd.
  - 3. Heavy duty erosion control blanket: min. 1.45 lb/sq yd (plus or minus 10 percent).
  - 4. Appurtenances as necessary and required.

## 2.2 SOIL AMENDMENTS

- A. Agricultural Ground Limestone: Comply with IDOT Specification; Article 1081.07.
- B. Fertilizer: Comply with IDOT Specifications; Article 1081.08.

## 2.3 SEEDS

- A. Comply with IDOT Specification; Article 1081.04.
- B. Provide fresh, clean, new-crop seed complying with the tolerance for purity and germination as established by the Official Seed Analysis of North America.
- C. Provide seed mixture composed of grass species, proportions and minimum percentages of purity, germination, and maximum percentage of weed seed as specified.
- D. Provide mixtures as specified for the uses as indicated in article 3.2B of this specification.

## 3. EXECUTION

### 3.1 PREPARATION

- A. All work shall be in accordance with sections 250, Seeding, and 251, Mulch, of the IDOT Standard Specifications.
- B. Remove all foreign materials, plants, roots, stones, sticks, and debris greater than 0.5 inch from all areas to be seeded or landscaped. Remove all debris from site, do not bury foreign material.
- C. Remove contaminated soil.
- D. Cultivate area(s) to receive topsoil to depth of 3 inches. Repeat cultivation in area(s) where equipment has compacted subgrade.

- E. Place topsoil during dry weather; subgrade shall be dry and unfrozen. Spread topsoil to depths as indicated below:
  - 1. Seeded areas: 4 inches over area(s) to be seeded (taper depth from 6 inches to existing lawn in 12 inches).
  - 2. Landscape Areas: 8 inches over area(s) to be landscaped as shown on the plans.
  - 3. Seeded Landscaped Areas: 8 inches over area(s) to be seeded as shown on the plans.
- F. Cultivate topsoil to full depth with mechanical tiller. Cultivate inaccessible areas by hand. Rake until surface is smooth.
- G. Grade to eliminate rough spots and provide proper drainage, eliminate low areas where ponding may occur. Maintain smooth, uniform grades.
- H. Provide erosion and sediment controls as necessary to prevent loss of soils.

### 3.2 FERTILIZING

- A. All work shall be in accordance with sections 250, Seeding, of the IDOT Standard Specifications.
- B. Prepare all disturbed areas within the limits of construction for application of lime, fertilizer, seed and mulch.
- C. Apply agricultural ground limestone at the rate of 2.2 tons per acre (100 lbs/1000 sq ft).
- D. Apply fertilizer nutrients at a ratio of 1:1:1 (Nitrogen, Phosphorous, Potassium).
  - 1. Prior to seeding: Apply at the rate of 300 lbs per acre (6.9 lbs/1000 sq ft) of total fertilizer (i.e. 100 lbs/acre of each nutrient).
  - 2. 30 to 60 days after germination: Apply at the rate of 150 lbs per acre (3.45 lbs/1000 sq ft) of total fertilizer (i.e. 50 lbs/acre of each nutrient).
  - 3. 30 to 60 days after germination during spring seeding seasons: provide an herbicide for crabgrass control at the manufacturer's suggested rate.

### 3.3 SEEDING

- A. All work shall be done in accordance with Section 250, Seeding, of the IDOT Standard Specifications.
- B. Seeding mixtures shall be in accordance with Article 250.07 of the IDOT Standard Specifications and as follows:
  - 1. Lawns, Seeded Landscape Areas, and other Urban Areas:
    - a. IDOT Seeding Mixture "CLASS I - LAWN SEEDING".
  - 2. Rural Areas and Non-Urban Roadside Areas:
    - a. IDOT Seeding Mixture "CLASS 2 - ROADSIDE MIXTURE".
  - 3. Sloped Areas (3:1 or Greater):
    - a. IDOT Seeding Mixture "CLASS 3 - SLOPE MIXTURE".
  - 4. Temporary Erosion Control:

- a. IDOT Seeding Mixture "CLASS 7 - TEMPORARY EROSION CONTROL MIXTURE".

5. Landscaped Areas: Do not seed these areas.

6. Seeded Landscaped Areas: seed these areas with: CLASS 1 or CLASS 7 seeding as specified by the Architect/Engineer.
- C. Do not sow immediately following rain, when ground is too dry or during windy periods.
  - D. Roll seeded area with roller not exceeding 112 pounds.
  - E. Apply water with fine spray immediately after each area has been sown.
  - F. Provide temporary erosion control seeding as necessary and required.

3.4 MULCHING

- A. All work shall be done in accordance with Section 251, Mulch, of the IDOT Standard Specifications.
- B. Apply mulch per Method 2, Procedure 2 or 3 of IDOT Specifications. Apply at the rate of 2 tons per acre for all areas with slopes 4:1 (H:V) or less.
- C. Provide knitted straw mat or excelsior blanket at all areas where slopes are greater than 4:1 (H:V), in ditch & swale flow lines with slopes of 2 percent or less, and at other areas as shown on drawings. Install as per IDOT and manufacturers requirements.
- D. Provide heavy duty erosion control blanket in ditch & swale flow lines with slopes greater than 2 percent, and other areas as shown on drawings. Install as per IDOT and manufacturers requirements.
- E. Lay blankets and mats, in the direction of flow, as per IDOT standards: overlap end of strips a minimum 6 inches with upstream section on top. Fasten all matting with metal staples or wood stakes as per IDOT and the manufacturer's requirements.

3.5 MAINTENANCE

- A. The Using Agency will assume maintenance responsibility after final acceptance of the project. Prior to that, the Contractor shall be responsible for proper maintenance of all seeded areas.
- B. Maintain surfaces; supply additional topsoil in low areas, including areas affected by erosion. Provide inter-seeding as necessary.
- C. Water as necessary to ensure uniform seed germination and to keep surface of soil damp.
- D. Cut grass first time when it reaches height of 2.5 inches; maintain to minimum height of 2 inches. Do not cut more than 1/3 of blade at any one mowing.
- E. After first mowing, water grass sufficiently to moisten soil from 3 to 5 inches deep.
- F. 30 to 60 days after germination, the Contractor shall provide the secondary application of fertilizer as specified. The Contractor shall provide this secondary fertilizer application even if the date falls after the date of final acceptance.

END 329219

1. GENERAL

1.1 WORK INCLUDES

A. Base Bid

1. General Contractor Provide:

- a. PVC watermain, in the pipe sizes, type of jointing, pressure class shown on the Plans
- b. Ductile iron fittings
- c. Tracer wire including splice kits
- d. Testing as required
- e. Disinfection
- f. Casing pipe as required for water and sewer separation, including any miscellaneous items

1.2 RELATED WORK

A. Specified elsewhere:

1. Section 017124 – Grades, Lines, & Levels
2. Section 014100 – Regulatory Requirements
3. Section 312219 – Finish Grading
4. Section 312333 – Trenching and Backfilling
5. Section 312500 – Erosion & Sedimentation Controls

1.3 QUALITY ASSURANCE

- A. Comply with the requirements of the State of Illinois, Plumbing Code.
- B. Comply with IEPA requirements: Section 653.119 Protection of Water Main and Water Service Lines (From Title 35, Subtitle F, Chapter II).
- C. Comply with IEPA rules for Public Water Supply Rules (35 ILL Adm. Code 651 through 654).
- D. Comply with Section 014100 – Regulatory Requirements.
- E. PVC material shall be "virgin" material.

1.4 SUBMITTALS

- A. In accordance with Section 013323 – Shop Drawings, Product Data and Samples
  1. Certification by manufacturer for each item furnished in accordance with the ANSI/AWWA Standards.
  2. Certification of gaskets.
  3. Certification of proof-of-design tests for joints.
  4. Tracer wire cut sheet
  5. Tracer wire splice kits

## 1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Delivery and Handling: Material and accessories shall be handled in a manner that will ensure installation in sound, undamaged condition. Equipment, tools, and methods used in handling and installing material shall not damage the pipe and fittings, etc. Hooks inserted in ends of pipe shall have broad, well-padded contact surfaces.
- B. When pipe is delivered it is to be covered from exhaust fumes as per manufacturer's recommendations. Stockpiled pipe lengths must be blocked to prevent moving. The Contractor shall take precautions when moving pipe to keep from nicking or scratching pipe with equipment. Use of a vacuum pipe handler is recommended.
- C. All damage over 10 percent of the pipes thickness will not be accepted. No additional compensation will be provided for pipe marked as damaged.
- D. Pipe or pipe materials cannot be placed on private property without permission of the property Owner or in areas obstructing pedestrian or vehicle traffic.
- E. The Contractor shall store valves in shipping containers with labeling in place. Polyethylene materials must be stored out of sunlight.
- F. Storage: Store pipe on a flat surface so as to support the barrel evenly with bell ends overhanging. Individual lengths of pipe should be stacked in piles no higher than 5 feet. Pipe shall be protected during long exposures (over 3 months) to sunlight. Do not use clear plastic sheets. Provide for air circulation under sheet. All materials shall be stored such that no material is in contact with the ground. The material shall be protected against excessive bending or deformation resulting from its own weight or superimposed loads. If rubber rings are not to be used immediately, store them in their cartons, as shipped, in a cool dark place out of the direct rays of the sun.
- G. In addition to above all materials shall be delivered, stored, and handled as per manufacturer instructions.

## 2. PRODUCTS

### 2.1 MATERIALS

- A. PVC Pipe
  - 1. AWWA C905 DR 18 push on joint
  - 2. AWWA C905 DR 18 butt fused pipe for directional bore
  - 3. PVC material shall be "virgin" material and must conform to NSF Standard 14.
  - 4. Push on Joint material shall be elastomeric push on gaskets as per ASTM F477 for all watermain piping and shall be pressure rated in accordance with ASTM D3139.
  - 5. Butt fused pipe must have joints made from ASTM D1787 Class 12454B plastic formulated for fusing.
  - 6. Color: blue
- B. Tracer wire
  - 1. # 12 awg HS-CCS high strength copper clad steel conductor (hs-ccs)
  - 2. 45 mil high density, high molecular weight polyethylene (HDPE) insulation
  - 3. 21 percent conductivity
  - 4. 1150# minimum break strength
  - 5. APWA color code blue

6. Splice kits shall be a 3M DBR/Y - 6 direct bury or approved equal
7. Test Station – Rhino Triview or approved equal

C. Ductile Iron Fittings

1. Fittings shall be AWWA C110 or C153
2. Minimum pressure rating 350 psi
3. Ductile iron fittings shall be mechanical restrained joint EBAA Iron “Megalug” Series 2000PV or approved equal
4. Interior lining: double thickness cement mortar lined as per AWWA C104
5. Exterior lining: Asphaltic seal coat inside and out as per AWWA C104
6. Gaskets: SBR in accordance with AWWA C111
7. Approved ductile iron fittings manufactures:
  - a. Tyler Union
  - b. Star fittings

D. Stainless Steel Nuts and Bolts

1. Nuts and bolts used for the installation of the Ductile Iron Fittings shall be type 304 stainless steel with the nuts coated to prevent galling.
2. Dimensions are manufactured in accordance with AWWA C111
3. T bolt alloys SS 304 per ASTM F593
4. Heavy Hex Nut Alloys SS304 per ASTM F594
5. Nuts have fluoropolymer coating material which is VOC complaint, resin-bonded, thermally cured and dry lubricant, 0.3 to 0.4 mil per coats with 3 to 4 coats

E. Polyethylene Encasement

1. Conform to AWWA/ANSI C105/A21.5, In addition, the polyethylene shall consist of three layers of co-extruded linear low-density polyethylene (LLDPE), fused into a single thickness of not less than 8 mils. The inside surface of the polyethylene wrap to be in contact with the pipe exterior shall be infused with a blend of anti-microbial biocide to mitigate microbiologically influenced corrosion and a volatile corrosion inhibitor to control galvanic corrosion.

F. PVC Casing Pipe

1. Watermain quality pipe as accepted by IEPA for water and sewer separation requirements.

### 3. EXECUTION

#### 3.1 GENERAL

- A. Installation shall be as per applicable AWWA Standards AWWA C600 and C111 and as per manufacturer’s installation instructions and per these Plans and Specifications.
- B. See paragraph 1.3 of this section for water sewer separation requirements.
- C. Watermain is to be installed by open cut method, unless specified otherwise by Bid Item.

#### 3.2 POLYETHYLENE ENCASEMENT

- A. All ductile iron water lines, valves, fittings, sleeves, hydrants, etc. shall be polyethylene encased meeting all the requirements for AWWA/ANSI C105/A21.5.

- B. The wrap shall be overlapped one foot in each direction at joints and secured in place around the pipe and any wrap at tap locations shall be taped tightly prior to tapping and inspected for any needed repairs following the tap. When installing in areas below the water table, both ends of the tube shall be thoroughly sealed with adhesive tape or plastic tie straps at the joint overlap. Additionally, circumferential wraps of tape or tie straps shall be placed at 2-foot intervals along the barrel of the pipe to help minimize the space between the encasement and the pipe.

### 3.3 CUTTING PIPE

- A. Cutting shall be done in a neat manner, without damage to the pipe or the lining. Cuts shall be smooth, straight, and at right angles to the pipe axis. After cutting, the ends of the pipe shall be dressed with a file or power grinder to remove all roughness and sharp edges. The cut ends of push-on joint pipe shall be suitably beveled.

### 3.4 ALIGNMENT

- A. Deflections from a straight line or grade shall not exceed the values recommended by the manufacturer. Either shorter pipe sections or fittings shall be installed where required to conform to the alignment or grade indicated on the drawings.

### 3.5 LAYING PIPE

- A. Pipe shall be protected from lateral displacement by placing the specified pipe embedment material. Under no circumstances shall pipe be laid in water, and no pipe shall be laid under unsuitable weather or trench conditions. Whenever pipe laying is stopped, the open end of the pipe shall be sealed with a watertight plug, which will prevent trench water from entering the pipe.

### 3.6 PUSH-ON JOINTS

- A. All joint surfaces shall be lubricated with heavy vegetable soap solution immediately before the joint is completed. Each spigot end shall be suitably beveled to facilitate assembly.

### 3.7 BUTT FUSED JOINTS

- A. Fusion joint data and fusion technician data indicating conformance with this specification and applicable standards, including written documentation regarding any intended variance from this specification and applicable standards. This will include fusion joint warranty information and recommended project specific fusion parameters, including criteria logged and recorded by data logger.
- B. Fusible polyvinylchloride pipe will be fused by qualified fusion technicians, as documented by the pipe supplier. Training records for qualified fusion technicians shall be available to Owner's Representative upon request.
- C. Each joint fusion shall be recorded and logged by an electronic monitoring device (data logger) affixed to the fusion machine. Joint data shall be submitted as part of the As-Recorded information, in accordance with this specification
- D. At each joint, the exterior of the pipe shall be de-burred so as to provide a smooth exterior pipe surface to facilitate insertion into host pipe.
- E. The fusible polyvinylchloride pipe will be installed in a manner so as not to exceed the recommended bending radius.



- F. Where fusible polyvinylchloride pipe is installed by pulling in tension, the recommended Safe Pulling Force, according to the pipe supplier, will not be exceeded.
- G. Only appropriately sized, and outfitted fusion machines that have been approved by the pipe supplier shall be used for the fusion process.
- H. Fusion machines must incorporate the following properties, including the following elements:
  - 1. HEAT PLATE - Heat plates shall be in good condition with no deep gouges or scratches within the pipe circle being fused. Plates shall be clean and free of any contamination. Heater controls shall properly function, and cord and plug shall be in good condition. The appropriately sized heat plate shall be capable of maintaining a uniform and consistent heat profile and temperature for the size of pipe being fused, per the pipe supplier's recommendations.
  - 2. CARRIAGE – Carriage shall travel smoothly with no binding at less than 50 psi. Jaws shall be in good condition with proper inserts for the pipe size being fused. Insert pins shall be installed with no interference to carriage travel.
  - 3. GENERAL MACHINE - Overview of machine body shall yield no obvious defects, missing parts, or potential safety issues during fusion.
- I. DATALOGGER - The current version of the pipe supplier's recommended and compatible software shall be used. Protective case shall be utilized for the hand-held wireless portion of the unit. Datalogger operations and maintenance manual shall be with the unit at all times. If fusing for extended periods of time, an independent 110V power source shall be available to extend battery life.
- J. Other equipment specifically required for the fusion process shall include the following:
  - 1. Pipe rollers shall be used for support of pipe to either side of the machine
  - 2. A weather protection canopy that allows full machine motion of the heat plate, fusion assembly and carriage shall be provided for fusion in inclement and /or windy weather.
  - 3. Fusion machine operations and maintenance manual shall be kept with the fusion machine at all times.
  - 4. Facing blades specifically designed for cutting fusible polyvinylchloride pipe.
- K. JOINT RECORDING
  - 1. Each fusion joint shall be recorded and logged by an electronic monitoring device (data logger) connected to the fusion machine. The fusion data logging and joint report shall be generated by software developed specifically for the fusion of fusible polyvinylchloride pipe. The software shall include fusible polyvinylchloride pipe based dimensional data and fusible polyvinylchloride pipe based interfacial pressure relationships. Data not logged by the data logger shall be logged manually and be included in the Fusion Technician's joint report.

### 3.8 RESTRAINED JOINTS

- A. Restrained joints shall be provided for all directional bored pipe and for all fittings. In addition, the minimum restrained length shall be a minimum 20 feet from any fitting.

### 3.9 BORED WATERMAIN

- A. Trenchless construction methods shall be utilized when shown on the Plans/Specifications.

- B. Directional bored watermain must utilize a Butt Fused joint pipe.
- C. Directional bored watermain when required shall be a 2-pass method and bentonite-based fluid to stabilize the pilot hole.
  - 1. The drill string shall be tracked above grade.

### 3.10 LEAKAGE

- A. All joints shall be watertight and free from leaks. Each leak which is discovered within the correction period stipulated in the General Conditions shall be repaired by and at the expense of the Contractor.

### 3.11 TRACER WIRE

- A. The watermain shall have tracer wire installed in the same trench directly above the pipe as specified above. The Contractor shall try to minimize splices that are to be made to the tracer wire. The distance between splices shall be minimum 500 feet unless circumstances prevent obtaining such distance and then approval from the District shall be obtained. Preapproval is not required where the watermain is to be directional bored. Where the watermain is to be directional drilled, the Contractor shall install 2 high strength tracer wire sections. Provide and install test stations minimum of every 800 feet.
- B. Once the watermain is installed the tracer wire shall be tested with the owner onsite.
- C. Tracer wire splice locations are to be provided to the Owner on submitted As Built Drawings with ties to three permanent objects for each splice.

### 3.12 METAL SIGNS

- A. Metal signs must be installed at every valve and change in direction. These signs will be provided by the District for the Contractor to install.

### 3.13 PRESSURE TEST

- A. Contractor is to pressure test the water mains as per AWWA C651.
  - 1. Test pressure not less than 50 percent of the working pressure at the lowest section of pipe. See plans for test pressure.
  - 2. Test period shall be not less than one hour and not more than six.
- B. Whenever in line valves are present, the Contractor is to provide pressure testing to demonstrate that the valve operational.
- C. Contractor is to provide 48 hours of notice to the District of testing. District representative is to witness the test for acceptance.
- D. Water for testing and disinfection shall be provided by the Owner. Three pipe volumes of water will be provided for free of charge. If either hydrostatic or disinfection testing fails, then the water needed for a successful subsequent test will be charged at a rate of \$2/1000 gallons.
- E. All taps 2 inches in size and smaller required for chlorination or flushing purposes, or for the temporary or permanent release of air, shall be provided by the Contractor as a part of the construction of water mains.

### 3.14 BLOCKING

- A. Provide 1 wrap of polyethylene for the ductile iron fittings. Nuts and bolts are to be protected from the installation of the concrete blocking. Amount of concrete to be installed is as shown on the Plans.
- B. Line stops and flushing fixture fittings shall be thrust blocked (remaining fittings utilize restrained joints), as shown on the plans and specified herein, with a minimum thickness of concrete behind the fittings of 12 inches.
- C. The concrete for thrust blocking shall be obtained from an Illinois Department of Transportation approved concrete batch plant and shall be Class SI Concrete as defined by the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, latest editions. Bagged concrete mixes such as "Quickrete", "Sackcrete", and etcetera shall not be used for this work. Fill material such as patio blocks, bricks, concrete bricks or others shall not be used in the thrust block.
- D. Contractor shall submit all concrete tickets to the Engineer.
- E. The cost of constructing the thrust blocks in the manner specified above and as detailed shall be considered included in the bid price for the items of work involved and no additional compensation will be allowed.

### 3.15 DISINFECTION

- A. The Contractor is to provide flushing and disinfection as specified in Section 41-2.15 of the Standard Specifications for water and sewer construction.
- B. A neutralizing chemical must be applied to the chlorinated discharge if the residual is above 25 ppm. Chemicals to be used can be Sulfur Dioxide (SO<sub>2</sub>), Sodium Bisulfate (NaHSO<sub>3</sub>), Sodium Sulfite (Na<sub>2</sub>SO<sub>3</sub>), Sodium Thiosulfate (Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>·5H<sub>2</sub>O), and Ascorbic Acid (C<sub>6</sub>O<sub>8</sub>H<sub>6</sub>).
- C. The Contractor shall provide sampling at the locations as shown on the Plans or as required in the IEPA Construction Permit.
- D. Contractor is to submit samples to the Illinois Environmental Protection Agency as required in Title 35 Subtitle F Chapter II Section 652.203 of the Illinois Administrative Code.
- E. Owner is to be notified minimum 48 hours in advance of any testing and the Owner shall be onsite to verify the testing process and results.
- F. Contractor is to provide any repeat disinfection and testing to provide satisfactory results.
- G. Two copies of State of Illinois Test Results showing satisfactory bacteriological results shall be submitted to the District.

### 3.16 WATERMAIN AND SEWER SEPARATION

- A. The water main shall be separated from any sewer pipe in strict accordance with 41-2.01 of the Standard Specification for Water and Sewer Construction in Illinois and the Ten States Standards – Recommended Standards for Water Works, Section 8.8.

END 331411

## 1. GENERAL

### 1.1 WORK INCLUDES

#### A. Base Bid:

##### 1. General Contractor Provide:

- a. Gate or Butterfly Valve in the sizes required
- b. Valve Box
- c. Mechanical joint restraints

### 1.2 RELATED WORK

1. Section 017124 – Grades, Lines, & Levels
2. Section 014100 – Regulatory Requirements
3. Section 312219 – Finish Grading
4. Section 312333 – Trenching and Backfilling
5. Section 312500 – Erosion and Sedimentation Controls
6. Section 331411 – Watermain Utility Transmission Piping
7. Section 331420 – Tapping Sleeve and Valve for Water Utility Service

### 1.3 QUALITY ASSURANCE

- A. The valves and appurtenances shall be the product of a manufacturer with a minimum of 10 years’ experience in the design, application, manufacture, and operation of similar size valves and shall be domestically manufactured. This includes the foundry where the valve is cast.

### 1.4 SUBMITTALS

#### A. n

##### 1. Product data:

- a. Submit material description and manufacturer’s current literature indication conformation with AWWA Requirements.

## 2. PRODUCTS

### 2.1 MATERIAL AND EQUIPMENT

#### A. Butterfly Valve

1. AWWA C504 butterfly valve
2. Valve working water pressure rating 250 psi
3. Joints shall be mechanical restrained joint end as per Section 331419.
4. 2-inch AWWA operating nut
5. Non-rising stem clockwise turn
6. Finish: Fusion Bonded Epoxy
7. Manufacturer:

a. Mueller or Kennedy

B. Gate Valve

1. AWWA C515 gate valve
2. Valve working water pressure rating 250 psi
3. Joints shall be mechanical restrained joint end as per Section 3314192.
4. 2-inch AWWA operating nut
5. Non-rising stem clockwise turn
6. Finish: Fusion Bonded Epoxy
7. Manufacturer:

a. Mueller or Kennedy

C. Valve Box

1. Cast Iron Valve Box
2. Two-piece screw type
3. Gate valve shall be furnished with a valve box alignment device. (VBAD)
  - a. Material HDPE (2-piece construction)
  - b. Color white.
  - c. The device shall be the BOXLOK as manufactured by Emma Sales, LLC, or approved equal.

3. EXECUTION

3.1 INSTALLATION

- A. Install valve and accessories as shown on the Plans per manufacturer's instructions and per applicable AWWA Standards.
- B. Install blocking underneath to support the valve. 2-inch patio blocks shall be used.
- C. Run tracer wire up alongside the valve box, loop 2 feet minimum excess tracer wire inside valve through hole cut in valve box.

3.2 TESTING

- A. Valves shall be pressure tested, disinfected as per Section 331419.
- B. Contractor shall demonstrate valves proper installation by pressure testing against the valve.

END 331419

## 1. GENERAL

### 1.1 WORK INCLUDES

#### A. Base Bid

##### 1. General Contractor Provide:

- a. Stainless steel tapping sleeve
- b. Tapping valve
- c. Cast Iron valve box
- d. Concrete blocking as required
- e. Poured in place concrete as required
- f. Miscellaneous items needed to complete the installation of said components
- g. Aggregate backfill as required

### 1.2 RELATED WORK

#### A. Specified elsewhere:

1. Section 017124 – Grades, Lines, and Levels
2. Section 014100 – Regulatory Requirements
3. Section 312219 – Finish Grading
4. Section 312333 – Trenching and Backfilling
5. Section 312500 – Erosion and Sedimentation Controls
6. Section 331411 – Watermain Utility Transmission Piping

### 1.3 QUALITY ASSURANCE

- #### A. As per AWWA C223-13, C228 & 207, ANSI Standard 61 and MSS SP-60

### 1.4 SUBMITTALS

- #### A. Shop Drawings: Drawings, details, specifications, and installation schedules covering all pipe, and accessories shall be submitted in accordance with the procedure set forth in the submittals section. The drawings and data shall include, but shall not be limited to, the following:

1. Certification by manufacturer for each item furnished in accordance with ASTM and/or ANSI/AWWA Standards
2. Certification of gridded gasket
3. Cut sheets of the tapping valve detailing dimensions

### 1.5 PRODUCT DELIVERY, STORAGE, AND HANDLING

- #### A. All materials shall be delivered, stored, and handled as per the manufacturer’s instructions.

## 2. PRODUCTS

## 2.1 MATERIALS

### A. Tapping Sleeve

1. Tapping sleeve shall be per AWWA C233-13 at a minimum
2. Type 304 stainless steel body, outlet and nuts, lugs and bolts
3. Nuts and bolts for connections shall be stainless steel per Section 331419. Flanged connection applies the same. Standard "Gland Pack" nuts and bolts will not be accepted.
4. Nuts and washers coated to prevent galling
5. Tapping sleeve pressure rating shall be 250 psi minimum
6. Flange shall be type 304 stainless steel per AWWA C228 with recess pre MSS SP-60 to accept standard tapping valve
7. Flange ANSI Class 150
8. Gridded gasket: Buna N and completely surrounds the pipe, ASTM D2000.
9. Manufacturer: Ford Meter Box or approved equal

### B. Tapping Valve and Valve Box

1. See Section 331419
2. Tapping valve is to be flanged by mechanical joint and shall meet MSS SP-60

## 3. EXECUTION

### 3.1 RELATED SECTIONS

- A. Install valve and accessories as shown on the Plans per manufacturer's instructions and per applicable AWWA Standards. Installation shall also be per Section 46 of the Standard Specifications for Water and Sewer Construction in Illinois 7<sup>th</sup> Edition.
- B. Install blocking underneath to support the valve. 2-inch patio blocks shall be used.
- C. Run tracer wire up alongside the valve box, loop 2 feet minimum excess tracer wire inside valve through hole cut in valve box.

### 3.2 TESTING

- A. Preliminary pressure test shall be performed per Section 46 of the Standard Specifications for Water and Sewer Construction in Illinois 7<sup>th</sup> Edition.
- B. Provide disinfection and pressure testing as per Section 331411.

### 3.3 BLOCKING

- A. Provide concrete blocking to undisturbed earth on the back side of the tapping valve after successful installation of the tapping sleeve. Concrete blocks are to be secured with wood wedges to earth.
- B. Provide concrete blocks to undisturbed earth to position the tapping valve.

END 331420