

# Project Manual

## Rutherford County Landfill White Goods Handling Area

Owner: Rutherford County



June 2012

Prepared by:



152 E. Main Street  
Forest City, NC 28043  
828-247-4495



# TABLE OF CONTENTS

## ADVERTISEMENT FOR BID

### 00100 INSTRUCTIONS TO BIDDERS

Instructions to Bidders ..... Document 00100

### 00300 BID FORM AND SUPPLEMENTS

Bid Form ..... Document 00300

Minority Business Participation ..... Document 00305

Notice of Award ..... Document 00320

### 00500 AGREEMENT

Agreement Form ..... Document 00500

Notice to Proceed ..... Document 00520

Change Order ..... Document 00540

### 00600 BONDS AND CERTIFICATES

Construction Performance Bond ..... Document 00610

Construction Payment Bond ..... Document 00620

Insurance Certificates ..... Document 00630

Payment Application ..... Document 00640

### 00700 GENERAL CONDITIONS

Standard General Conditions of the Construction Contract ..... Document 00710

### 00800 SUPPLEMENTARY CONDITIONS

Supplementary Conditions ..... Document 00800

### 01000 GENERAL REQUIREMENTS

Summary of Work ..... Section 01010

Measurement and Payment ..... Section 01025

Coordination and Meetings ..... Section 01039

Reference Standards ..... Section 01090

Submittals ..... Section 01300

Quality Control ..... Section 01400

Material and Equipment ..... Section 01600

Starting of Systems ..... Section 01650

Contract Closeout ..... Section 01700

### 02000 SPECIFICATIONS ..... Section 02000

### 03000 DRAWINGS



**ADVERTISEMENT FOR BIDS**  
Rutherford County, North Carolina  
Rutherford County Annex  
289 N. Main St.  
Rutherfordton, NC 28139

Sealed bids for the project entitled "***Rutherford County Landfill White Goods Handling Area***", will be received by Rutherford County on Monday, July 2, 2012 at 10:30am at the Rutherford County Annex at 289 N. Main Street in Rutherfordton, NC and then at said location publicly opened and read aloud. *This will be an informal bid.*

**The project consists of the construction of approximately 1800 SY of 8" concrete pad with loading dock and ramp, concrete masonry units containment wall and other items associated with work of this nature for the handling of white goods at the Rutherford County Landfill.**

The Contract Documents may be examined at the following locations:

Odom Engineering PLLC  
Rutherford County Website

Forest City, NC  
[www.rutherfordcountync.gov](http://www.rutherfordcountync.gov)

Copies of the Contract Documents may be obtained or ordered at:

**Odom Engineering**  
**152 E. Main Street**  
**Forest City NC, 28043**  
**Call: 828-247-4495**  
**Email: [heidi@odomengineering.com](mailto:heidi@odomengineering.com)**

There will be a non-refundable fee of \$25.00 for each set of documents obtained (payable to Odom Engineering).

***A mandatory Pre-Bid Meeting will be held on Thursday, June 21, 2012 at 10:30am at the Rutherford County Annex at 289 N. Main Street in Rutherfordton, NC.***

A certified check or cashiers check payable to *Rutherford County* or a satisfactory Bid Bond executed by a corporate surety licensed under the laws of North Carolina to execute such bonds in the amount equal to five percent of the total of the bid shall be submitted with each bid. A Performance and Payment Bond will be required for this project.

*All bidders must meet the following requirements:*

- 1. Demonstrate experience with concrete slab construction*
- 2. Appropriate NC Licensing*
- 3. Sufficient equipment and personnel to meet the project timeline and specifications*

The low bidder shall identify the minority business participation it will use on the project as applicable prior to project award. The Contractor must ensure that employees and applicants for



employment are not discriminated against because of their race, color, religion, sex or national origin. The low bidder shall provide a list of all employees (including subcontractors) expected to work on the project and their county of residence. The low bidder shall certify that all personnel working on the project are legal US residents.

*Rutherford County* reserves the right to waive any informalities or reject any or all bids.

June 8, 2012

Carl Classen, County Manager  
Rutherford County Annex  
289 N. Main St.  
Rutherfordton, NC 28139  
(828)287-6060

END OF ADVERTISEMENT FOR BIDS



DOCUMENT 00100  
**INSTRUCTIONS TO BIDDERS**



CONTENTS

Article 1 - Defined Terms.....	00100-1
Article 2 - Copies of Bidding Documents.....	00100-1
Article 3 – Qualifications of Bidders.....	00100-1
Article 4 - Examination of Bidding Documents, Other Related Data, and Site.....	00100-1
Article 5 - Pre-Bid Conference.....	00100-3
Article 6 - Site and Other Areas.....	00100-4
Article 7 - Interpretations and Addenda.....	00100-4
Article 8 - Bid Security.....	00100-4
Article 9 - Contract Times.....	00100-5
Article 10 - Liquidated Damages.....	00100-5
Article 11 - Substitute and "Or-Equal" Items.....	00100-5
Article 12 - Subcontractors, Suppliers, and Others.....	00100-6
Article 13 - Preparation of Bid.....	00100-6
Article 14 - Basis of Bid; Evaluation of Bids.....	00100-7
Article 15 - Submittal of bid.....	00100-8
Article 16 - Modification and Withdrawal of Bid.....	00100-8
Article 17 - Opening of Bids.....	00100-8
Article 18 - Bids to Remain Subject to Acceptance.....	00100-9
Article 19 - Award of Contract.....	00100-9
Article 20 - Contract Security and Insurance.....	00100-9
Article 21 - Signing of Agreement.....	00100-10



DOCUMENT 00100

INSTRUCTIONS TO BIDDERS

**ARTICLE 1 - DEFINED TERMS**

1.0 Terms used in these Instructions to Bidders will have the meanings indicated in the General conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below which are applicable to both the singular and plural thereof:

- A. *Bidder* - The individual or entity who submits a Bid directly to OWNER.
- B. *Issuing Office* - The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.
- C. *Successful Bidder* - The lowest responsible Bidder submitting a responsive Bid to whom OWNER (on the basis of OWNER's evaluation as hereinafter provided) makes an award.

**ARTICLE 2 - COPIES OF BIDDING DOCUMENTS**

2.01 Complete sets of the Bidding Documents may be obtained from the Issuing Office.

2.02 Complete sets of Bidding Documents must be used in preparing Bids; neither OWNER nor ENGINEER assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.03 OWNER and ENGINEER, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not confer a license or grant for any other use.

**ARTICLE 3 - QUALIFICATIONS OF BIDDERS**

3.01 To demonstrate Bidders qualifications to perform the Work, within five days of OWNER's request, Bidder shall submit written evidence such as financial data, previous experience, present commitments, and such other data as may be called for below.

- A. Appropriate North Carolina Public Contractor's License.

**ARTICLE 4 - EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA, AND SITE**

4.01 *Subsurface and Physical Conditions*

No Subsurface data is available for this project.

*4.02-Underground Facilities*

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

*4.03 Hazardous Environmental Condition*

No data available.

4.04 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated conditions appears in paragraph 4.04 of the General conditions.

4.05 On request, OWNER will provide Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies as Bidder deems necessary for submission of a Bid. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

4.06 Reference is made to Article 7 of the Supplementary Conditions for the identification of the general nature of other work that is to be performed at the Site by OWNER or others (such as utilities and other prime contractors) that relates to the Work for which a Bid is to be submitted. On request, OWNER will provide to each Bidder for examination access to or copies of Contract Documents (other than portions thereof related to price) for such other work.

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

A. Examine and carefully study the Bidding Documents, including any Addenda and the other related data identified in the Bidding Documents;

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

C. Become familiar with and satisfy Bidder as to all federal, state, and local Laws and Regulations that may affect cost, progress, or performance of the Work.

D. Obtain and carefully study (or assume responsibility for doing so) all additional supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the Work or which relate to

any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including any specific means, methods, techniques, sequences, and procedures of construction expressly require by the Bidding Documents, and safety precautions and programs incident thereto;

E. Agree at the time of submitting its bid that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its bid for performance of the Work at the price bid and within the times and in accordance with the other terms and conditions of the bidding Documents;

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

G. Correlate the information known to Bidder, information and observations obtained from visits to the site, reports and drawings identified in the bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents;

H. Promptly give ENGINEER written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirms that the written resolution thereof by ENGINEER is acceptable to Bidder;

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

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

#### ARTICLE 5 - PRE-BID CONFERENCE-

A *mandatory* Pre-Bid Meeting will be held on Thursday, June 21, 2012 at 10:30 am at the Rutherford County Annex.

## ARTICLE 6 - SITE AND OTHER AREAS

6.01 The Site is identified in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of materials and equipment to be incorporated in the Work are to be obtained and paid for by CONTRACTOR. Easements for permanent structures or permanent changes in existing facilities are to be obtained and paid for by OWNER unless otherwise provided in the Bidding Documents.

## ARTICLE 7 - INTERPRETATION AND ADDENDA

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

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

## ARTICLE 8 - BID SECURITY

8.01 A Bid must be accompanied by Bid security made payable to OWNER in an amount of 5% of Bidder's maximum Bid price and in the form of a certified or bank check or a Bid Bond issued by a surety meeting the requirements of paragraphs 5.01 and 5.02 of the General Conditions. Failure to provide a satisfactory Bid security will result in a non-responsive Bid.

8.02 The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract Documents, furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, OWNER may annul the Notice of Award and the bid security of that bidder will be forfeited. The Bid security of other Bidders whom Owner believes to have a reasonable chance of receiving the award may be retained by OWNER until the earlier of seven days after the Effective Date of the Agreement or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be returned.

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

## ARTICLE 9 - CONTRACT TIMES

### 9.01 *Time of Essence*

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

### 9.02 *Days to Achieve a Substantial and Final Payment*

A. The Work is to be completed within 60 days of the notice to proceed.

## ARTICLE 10 - LIQUIDATED DAMAGES

10.01 CONTRACTOR and OWNER recognize that time is of the essence of this Agreement and that OWNER will suffer financial loss if the Work is not completed within the time(s) specified in paragraph 9.01 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by OWNER if the Work is not completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty), CONTRACTOR shall pay OWNER \$300 for each day that expires after the time specified in paragraph 9.02 for Substantial Completion until the Work is substantially complete. After Substantial Completion, if CONTRACTOR shall neglect, refuse or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by OWNER, CONTRACTOR shall pay OWNER \$300 for each day that expires after the time specified in paragraph 9.02 for completion and readiness for final payment until the Work is completed and ready for final payment.

## ARTICLE 11 - SUBSTITUTE AND /OR-EQUAL ITEMS

11.01 The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration of possible substitute and or-equal items. Whenever it is specified or described in the Bidding Documents that a substitute and or -equal item of material or equipment may be furnished or used by CONTRACTOR if acceptable to ENGINEER, application for such acceptance will not be considered by ENGINEER until after the Effective Date of the Agreement. The procedure for submission of any such application by CONTRACTOR for consideration by ENGINEER is set forth in the General Conditions and may be supplemented in the General Requirements.

## ARTICLE 12 - SUBCONTRACTORS, SUPPLIERS, AND OTHERS

12.01 The requirements of Construction Grants and Loans dictate that for single prime bidding, all

bidders are required to identify to the OWNER, on their bid, the contractors they have selected for the subdivision or branches of work for the following: a) heating, ventilating, and air conditioning; b) plumbing; c) electrical; and d) general. The North Carolina License Number for each Subcontractor should be included on the bid. If OWNER or ENGINEER, after due investigation, has a reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, OWNER may, before the Notice of Award is given, request apparent Successful Bidder to submit a substitute, without an increase in the Bid.

12.02 If apparent Successful bidder declines to make any such substitution, OWNER may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, individuals, or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the bid security of any bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which OWNER or ENGINEER makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to OWNER and ENGINEER subject to revocation of such acceptance after the Effective Date of the Agreement as provided in paragraph 6.06 of the General Conditions.

12.03 CONTRACTOR shall not be required to employ any Subcontractor, Supplier, individual, or entities against whom CONTRACTOR has a reasonable objection.

#### **ARTICLE 13 - PREPARATION OF BID**

13.01 The Bid form is included with the Bidding Documents. Additional copies may be obtained from ENGINEER.

13.02 All blanks on the Bid form shall be completed by printing in ink or by typewriter and the Bid signed. A bid shall be indicated for each Bid item listed therein.

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

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

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

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

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

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

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

13.10 The address and telephone number for communications regarding the Bid shall be shown.

13.11 The Bid shall contain evidence of Bidders authority and qualification to do business in the state where the Project is located or covenant to obtain such qualification prior to award of the Contract. Bidders state contractor license number for the state of the Project, if any, shall also be shown on the Bid form.

#### **ARTICLE 14 - BASIS OF BID; EVALUATION OF BIDS**

##### **14.01 *Unit Price***

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

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

C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.

D. The Bids will be evaluated as follows:

E. The sum total of both the Base Bid and Alternate Bids for all Bid items provided. If the total exceeds a pre-determined amount, alternate Bid items will be removed until the total is equal to the pre-determined amount.

##### **14.02 *Bid Price***

The Bid price shall include such amounts as the Bidder deems proper for overhead and profit on account of cash allowances, if any, named in the Contract Documents as provided in paragraph 11.02 of the General Conditions.

#### **ARTICLE 15 - SUBMITTAL OF BID**

15.01 Each prospective Bidder is furnished one copy of the Bidding Documents with one separate unbound copy each of the Bid form, and, if required, the Bid Bond. The unbound copy of the Bid form is to be completed and submitted with the Bid security.

15.02 A Bid shall be submitted no later than the date and time prescribed and at the place indicated in the advertisement or invitation to Bid and shall be enclosed in an opaque sealed envelope plainly marked with the Project title (and, if applicable, the designated portion of the Project for which the Bid is submitted), the name and address of bidder, and shall be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the bid shall be enclosed in a separate envelope plainly marked on the outside with the notation "BID ENCLOSED".

#### **ARTICLE 16 - MODIFICATION AND WITHDRAWAL OF BID**

16.01 A Bid may be modified or withdrawn by an appropriate document duly executed in the manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids.

16.02 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with OWNER and promptly thereafter demonstrates to the reasonable satisfaction of OWNER that there was a material and substantial mistake in the preparation of its Bid, that bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

#### **ARTICLE 17 - OPENING OF BIDS**

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

#### **ARTICLE 18 - BIDS REMAIN SUBJECT TO ACCEPTANCE**

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

## **ARTICLE 19 - AWARD OF CONTRACT**

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

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

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

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

19.05 OWNER may conduct such investigations as OWNER deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities to perform the Work in accordance with the Contract Documents.

19.06 If the Contract is to be awarded, OWNER will award the Contract to the lowest qualified bidder.

## **ARTICLE 20 - CONTRACT SECURITY AND INSURANCE**

20.01 Article 5 of the General Conditions, as may be modified by the Supplementary Conditions, set forth OWNER's requirements as to performance and payment Bonds and insurance. When the Successful Bidder delivers the executed Agreement to OWNER, it must be accompanied by such Bonds.

## **ARTICLE 21 - SIGNING OF AGREEMENT**

21.01 When OWNER gives a Notice of Award to the Successful Bidder, it shall be accompanied by

the required number of unsigned counterparts of the Agreement with the other Contract Documents which are identified in the Agreement as attached thereto. Within 15 days thereafter, Successful Bidder shall sign and deliver the required number of counterparts of the Agreement and attached documents to OWNER. Within ten days thereafter, OWNER shall deliver one fully signed counterpart to Successful Bidder with a complete set of the Drawings with appropriate identification.

END OF INSTRUCTIONS TO BIDDERS

DOCUMENT 00300  
**BID FORM AND SUPPLEMENTS**



## BID FORM

**PROJECT:** *Rutherford County Landfill White Goods Handling Area*

**OWNER:** *Rutherford County, NC*

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

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

3.01 In submitting this Bid, Bidder represents, as set forth in the Agreement, that:

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

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

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

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

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.0.2 of the General Conditions, and (2) reports and drawings of a

Hazardous Environmental Condition, if any, which has been identified in the Supplementary Conditions as provided in paragraph 4.06 of the General Conditions.

E. Bidder has obtained and carefully studied (or assumes responsibility for having done so) all additional or supplementary examinations, investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site which may affect cost, progress, or performance of the work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedure of construction expressly required by the Bidding Documents to be employed by Bidder, and safety precautions and programs incident thereto.

F. Bidder does not consider that any further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times and in accordance with the other terms and conditions of the Bidding Documents.

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

H. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the Site, reports and drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies and data with the Bidding Documents.

I. Bidder has given ENGINEER written notice of all conflicts, errors ambiguities or discrepancies that Bidder has discovered in the Bidding Documents and the written resolution thereof by ENGINEER is acceptable to Bidder.

J. The bidding documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the work for which this Bid is submitted.

4.01 Bidder further represents that this Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid; Bidder has not solicited or induced any individual or entity to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over OWNER.

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

## RUTHERFORD COUNTY LANDFILL BID FORM

		QTY	UNIT	UNIT PRICE	TOTAL
1	Mobilization	1	LS		
2	Grading	1	LS		
3	Construction Staking	1	LS		
4	4" Compacted ABC Stone	1,800	SY		
5	8" Concrete Slab w/ Rebar	1,800	SY		
6	Concrete Slab Footings and Rebar	600	LF		
7	CMU Wall	600	SF		
8	Wall Footings w/ Rebar	102	LF		
9	Loading Dock w/ Ramp	1	LS		
10	4" Curb	260	LF		
11	Storm Water Flume	1	LS		
<b>SUBTOTAL</b>					
<b>CONTINGENCY 10%</b>					
<b>TOTAL</b>					

Total Amount of Bid \$ \_\_\_\_\_ (In Words)

Unit Prices have been computed in accordance with paragraph 11.03.B of the General Condition



Bidders are required to identify the contractors they have selected for the following:

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

6.01 Bidder agrees that the Work will be substantially completed and completed and ready for final payment in accordance with paragraph 14.07.B of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified above, which shall be stated in the Agreement.

7.01 The following documents are attached to and made a condition of this Bid:

- A. Required bid security
- B. A tabulation of Subcontractors, Suppliers, individuals and entities required to be identified in this bid.

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

SUBMITTED on \_\_\_\_\_, 20\_\_\_\_.  
North Carolina Public Utilities Contractor License No. \_\_\_\_\_.

If BIDDER is:

An Individual

Name(typed or printed): \_\_\_\_\_ By \_\_\_\_\_

\_\_\_\_\_ (SEAL)

*(Individual's signature)*

Doing business as: \_\_\_\_\_

Business address: \_\_\_\_\_

Phone No.: \_\_\_\_\_ FAX No.: \_\_\_\_\_

A Partnership

Partnership Name: \_\_\_\_\_

By \_\_\_\_\_ (SEAL)

*(Signature of general partner - attach evidence of authority to sign)*

Name (typed or printed): \_\_\_\_\_

Business address: \_\_\_\_\_

Phone No.: \_\_\_\_\_ FAX No.: \_\_\_\_\_

A Corporation

Corporation Name \_\_\_\_\_ (SEAL) State  
of Incorporation: \_\_\_\_\_ Type  
(General Business, Professional, Service, Limited Liability): \_\_\_\_\_

By \_\_\_\_\_ (SEAL)  
*(Signature - attach evidence to sign)*

Name (typed or printed): \_\_\_\_\_  
Title: \_\_\_\_\_

Attest \_\_\_\_\_ (CORPORATE SEAL)  
*(Signature of Corporate Secretary)*

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

Phone No.: \_\_\_\_\_ FAX No.: \_\_\_\_\_

Date of Qualification to do business is: \_\_\_\_\_

A Joint Venture

Joint Venturer Name: \_\_\_\_\_ (SEAL) By:  
\_\_\_\_\_  
*(Signature of joint venture partner - attach evidence of authority to sign)*

Name (typed or printed): \_\_\_\_\_  
Title: \_\_\_\_\_  
Business Address: \_\_\_\_\_  
Phone No.: \_\_\_\_\_ FAX No.: \_\_\_\_\_

Joint Venturer Name: \_\_\_\_\_ (SEAL) By:  
\_\_\_\_\_  
*(Signature of joint venture partner - attach evidence of authority to sign)*

Name (typed or printed): \_\_\_\_\_  
Title: \_\_\_\_\_  
Business Address: \_\_\_\_\_  
Phone No.: \_\_\_\_\_ FAX No.: \_\_\_\_\_

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

END OF BID FORM

0300-5

## **MINORITY BUSINESS PARTICIPATION**

This community has a 10% goal for participation by Minority Business Enterprises for construction projects. As part of the management and execution of this program, the Bidder is required to provide proof of this participation or provide documentation of their "good faith effort" to solicit Minority Businesses or provide documentation that the project will be 100% completed by the bidder's own work forces.

The Bidder must complete either Affidavit A, B or C to document this process. The Bidder must include the completed documents as part of their bid package.



AFFIDAVIT A

**IDENTIFICATION OF MINORITY BUSINESS PARTICIPATION**

I, \_\_\_\_\_  
(Name of Bidder)

do hereby certify that on this project, we will use the following minority business enterprises as construction subcontractors, vendors, suppliers or providers of professional services.

Firm Name, Address and Phone #	Work Type	* Minority Category

\* Minority Categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**)  
American Indian (**I**), Female (**F**), Socially and Economically Disadvantaged (**D**)  
The total value of minority business contracting will be (\$)

\_\_\_\_\_

Date: \_\_\_\_\_ Name of Authorized Officer: \_\_\_\_\_

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

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



**AFFIDAVIT B**

**INTENT TO PERFORM CONTRACT WITH OWN WORKFORCE**

County of \_\_\_\_\_

Affidavit of

\_\_\_\_\_  
(Name of Bidder)

I hereby certify that it is our intent to perform 100% of the work required for the

\_\_\_\_\_ contract.  
(Name of Project)

In making this certification, the Bidder states that the Bidder does not customarily subcontract elements of this type project, and normally performs and has the capability to perform and will perform all elements of the work on this project with his/her own current work forces; and

The Bidder agrees to provide any additional information or documentation requested by the owner in support of the above statement.

The undersigned hereby certifies that he or she has read this certification and is authorized to bind the Bidder to the commitments herein contained.

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

Name of Authorized Officer: \_\_\_\_\_

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

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



**AFFIDAVIT C**

**GOOD FAITH EFFORTS**

County of \_\_\_\_\_

If the goal of 10% participation by minority business **is not achieved**, the Bidder shall provide the following documentation to the Owner of his good faith efforts

Affidavit of:

\_\_\_\_\_

I do certify the attached as true and accurate representation of my good faith efforts.  
(Attach additionally sheets if required)

Name and Phone #	*Minority Category	Work Description	Dollar Value

\* Minority Categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**), Socially and Economically Disadvantaged (**D**)  
Documentation of the Bidder's good faith efforts to meet the goals set forth in these provisions. Examples of documentation include, but are not limited to, the following evidence:

1. Copies of Solicitations for quotes to at least three (3) minority business firms. Each solicitation shall contain a specific description of the work to be subcontracted, location where bid documents can be reviewed, representative of the Prime Bidder to contact, and location, date and time when quotes must be received.
2. Copies of quotes or responses received from each firm responding to the solicitation
3. A telephone log of follow-up calls to each firm sent a solicitation
4. For subcontracts where a minority business firm is not considered the lowest responsible sub-bidder, copies of quotes received from all firms submitting quotes for that particular subcontract.
5. Documentation of any contracts or correspondence to minority business, community, or contractor organizations in an attempt to meet the goal.
6. Copy of pre-bid roster



7. Letter documenting efforts to provide assistance in obtaining required bonding or insurance for minority business.
8. Letter detailing reasons for rejection of minority business due to lack of qualification.
9. Letter documenting proposed assistance offered to minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letter of credit, including waiving credit that is ordinarily required.

Failure to provide the documentation as listed in these provisions may result in the rejection of the bid and award to next lowest responsible and responsive bidder.

Date: \_\_\_\_\_ Name of Authorized Office \_\_\_\_\_

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

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



### NOTICE OF AWARD

Dated \_\_\_\_\_

TO: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

PROJECT: **Rutherford County Landfill White Goods Handling Area**

You are notified that your Bid dated July 2 , 2012 for the above Contract has been considered. You are the apparent Successful Bidder and have been awarded a contract for

The Contract Price of your contract is \_\_\_\_\_ (\$)  
(Use words)

Copies of each of the proposed Contract Documents (except Drawings) accompany this Notice of Award.

You must comply with the following conditions precedent within fifteen days of the date of this Notice of Award.

1. Deliver to the OWNER three fully executed counterparts of the Contract Documents. (Each of the Contract Documents must bear your signature on them).
2. Deliver with the executed Contract Documents the Contract security (Bonds) as specified in the Instructions to Bidders (Article 20), the General Conditions (paragraph 5.01) and Supplementary Conditions (paragraph SC-5.01).

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

Within ten days after you comply with the above conditions, OWNER will return to you one fully signed counterpart of the Agreement with the Contract Documents attached.

#### ACCEPTANCE OF AWARD

\_\_\_\_\_  
Rutherford County  
Owner

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Carl Classen, County Manager  
Title

\_\_\_\_\_  
Title



DOCUMENT 00500  
**AGREEMENT**



DOCUMENT 00500  
**AGREEMENT**

THIS AGREEMENT is by and between Rutherford County (hereinafter called OWNER) and \_\_\_\_\_ (hereinafter called CONTRACTOR).

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

**ARTICLE 1 - WORK**

CONTRACTOR shall complete all Work as specified or indicted in the Contract Documents. The Work is generally described as follows:

The project consists of the construction of approximately 1800 SY of 8" concrete pad with loading dock and ramp, concrete masonry units containment wall and other items associated with work of this nature for the handling of white goods at the Rutherford County Landfill.

**ARTICLE 2 - NOT USED**

**ARTICLE 3 - ENGINEER.**

The Project has been designed by *Odom Engineering, PLLC* who is hereinafter called ENGINEER and who is to act as OWNER's representative, assume all duties and responsibilities, and have the rights and authority assigned to ENGINEER in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

**ARTICLE 4 - CONTRACT TIMES.**

*4.01 Time of the Essence*

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

*4.02 Days to Achieve Substantial Completion and Final Payment*

The Work is to be completed within 60 days of Notice to Precede.

*4.03 Liquidated Damages*

CONTRACTOR and OWNER recognize that time is of the essence of this Agreement and that OWNER will suffer financial loss if the Work is not completed within the time(s) specified above,

plus any extensions allowed. The parties also recognize the delays, expense, and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by OWNER if the Work is not completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty), CONTRACTOR shall pay OWNER \$300 for each day that expires after the time specified.

**ARTICLE 5 - CONTRACT PRICE.**

5.01 OWNER shall pay CONTRACTOR for completion of the Work in accordance with the Contract Documents an amount in current funds equal to the sum of the established unit price for each separately identified item of Unit Price Work times the estimated quantity of that item as indicated on the Bid Form submitted by the CONTRACTOR, attached hereto as an exhibit.

TOTAL OF ALL UNIT PRICES \_\_\_\_\_ (\$)

5.02 Estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by ENGINEER.

**ARTICLE 6 - PAYMENT PROCEDURES.**

*6.01 Submittal and Processing of Payments*

A. CONTRACTOR shall submit Applications for Payment to the ENGINEER. Applications for Payment will be processed by ENGINEER and submitted to OWNER.

*6.02. Progress Payments; Retainage*

A. OWNER shall make progress payments on account of the Contract Price on the basis of CONTRACTOR's Applications for Payment as recommended by ENGINEER on or about the 25<sup>th</sup> day of each month during construction.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below, but, in each case, less the aggregate of payments previously made and less such amounts as ENGINEER shall determine, or OWNER may withhold.

(a) 95% of Work completed (with the balance being retainage).

(b) 95% of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

6.03 *Final Payment.* Upon final completion and acceptance of the Work. OWNER shall pay the remainder of the Contract Price as recommended by ENGINEER.

## ARTICLE 7 - INTEREST

7.01. All money's not paid when due (30 days after recommendation of Project Engineer) as shall bear interest at the rate of 6% per annum.

## ARTICLE 8 – CONTRACTOR'S REPRESENTATIONS

8.01. In order to induce OWNER to enter into this Agreement CONTRACTOR makes the following representations:

A. CONTRACTOR has examined and carefully studied the contract Documents and the other related data identified in the Bidding Documents.

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

C. CONTRACTOR is familiar with and is satisfied as to all federal, state and local Laws and Regulations that may affect cost, progress, performance and furnishing of the Work.

D. CONTRACTOR has obtained and carefully studied (or assumes responsibility for having done so) all investigations, explorations, tests, studies and data concerning conditions (surface, subsurface and Underground Facilities) at or contiguous to the Site or otherwise which may affect cost, progress or performance of the Work or which relate to any aspect of the means, methods, techniques, sequences and procedures of construction to be employed by CONTRACTOR, including applying the specific means, methods, techniques, sequences, and procedures of construction, if any, expressly required by the Contract Documents to be employed by CONTRACTOR, and safety precautions and programs incident thereto.

E. CONTRACTOR does not consider that any further examinations, investigations, explorations, tests, studies or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents.

F. CONTRACTOR is aware of the general nature of work to be performed by OWNER and others at the site that relates to the Work as indicated in the Contract Documents.

G. CONTRACTOR has correlated the information known to CONTRACTOR, information and observations obtained from visits to the Site, reports and drawings identified in the Contract Documents, and all additional examinations, investigations, explorations, tests, studies and data with the Contract Documents.

H. CONTRACTOR has given ENGINEER written notice of all conflicts, errors, ambiguities or discrepancies that CONTRACTOR has discovered in the Contract Documents, and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR

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

## ARTICLE 9 - CONTRACT DOCUMENTS

9.01 A. The Contract Documents consist of the following:

1. This Agreement (Document 00500);
2. General Requirements and Specifications as listed in the table of contents of the Project Manual;
3. Drawings consisting of a cover sheet and plan sheets numbered with the sheets bearing the following general title: **Rutherford County Landfill White Goods Handling Area**;
4. Addenda (numbers \_\_ to \_\_ inclusive);
5. Exhibits to this Agreement (enumerated as follows):
  - a. CONTRACTOR's Bid (Document 00410)
  - b. CONTRACTOR'S complete listing of personnel that will work on the project
6. The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
  - a. Written Amendments;
  - b. Change Order (s).

B. There are no Contract Documents other than those listed above in this Article 9.

## ARTICLE 10 - MISCELLANEOUS

### 10.01 *Terms*

A. Terms used in this Agreement will have the meanings indicated in the General Conditions.

10.02 *Assignment of Contract*

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

10.03 *Successors and Assigns*

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

10.04 *Severability*

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

**ARTICLE 11 – PRE-AUDIT CERTIFICATE**

This instrument has been pre-audited in the manner required by the Local Government Budget and Fiscal Control Act.

\_\_\_\_\_  
Paula Roach, County Finance Officer

IN WITNESS WHEREOF, OWNER and CONTRACTOR have signed this Agreement in duplicate. One counterpart each has been delivered to OWNER and CONTRACTOR. All portions of the Contract Documents have been signed, initialed or identified by OWNER and CONTRACTOR or on their behalf.

This Agreement will be effective on \_\_\_\_\_, 2012 (which is the Effective Date of the Agreement).

1. CONTRACTOR

\_\_\_\_\_  
(Contractor Name)

BY: \_\_\_\_\_  
(signature)

\_\_\_\_\_  
(print name)

(CORPORATE SEAL)

TITLE: \_\_\_\_\_

ATTEST:

\_\_\_\_\_

TITLE \_\_\_\_\_

\_\_\_\_\_

2. OWNER

Rutherford County  
(Owner Name)

BY: \_\_\_\_\_  
(signature)

(CORPORATE SEAL)

TITLE: Carl Classen, County Manager

ATTEST:

\_\_\_\_\_

TITLE \_\_\_\_\_

End of Agreement

# NOTICE TO PROCEED

Dated \_\_\_\_\_

TO: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

PROJECT: Rutherford County Landfill White Goods Handling Area

You are notified that the Contract Times for the above Project will commence to run on \_\_\_\_\_, 2012. By that date, you are to start performing your obligations under the Contract Documents. In accordance with Article 4 of the Agreement, the work is to be completed within 60 days of the Notice to Proceed

Before you may start any work at the site, paragraph 2.05 of the General Conditions provides that you and the Owner must each deliver to the other (with copies to ENGINEER and other identified additional insureds) certificates of insurance which each is required to purchase and maintain in accordance with the Contract Documents.

Also, before you may start any Work at the Site, you must

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

\_\_\_\_\_ Rutherford County \_\_\_\_\_ Owner

\_\_\_\_\_ Authorized Signature

\_\_\_\_\_ Carl Classen, County Manager \_\_\_\_\_ Title

\_\_\_\_\_ Contractor

\_\_\_\_\_ Authorized Signature

\_\_\_\_\_ Title

Return completed form to ENGINEER



RUTHERFORD COUNTY  
 RUTHERFORD COUNTY LANDFILL WHITE GOODS HANDLING AREA  
 CHANGE ORDER NO. \_\_\_\_

INSTITUTION: Rutherford County  
 PROJECT: Rutherford County Landfill White Goods Handling Area  
 ORIGINAL CONTRACT FOR:  
 ENGINEER: Odom Engineering, PLLC  
 CONTRACTOR:

Under the terms of the Contract and without invalidating the original provisions thereof, the following changes in work are authorized for the change in contract amount herein set forth:

Item	Quantity	Unit	Unit Price	Total
TOTAL				

Contractor proposes to furnish labor materials, and equipment for the above referenced addition.

**CONTRACT COST SUMMARY**

1. Current Contract Amount
2. Amt. Of this Order
3. Revised Contract Total Amount

I certify that my Bonding Company will be notified forthwith that my contract has been increased by the amount of this change order, and that a copy of the approved change order will be mailed upon receipt by me to my surety.

\_\_\_\_\_  
 (Contractor)

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

\_\_\_\_\_  
 (Date)

Odom Engineering  
 (Engineer)

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

\_\_\_\_\_  
 (Date)

Rutherford County  
 (Owner)

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

\_\_\_\_\_  
 (Date)



DOCUMENT 00600  
**BONDS AND CERTIFICATES**



## PERFORMANCE BOND

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

CONTRACTOR (Name and Address):

SURETY (Name and Address of Principle Place of Place of Business)

OWNER (Name and Address):

### CONTRACT

Date:  
Amount:  
Description (Name and Location):

### BOND

Bond Number:  
Date (Not earlier than Contract Date):  
Amount:  
Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Payment Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPLE  
Company:

SURETY

Signature: \_\_\_\_\_ (Seal) \_\_\_\_\_ (Seal)  
Name and Title: \_\_\_\_\_ Surety's Name and Corporate Seal

By: \_\_\_\_\_  
Signature and Title  
(Attach Power of Attorney)

(Space is provided below for signatures of additional parties, if required)

Attest: \_\_\_\_\_  
Signature and Title

CONTRACTOR AS PRINCIPLE  
Company:

SURETY

Signature: \_\_\_\_\_ (Seal) \_\_\_\_\_ (Seal)  
Name and Title: \_\_\_\_\_ Surety's Name and Corporate Seal

By: \_\_\_\_\_  
Signature and Title  
(Attach Power of Attorney)

Attest: \_\_\_\_\_  
Signature and Title



PAYMENT BOND

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

CONTRACTOR (Name and Address):

SURETY (Name and Address of Principle Place of Place of Business)

OWNER (Name and Address):

CONTRACT

Date:
Amount:
Description (Name and Location):

BOND

Bond Number:
Date (Not earlier than Contract Date):
Amount:
Modifications to this Bond Form:

Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Payment Bond to be duly executed on its behalf by is authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPLE
Company:

SURETY

Signature: (Seal) Surety's Name and Corporate Seal (Seal)
Name and Title:

By:
Signature and Title
(Attach Power of Attorney)

(Space is provided below for signatures of additional parties, if required)

Attest:
Signature and Title

CONTRACTOR AS PRINCIPLE
Company:

SURETY

Signature: (Seal) Surety's Name and Corporate Seal (Seal)
Name and Title:

By:
Signature and Title
(Attach Power of Attorney)

Attest:
Signature and Title



APPLICATION FOR PAYMENT

PROJECT: RUTHERFORD COUNTY LANDFILL WHITE GOODS HANDLING AREA  
RUTHERFORD COUNTY

DOCUMENT DATE: \_\_\_\_\_  
APPLICATION NO: \_\_\_\_\_  
DATE NOTICE PROCEED: \_\_\_\_\_  
COMPLETION DATE: \_\_\_\_\_  
Days Remaining in Contract: \_\_\_\_\_  
PERCENT COMPLETE: \_\_\_\_\_

ENGINEER: ODOM ENGINEERING, PLLC  
FOREST CITY, NC

CONTRACTOR:

CONTRACT: ORIGINAL CONTRACT AMOUNT \_\_\_\_\_  
APPROVED CHANGE ORDER AMOUNT \_\_\_\_\_  
REVISED CONTRACT AMOUNT \_\_\_\_\_

SUMMARY: TOTAL WORK COMPLETED TO DATE \_\_\_\_\_  
TOTAL MATERIALS STORED ON SITE \_\_\_\_\_  
TOTAL EARNED THIS APPLICATION \_\_\_\_\_  
LESS \_\_\_% RETAINAGE \_\_\_\_\_  
SUBTOTAL \_\_\_\_\_  
LESS PREVIOUS PAYMENTS \_\_\_\_\_  
CURRENT PAYMENT DUE \_\_\_\_\_

SIGNATURES:  
CONTRACTOR:

\_\_\_\_\_  
NAME TITLE DATE

VERIFICATION: IN ACCORDANCE WITH THE CONTRACT AND THIS APPLICATION FOR PAYMENT, THE CONTRACTOR HAS COMPLETED THE WORK STATED ABOVE AND IS ENTITLED THE FULL PAYMENT IN THE AMOUNT SHOWN.

ENGINEER: ODOM ENGINEERING PLLC

David Odom, PE President \_\_\_\_\_  
NAME TITLE DATE

APPROVAL: THIS APPLICATION IS HEREBY APPROVED FOR PAYMENT:

OWNER: RUTHERFORD COUNTY

Carl Classen County Manager \_\_\_\_\_  
NAME TITLE DATE



DOCUMENT 00700  
**GENERAL CONDITIONS**



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 Law.

## STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

*Prepared by*

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By



PROFESSIONAL ENGINEERS IN PRIVATE PRACTICE  
*a practice division of the*

NATIONAL SOCIETY OF PROFESSIONAL

ENGINEERS

AMERICAN COUNCIL OF ENGINEERING

COMPANIES

AMERICAN SOCIETY OF CIVIL ENGINEERS

This document has been approved and endorsed

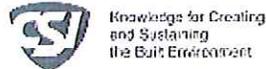
by

The Associated General Contractors of America



and the

Construction Specification Institute



---

EJCDC C-710 Standard General Conditions of the Construction Contract, Funding Agency Edition  
Copyright © 2002 National Society of Professional Engineers for EJCDC. All rights reserved.

---

These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor Funding Agency Edition No. C-521 (2002 Edition). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the EJCDC Construction Documents, General and Instructions (No. C-001, 2002 Edition). For guidance in the preparation of Supplementary Conditions, see Guide to the Preparation of Supplementary Conditions (No. C-800, 2002 Edition).

Copyright © 2002 National Society of Professional Engineers  
1420 King Street, Alexandria, VA 22314-2794  
(703) 684-2882

American Council of Engineering Companies  
1015 15th Street N.W., Washington, DC 20005  
(202) 347-7474

American Society of Civil Engineers  
1801 Alexander Bell Drive, Reston, VA 20191-4400  
(800) 548-2723

TABLE OF CONTENTS

	Page
Article 1 – Definitions and Terminology .....	7
1.01 Defined Terms .....	7
1.02 Terminology .....	10
Article 2 – Preliminary Matters .....	11
2.01 Delivery of Bonds and Evidence of Insurance .....	11
2.02 Copies of Documents .....	11
2.03 Commencement of Contract Times; Notice to Proceed .....	12
2.04 Starting the Work .....	12
2.05 Before Starting Construction .....	12
2.06 Preconstruction Conference .....	12
2.07 Initial Acceptance of Schedules .....	12
Article 3 – Contract Documents: Intent, Amending, Reuse .....	13
3.01 Intent .....	13
3.02 Reference Standards .....	13
3.03 Reporting and Resolving Discrepancies .....	13
3.04 Amending and Supplementing Contract Documents .....	14
3.05 Reuse of Documents .....	14
3.06 Electronic Data .....	14
Article 4 – Availability of Lands; Subsurface and Physical Conditions; Hazardous Environmental Conditions; Reference Points .....	15
4.01 Availability of Lands .....	15
4.02 Subsurface and Physical Conditions .....	15
4.03 Differing Subsurface or Physical Conditions .....	16
4.04 Underground Facilities .....	17
4.05 Reference Points .....	17
4.06 Hazardous Environmental Condition at Site .....	18
Article 5 – Bonds and Insurance .....	19
5.01 Performance, Payment, and Other Bonds .....	19
5.02 Licensed Sureties and Insurers .....	19
5.03 Certificates of Insurance .....	20
5.04 Contractor’s Liability Insurance .....	20
5.05 Owner’s Liability Insurance .....	21
5.06 Property Insurance .....	21
5.07 Waiver of Rights .....	22
5.08 Receipt and Application of Insurance Proceeds .....	23
5.09 Acceptance of Bonds and Insurance; Option to Replace .....	23
5.10 Partial Utilization, Acknowledgment of Property Insurer .....	23
Article 6 – Contractor’s Responsibilities .....	23
6.01 Supervision and Superintendence .....	24
6.02 Labor; Working Hours .....	24
6.03 Services, Materials, and Equipment .....	24
6.04 Progress Schedule .....	24
6.05 Substitutes and “Or-Equals” .....	24
6.06 Concerning Subcontractors, Suppliers, and Others .....	26
6.07 Patent Fees and Royalties .....	28
6.08 Permits .....	28

6.09	Laws and Regulations .....	28
6.10	Taxes.....	28
6.11	Use of Site and Other Areas.....	29
6.12	Record Documents.....	29
6.13	Safety and Protection .....	29
6.14	Safety Representative.....	30
6.15	Hazard Communication Programs .....	30
6.16	Emergencies.....	30
6.17	Shop Drawings and Samples .....	30
6.18	Continuing the Work .....	32
6.19	Contractor's General Warranty and Guarantee .....	32
6.20	Indemnification .....	33
6.21	Delegation of Professional Design Services .....	33
Article 7 – Other Work at the Site.....		34
7.01	Related Work at Site .....	34
7.02	Coordination .....	34
7.03	Legal Relationships.....	35
Article 8 – Owner's Responsibilities.....		35
8.01	Communications to Contractor .....	35
8.02	Replacement of Engineer .....	35
8.03	Furnish Data.....	35
8.04	Pay When Due .....	35
8.05	Lands and Easements; Reports and Tests .....	35
8.06	Insurance.....	35
8.07	Change Orders .....	35
8.08	Inspections, Tests, and Approvals.....	35
8.09	Limitations on Owner's Responsibilities .....	36
8.10	Undisclosed Hazardous Environmental Condition .....	36
8.11	Evidence of Financial Arrangements .....	36
Article 9 – Engineer's Status During Construction .....		36
9.01	Owner's Representative .....	36
9.02	Visits to Site.....	36
9.03	Project Representative .....	36
9.04	Authorized Variations in Work.....	37
9.05	Rejecting Defective Work.....	37
9.06	Shop Drawings, Change Orders and Payments.....	37
9.07	Determinations for Unit Price Work .....	37
9.08	Decisions on Requirements of Contract Documents and Acceptability of Work .....	37
9.09	Limitations on Engineer's Authority and Responsibilities .....	38
Article 10 – Changes in the Work; Claims .....		38
10.01	Authorized Changes in the Work.....	38
10.02	Unauthorized Changes in the Work .....	38
10.03	Execution of Change Orders.....	39
10.04	Notification to Surety.....	39
10.05	Claims.....	39
Article 11 – Cost of the Work; Allowances; Unit Price Work .....		40
11.01	Cost of the Work.....	40
11.02	Allowances .....	42
11.03	Unit Price Work.....	42

Article 12 – Change of Contract Price; Change of Contract Times .....	43
12.01 Change of Contract Price.....	43
12.02 Change of Contract Times.....	44
12.03 Delays.....	44
Article 13 – Tests and Inspections; Correction, Removal or Acceptance of Defective Work .....	45
13.01 Notice of Defects.....	45
13.02 Access to Work.....	45
13.03 Tests and Inspections.....	45
13.04 Uncovering Work.....	46
13.05 Owner May Stop the Work.....	46
13.06 Correction or Removal of Defective Work.....	46
13.07 Correction Period .....	46
13.08 Acceptance of Defective Work.....	47
13.09 Owner May Correct Defective Work.....	47
Article 14 – Payments to Contractor and Completion.....	48
14.01 Schedule of Values.....	48
14.02 Progress Payments .....	48
14.03 Contractor’s Warranty of Title.....	50
14.04 Substantial Completion .....	50
14.05 Partial Utilization.....	51
14.06 Final Inspection.....	51
14.07 Final Payment .....	52
14.08 Final Completion Delayed.....	53
14.09 Waiver of Claims .....	53
Article 15 – Suspension of Work and Termination.....	53
15.01 Owner May Suspend Work .....	53
15.02 Owner May Terminate for Cause .....	53
15.03 Owner May Terminate For Convenience.....	54
15.04 Contractor May Stop Work or Terminate .....	55
Article 16 – Dispute Resolution .....	55
16.01 Methods and Procedures.....	55
Article 17 – Miscellaneous.....	55
17.01 Giving Notice.....	55
17.02 Computation of Times.....	56
17.03 Cumulative Remedies.....	56
17.04 Survival of Obligations.....	56
17.05 Controlling Law .....	56
17.06 Headings.....	56
Article 18 – Federal Requirements .....	56
18.01 Agency Not a Party .....	56
18.02 Contract Approval .....	56
18.03 Conflict of Interest .....	56
18.04 Gratuities.....	57
18.05 Audit and Access to Records.....	57
18.06 Small, Minority and Women’s Businesses.....	57
18.07 Anti-Kickback.....	57
18.08 Clean Air and Pollution Control Acts .....	58
18.09 State Energy Policy .....	58
18.10 Equal Opportunity Requirements .....	58

18.11 Restrictions on Lobbying .....	58
18.12 Environmental Requirements .....	59

# GENERAL CONDITIONS

## ARTICLE 1 – DEFINITIONS AND TERMINOLOGY 1.01

### *Defined Terms*

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

submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

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

30. *Owner* – The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.
31. *PCBs* – Polychlorinated biphenyls.
32. *Petroleum* – Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.
33. *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.
34. *Project* – The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
35. *Project Manual* – The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
36. *Radioactive Material* – Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
37. *Related Entity* – An officer, director, partner, employee, agent, consultant, or subcontractor.
38. *Resident Project Representative* – The authorized representative of Engineer who may be assigned to the Site or any part thereof.
39. *Samples* – Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
40. *Schedule of Submittals* – A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.
41. *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.
42. *Shop Drawings* – All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
43. *Site* – Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.
44. *Specifications* – That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
45. *Subcontractor* – An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.

46. *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.
47. *Successful Bidder* – The Bidder submitting a responsive Bid to whom Owner makes an award.
48. *Supplementary Conditions* – That part of the Contract Documents which amends or supplements these General Conditions.
49. *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 any Subcontractor.
50. *Underground Facilities* – All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
51. *Unit Price Work* – Work to be paid for on the basis of unit prices.
52. *Work* – The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.
53. *Work Change Directive* – A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and Agency upon recommendation of the Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

## 1.02 Terminology

A. The following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following 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 requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. Day

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

D. Defective

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

E. Furnish, Install, Perform, Provide

1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
4. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, "provide" is implied.

- F. Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 *Delivery of Bonds and Evidence of Insurance*

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

2.02 *Copies of Documents*

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

2.03 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement.

2.04 *Starting the Work*

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

2.05 *Before Starting Construction*

- A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule;
2. a preliminary Schedule of Submittals; and
3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 *Preconstruction Conference*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, Agency, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

2.07 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
  2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
  3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

## ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

### 3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to Owner.
- C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

### 3.02 *Reference Standards*

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

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

### 3.03 *Reporting and Resolving Discrepancies*

#### A. *Reporting Discrepancies*

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

#### B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

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

### 3.04 *Amending and Supplementing Contract Documents*

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

### 3.05 *Reuse of Documents*

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

### 3.06 *Electronic Data*

- A. Copies of data furnished by Owner or Engineer to Contractor or Contractor to Owner or Engineer that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.

- C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

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

**4.01 Availability of Lands**

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

**4.02 Subsurface and Physical Conditions**

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

1. those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents; and
2. those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Contract Documents.

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

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

4.03 *Differing Subsurface or Physical Conditions*

A. *Notice:* If Contractor believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

1. is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or
2. is of such a nature as to require a change in the Contract Documents; or
3. differs materially from that shown or indicated in the Contract Documents; or
4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

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

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

C. *Possible Price and Times Adjustments*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:
  - a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and
  - b. with respect to Work that is paid for on a Unit Price Basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:
  - a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or
  - b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or
  - c. Contractor failed to give the written notice as required by Paragraph 4.03.A.
3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, Owner and Engineer, and any of their Related Entities shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of

engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

#### 4.04 *Underground Facilities*

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

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

#### B. *Not Shown or Indicated*

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

#### 4.05 *Reference Points*

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

of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 *Hazardous Environmental Condition at Site*

- A. *Reports and Drawings:* Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the Engineer in the preparation of the Contract Documents.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:
1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
  2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
  3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.
- D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any.
- E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered to Contractor written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.
- F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.

- G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06. H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

## ARTICLE 5 – BONDS AND INSURANCE

### 5.01 *Performance, Payment, and Other Bonds*

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

### 5.02 *Licensed Sureties and Insurers*

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

5.03 *Certificates of Insurance*

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

5.04 *Contractor's Liability Insurance*

- A. Contractor shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:

- 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
- 2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
- 3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
- 4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:
  - a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
  - b. by any other person for any other reason;
- 5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and
- 6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

- B. The policies of insurance required by this Paragraph 5.04 shall:

- 1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
- 2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
- 3. include completed operations insurance;

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

5.05 *Owner's Liability Insurance*

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

5.06 *Property Insurance*

- A. Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (Contractor shall be responsible for any deductible or self-insured retention.). This insurance shall:
  1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;
  2. be written on a Builder's Risk "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions;
  3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
  4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
  5. allow for partial utilization of the Work by Owner;
  6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.
- B. Contractor shall purchase and maintain such boiler and machinery insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured.
- C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.
- D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

5.07 *Waiver of Rights*

- A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or additional insureds thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insured or additional insured (and the officers, directors, 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 Contractor as trustee or otherwise payable under any policy so issued.
- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them for:
1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
  2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.

- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

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

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

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

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

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

ARTICLE 6 – CONTRACTOR'S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the

design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances. The superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or received from the superintendent shall be binding on Contractor.

#### 6.02 *Labor; Working Hours*

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

#### 6.03 *Services, Materials, and Equipment*

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

#### 6.04 *Progress Schedule*

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

#### 6.05 *Substitutes and "Or-Equals"*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to

establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. "Or-Equal" Items: If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that:

- 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
- 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
- 3) it has a proven record of performance and availability of responsive service; and

b. Contractor certifies that, if approved and incorporated into the Work:

- 1) there will be no increase in cost to the Owner or increase in Contract Times, and
- 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

## 2. Substitute Items

- a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.
- b. Contractor shall submit sufficient information as provided below to allow Engineer to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.
- c. The procedure requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented in the General Requirements and as Engineer may decide is appropriate under the circumstances.
- d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
  - 1) shall certify that the proposed substitute item will:
    - a) will perform adequately the functions and achieve the results called for by the general design,
    - b) be similar in substance to that specified, and
    - c) be suited to the same use as that specified;

2) will state:

- a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time;
- b) whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and
- c) whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

3) will identify:

- a) all variations of the proposed substitute item from that specified, and
  - b) available engineering, sales, maintenance, repair, and replacement services;
- 4) and shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.

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

#### 6.06 Concerning Subcontractors, Suppliers, and Others

- A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner

may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.

- B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.
- C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:
1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity, nor
  2. shall anything in the Contract Documents create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.
- D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.
- E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.
- F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, and Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or additional insureds (and the officers, directors, partners, employees, agents, consultants and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

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

6.08 *Permits*

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

6.09 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

6.10 *Taxes*

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

6.11 *Use of Site and Other Areas*

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

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

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

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

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

#### 6.12 *Record Documents*

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

#### 6.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. 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

---

EJCDC C-710 Standard General Conditions of the Construction Contract, Funding Agency Edition  
Copyright © 2002 National Society of Professional Engineers for EJCDC. All rights reserved.

---

00710 - 29

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the

protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.

- C. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or , 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).
- D. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

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

6.15 *Hazard Communication Programs*

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

6.16 *Emergencies*

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

6.17 *Shop Drawings and Samples*

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

1. *Shop Drawings*

- a. Submit number of copies specified in the General Requirements.

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

## 2. *Samples*

- a. Submit number of Samples specified in the Specifications.
- b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

## C. *Submittal Procedures*

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

## D. *Engineer's Review*

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

incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

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

#### E. Resubmittal Procedures

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

#### 6.18 *Continuing the Work*

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

#### 6.19 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its Related Entities shall be entitled to rely on representation of Contractor's warranty and guarantee.

- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
2. normal wear and tear under normal usage.

- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:

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

- A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, 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 respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, partners, employees, agents, consultants and subcontractors arising out of:
1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
  2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

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

other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.

- E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

## ARTICLE 7 – OTHER WORK AT THE SITE

### 7.01 *Related Work at Site*

- A. Owner may perform other work related to the Project at the Site with Owner's employees, or via other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:
1. written notice thereof will be given to Contractor prior to starting any such other work; and
  2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.
- B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.
- C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

### 7.02 *Coordination*

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

7.03 *Legal Relationships*

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

ARTICLE 8 -- OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

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

8.02 *Replacement of Engineer*

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

8.03 *Furnish Data*

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

8.04 *Pay When Due*

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

8.05 *Lands and Easements; Reports and Tests*

- A. Owner's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by Engineer in preparing the Contract Documents.

8.06 *Insurance*

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

8.07 *Change Orders*

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

8.08 *Inspections, Tests, and Approvals*

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

8.09 *Limitations on Owner's Responsibilities*

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

8.10 *Undisclosed Hazardous Environmental Condition*

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

8.11 *Evidence of Financial Arrangements*

- A. If and to the extent Owner has agreed to furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents, Owner's responsibility in respect thereof will be as set forth in the Supplementary Conditions.

**ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION**

9.01 *Owner's Representative*

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents and will not be changed without written consent of Owner and Engineer.

9.02 *Visits to Site*

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

9.03 *Project Representative*

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

and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

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

9.05 *Rejecting Defective Work*

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

9.06 *Shop Drawings, Change Orders and Payments*

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

9.07 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

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

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.
- B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believe that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.

- C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.
- D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

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

10.02 *Unauthorized Changes in the Work*

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

### 10.03 Execution of Change Orders

A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;
2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and
3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

### 10.04 Notification to Surety

A. If notice 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) is required by the provisions of any bond to be given to a surety, the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

### 10.05 Claims

- A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.
- B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Time shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).
- C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:
1. deny the Claim in whole or in part,
  2. approve the Claim, or
  3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.

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

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

### 11.01 *Cost of the Work*

- A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in Paragraph 11.01.B.
  - 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 at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.
  - 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
  - 3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.
  - 4. Costs of special consultants (including but not limited to Engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
  - 5. Supplemental costs including the following:
    - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

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

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

1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.
2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of

defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A and 11.01.B.

- C. *Contractor's Fee*: When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.
- D. *Documentation*: Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

#### 11.02 Allowances

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

##### B. Cash Allowances

1. Contractor agrees that:

- a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
- b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

##### C. Contingency Allowance

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

#### 11.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.

- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:
  - 1. the Bid price of a particular item of Unit Price Work amounts to more than 5 percent of the Contract Price and the variation in the quantity of that particular item of Unit Price Work performed by Contractor differs by more than 25 percent from the estimated quantity of such item indicated in the Agreement; and
  - 2. there is no corresponding adjustment with respect to any other item of Work; and
  - 3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

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

### 12.01 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:
  - 1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or
  - 2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or
  - 3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).
- C. Contractor's Fee: The Contractor's fee for overhead and profit shall be determined as follows:
  - 1. a mutually acceptable fixed fee; or
  - 2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
    - a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;
    - b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;
    - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor

under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;

- d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
- e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
- f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

#### 12.02 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

#### 12.03 *Delays*

- A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.
- B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.B.
  - 1. delays caused by or within the control of Contractor; or
- D. Owner, Engineer and the Related Entities of each of them shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of Engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

- E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

#### ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK 13.01

##### *Notice of Defects*

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

##### 13.02 *Access to Work*

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

##### 13.03 *Tests and Inspections*

- A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
  2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in said Paragraph 13.04.C; and
  3. as otherwise specifically provided in the Contract Documents.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.
- E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, it must, if requested by Engineer, be uncovered for observation.
- F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

#### 13.04 Uncovering Work

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

#### 13.05 Owner May Stop the Work

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

#### 13.06 Correction or Removal of Defective Work

- A. Promptly after receipt of notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).
- B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

#### 13.07 Correction Period

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.1 1.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or

2. correct such defective Work; or
  3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
  4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

#### *13.08 Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

#### *13.09 Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site,

take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

- C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

#### ARTICLE 14-- PAYMENTS TO CONTRACTOR AND COMPLETION

##### 14.01 *Schedule of Values*

- A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

##### 14.02 *Progress Payments*

###### A. *Applications for Payments*

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

###### B. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor

indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

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

- c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
- d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

*C. Payment Becomes Due*

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

*D. Reduction in Payment*

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

14.03 *Contractor's Warranty of Title*

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

14.04 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.
- B. Promptly after Contractor's notification, Owner, Agency, Contractor, and Engineer shall make a prefinal inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the

tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will within 14 days after submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will within said 14 days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to complete or correct items on the tentative list.

#### 14.05 *Partial Utilization*

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

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

#### 14.06 *Final Inspection*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner, Agency, and Contractor and will notify Contractor in writing of all

---

EJCDC C-710 Standard General Conditions of the Construction Contract, Funding Agency Edition  
Copyright © 2002 National Society of Professional Engineers for EJCDC. All rights reserved.

---

00710 - 51

particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

#### 14.07 *Final Payment*

A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.
2. The final Application for Payment shall be accompanied (except as previously delivered) by:
  - a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.7;
  - b. consent of the surety, if any, to final payment;
  - c. a list of all Claims against Owner that Contractor believes are unsettled; and
  - d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

*B. Engineer's Review of Application and Acceptance*

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

*C. Payment Becomes Due*

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

#### 14.08 *Final Completion Delayed*

- A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.0 1, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims. The remaining balance of any sum included in the final Application for Payment but held by OWNER for Work not fully completed and accepted will become due when the Work is fully completed and accepted.

#### 14.09 *Waiver of Claims*

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

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

### ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

#### 15.01 *Owner May Suspend Work*

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

#### 15.02 *Owner May Terminate for Cause*

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

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

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

1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion),
  2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and
  3. complete the Work as Owner may deem expedient.
- C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph Owner shall not be required to obtain the lowest price for the Work performed.
- D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.
- E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.
- F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B, and 15.02.C.

#### 15.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
  2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;
  3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and
  4. reasonable expenses directly attributable to termination.
- B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

**ARTICLE 16 – DISPUTE RESOLUTION**

16.01 *Methods and Procedures*

- A. Owner and Contractor may mutually request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association. Timely submission of the request shall stay the effect of Paragraph 10.05.E.
- B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.
- C. If the claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:
  - 1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions, or
  - 2. agrees with the other party to submit the Claim to another dispute resolution process, or
  - 3. gives written notice to the other party of their intent to submit the Claim to a court of competent jurisdiction.

**ARTICLE 17 – MISCELLANEOUS**

17.01 *Giving Notice*

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

#### 17.02 Computation of Times

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

#### 17.03 Cumulative Remedies

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

#### 17.04 Survival of Obligations

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

#### 17.05 Controlling Law

- A. This Contract is to be governed by the law of the state in which the Project is located. 17.06

#### Headings

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

### ARTICLE 18 – FEDERAL REQUIREMENTS

#### 18.01 Agency Not a Party

- A. This Contract is expected to be funded in part with funds provided by Agency. Neither Agency, nor any of its departments, entities, or employees is a party to this Contract.

#### 18.02 Contract Approval

- A. Owner and Contractor will furnish Owner's attorney such evidence as required so that Owner's attorney can complete and execute the following "Certificate of Owner's Attorney" (Exhibit GC-A) before Owner submits the executed Contract Documents to Agency for approval.

B. Concurrence by Agency in the award of the Contract is required before the Contract is effective. 18.03 *Conflict of Interest*

- A. Contractor may not knowingly contract with a supplier or manufacturer if the individual or entity who prepared the plans and specifications has a corporate or financial affiliation with the supplier or manufacturer.

- B. Owner's officers, employees, or agents shall not engage in the award or administration of this Contract if a conflict of interest, real or apparent, would be involved. Such a conflict would arise when: (i) the employee,

officer or agent; (ii) any member of their immediate family; (iii) their partner or (iv) an organization that employs, or is about to employ, any of the above, has a financial interest in Contractor. Owner's officers, employees, or agents shall neither solicit nor accept gratuities, favors or anything of monetary value from Contractor or subcontractors.

#### 18.04 *Gratuities*

- A. If Owner finds after a notice and hearing that Contractor, or any of Contractor's agents or representatives, offered or gave gratuities (in the form of entertainment, gifts, or otherwise) to any official, employee, or agent of Owner or Agency in an attempt to secure this Contract or favorable treatment in awarding, amending, or making any determinations related to the performance of this Contract, Owner may, by written notice to Contractor, terminate this Contract. Owner may also pursue other rights and remedies that the law or this Contract provides. However, the existence of the facts on which Owner bases such findings shall be an issue and may be reviewed in proceedings under the dispute resolution provisions of this Contract.
- B. In the event this Contract is terminated as provided in paragraph 18.04.A, Owner may pursue the same remedies against Contractor as it could pursue in the event of a breach of this Contract by Contractor. As a penalty, in addition to any other damages to which it may be entitled by law, Owner may pursue exemplary damages in an amount (as determined by Owner) which shall not be less than three nor more than ten times the costs Contractor incurs in providing any such gratuities to any such officer or employee.

#### 18.05 *Audit and Access to Records*

- A. For all negotiated contracts and negotiated modifications (except those of \$10,000 or less), Owner, Agency, the Comptroller General, or any of their duly authorized representatives, shall have access to any books, documents, papers, and records of the Contractor, which are pertinent to the Contract, for the purpose of making audits, examinations, excerpts and transcriptions. Contractor shall maintain all required records for three years after final payment is made and all other pending matters are closed.

#### 18.06 *Small, Minority and Women's Businesses*

- A. If Contractor intends to let any subcontracts for a portion of the work, Contractor shall take affirmative steps to assure that small, minority and women's businesses are used when possible as sources of supplies, equipment, construction, and services. Affirmative steps shall consist of: (1) including qualified small, minority and women's businesses on solicitation lists; (2) assuring that small, minority and women's businesses are solicited whenever they are potential sources; (3) dividing total requirements when economically feasible, into small tasks or quantities to permit maximum participation of small, minority, and women's businesses; (4) establishing delivery schedules, where the requirements of the work permit, which will encourage participation by small, minority and women's businesses; (5) using the services and assistance of the Small Business Administration and the Minority Business Development Agency of the U.S. Department of Commerce; (6) requiring each party to a subcontract to take the affirmative steps of this section; and (7) Contractor is encouraged to procure goods and services from labor surplus area firms.

#### 18.07 *Anti-Kickback*

- A. Contractor shall comply with the Copeland Anti-Kickback Act (18 USC 874 and 40 USC 276c) as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Buildings or Public Works Financed in Whole or in Part by Loans or Grants of the United States"). The Act provides that Contractor or subcontractor shall be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public facilities, to give up any part of the compensation to which they are otherwise entitled. Owner shall report all suspected or reported violations to Agency.

#### 18.08 Clean Air and Pollution Control Acts

- A. If this Contract exceeds \$100,000, Contractor shall comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 USC 7401 *et seq.*) and the Federal Water Pollution Control Act as amended (33 USC 1251 *et seq.*). Contractor will report violations to the Agency and the Regional Office of the EPA.

#### 18.09 State Energy Policy

- A. Contractor shall comply with the Energy Policy and Conservation Act (P.L. 94-163). Mandatory standards and policies relating to energy efficiency, contained in any applicable State Energy Conservation Plan, shall be utilized.

#### 18.10 Equal Opportunity Requirements

- A. If this Contract exceeds \$10,000, Contractor shall comply with Executive Order 11246, "Equal Employment Opportunity," as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and as supplemented by regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor."
- B. Contractor's compliance with Executive Order 11246 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative active obligations required by the Standard Federal Equal Employment Opportunity Construction Contract Specifications, as set forth in 41 CFR Part 60-4 and its efforts to meet the goals established for the geographical area where the Contract is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the Contract, and in each trade, and Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting Contractor's goals shall be a violation of the Contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.
- C. Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the Contract resulting from this solicitation. The notification shall list the name, address, and telephone number of the subcontractor; employer identification number; estimated dollar amount of subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the Contract is to be performed.

#### 18.11 Restrictions on Lobbying

- A. Contractor and each subcontractor shall comply with Restrictions on Lobbying (Public Law 101-121, Section 319) as supplemented by applicable Agency regulations. This Law applies to the recipients of contracts and subcontracts that exceed \$100,000 at any tier under a Federal loan that exceeds \$150,000 or a Federal grant that exceeds \$100,000. If applicable, Contractor must complete a certification form on lobbying activities related to a specific Federal loan or grant that is a funding source for this Contract. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 USC 1352. Each tier shall disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Certifications and disclosures are forwarded from tier to tier up to the Owner. Necessary certification and disclosure forms shall be provided by Owner.

18.1.2 *Environmental Requirements*

A. When constructing a project involving trenching and/or other related earth excavations, Contractor shall comply with the following environmental constraints:

1. Wetlands – When disposing of excess, spoil, or other construction materials on public or private property, Contractor shall not fill in or otherwise convert wetlands.
2. Floodplains – When disposing of excess, spoil, or other construction materials on public or private property, Contractor shall not fill in or otherwise convert 100 year floodplain areas delineated on the latest Federal Emergency Management Agency Floodplain Maps, or other appropriate maps, i.e., alluvial soils on NRCS Soil Survey Maps.
3. Historic Preservation – Any excavation by Contractor that uncovers an historical or archaeological artifact shall be immediately reported to Owner and a representative of Agency. Construction shall be temporarily halted pending the notification process and further directions issued by Agency after consultation with the State Historic Preservation Officer (SHPO).
4. Endangered Species – Contractor shall comply with the Endangered Species Act, which provides for the protection of endangered and/or threatened species and critical habitat. Should any evidence of the presence of endangered and/or threatened species or their critical habitat be brought to the attention of Contractor, Contractor will immediately report this evidence to Owner and a representative of Agency. Construction shall be temporarily halted pending the notification process and further directions issued by Agency after consultation with the U.S. Fish and Wildlife Service.

EXHIBIT GC - A  
Certificate of Owner's Attorney

I, the undersigned, \_\_\_\_\_, the duly authorized and acting legal representative of \_\_\_\_\_

I have examined the attached Contract(s) and performance and payment bond(s) and the manner of execution thereof, and I am of the opinion that each of the aforesaid agreements is adequate and has been duly executed by the proper parties thereto acting through their duly authorized representatives; that said representatives have full power and authority to execute said agreements on behalf of the respective parties named thereon; and that the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with the terms, conditions, and provisions thereof.

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

DOCUMENT 00800  
SUPPLEMENTARY CONDITIONS



These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (No. 1910-8, 1996 Edition) and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect. The terms used in these Supplementary conditions will have the meanings indicated in the General Conditions. Additional terms used in these supplementary conditions have the meanings indicated below, which are applicable to both the singular and plural thereof.

SC-2.01 Delivery of Bonds

N/A

SC-2.02 Copies of Documents

*Delete paragraph 2.02 in its entirety and insert the following paragraph in its place:*

OWNER shall furnish CONTRACTOR up to three copies of the Contract Documents. Additional copies will be furnished upon request at the cost of reproduction.

SC-5.04 CONTRACTOR's Liability Insurance

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

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

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

(a) State:	Statutory
(b) Applicable Federal (e.g., Longshoreman's):	Statutory
(c) Employer's Liability:	\$ <u>100,000</u>

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

(a) General Aggregate	\$ <u>1,000,000</u>
(b) Products - Completed Operations Aggregate	\$ <u>1,000,000</u>
(c) Personal and Advertising Injury	\$ <u>1,000,000</u>
(d) Each Occurrence	\$ <u>1,000,000</u>

(Bodily Injury and Property Damage)

(e) Property Damage liability insurance will provide Explosion, Collapse and Underground coverages where applicable.

- (f) Excess or Umbrella Liability
- (1) General Aggregate \$ 1,000,000
- (2) Each Occurrence \$ 1,000,000

3. Automobile Liability under paragraph 5.04.A.6 of the General Conditions:

- (a) Bodily Injury:
  - Each person \$ 250,000
  - Each Accident \$ 500,000
- (b) Property Damage:
  - Each Accident \$ 250,000
- (c) Combined Single Limit of: \$ 1,000,000

4. The Contractual Liability coverage required by paragraph 5.04.B.4 of the General Conditions shall provide coverage for not less than the following amounts:

- (a) Bodily Injury:
  - Each Accident \$ 250,000
  - Annual Aggregate \$ 1,000,000
- (b) Property Damage:
  - Each Accident \$ 250,000
  - Annual Aggregate \$ 1,000,000

SC-5.06.A Property Insurance

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

A. CONTRACTOR shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof. This insurance shall:

1. include the interests of OWNER, CONTRACTOR, Subcontractors, ENGINEER, ENGINEER'S Consultants and any other persons or entities identified in the Supplementary Conditions, and the officers, directors, partners, employees, agents and other consultants and subcontractors of any of them each of whom is deemed to have an insurable interest and shall be listed as an insured or additional insured;
2. be written on a Builder's Risk all-risk@ or open peril or special causes of loss policy form that shall at least include insurance for physical loss and damage to the Work, temporary buildings, falsework and materials and equipment in transit and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, and such other perils as may be specifically required by the

Supplementary Conditions.

3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by OWNER prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by ENGINEER; and
5. allow for partial utilization of the Work by OWNER;
6. include testing and startup; and
7. be maintained in effect until final payment is made unless otherwise agreed to in writing by OWNER, CONTRACTOR and ENGINEER with 30 days written notice to each other additional insured to whom a certificate of insurance has been issued.

B. CONTRACTOR shall be responsible for any deductible or self-insured retention.

C. The policies of insurance required to be purchased and maintained by CONTRACTOR in accordance with this paragraph SC 5.06 shall comply with the requirements of paragraph 5.06.C of the General Conditions.

SC-5.06.E      Property Insurance

*Delete Paragraph 5.06.E in its entirety.*

SC-6.10      Taxes

*Add the following sentence at the end of 6.10.A:*

The Owner may obtain rebate on taxes paid by the Contractor on certain Products or items: provide administrative assistance and cooperation to the Owner in this regard.

SC-16 Dispute Resolution

*Add the following new paragraph immediately after paragraph 16.01:*

SC-16.2 Mediation

A. OWNER and CONTRACTOR agree that they shall submit any and all unsettled Claims or counterclaims, disputes, or other matters in question between them arising out of or relating to the Contract Documents or the breach thereof to mediation prior to either of them initiating against the other a demand for arbitration pursuant to paragraph SC-16.03, unless delay in initiating arbitration would irrevocably prejudice one of the parties. The 30 day time limit within which to file a demand for arbitration as provided in paragraphs SC-16.03.B and 16.03.C shall be suspended with respect to a dispute submitted to mediation within that time limit and shall remain suspended until 10 days after the termination of the mediation. The mediator of any dispute submitted to mediation under this agreement shall not serve as arbitrator of such dispute unless otherwise agreed.

SC-16 Dispute Resolution

*Add the following new paragraph immediately after paragraph 16.02:*

SC-16.03 Arbitration

A. All Claims or counterclaims, disputes, or other matters in question between OWNER and CONTRACTOR arising out of or relating to the Contract Documents or the breach thereof (except for Claims which have been waived by the making or acceptance of final payment as provided by paragraph 14.09) not resolved under the provisions of paragraph SC-16.02 will be decided by binding arbitration in accordance with the American Arbitration Association's Construction Rules then obtaining, subject to the limitations of this paragraph SC-16.03. This agreement to arbitrate and any other agreement or consent to arbitrate entered into will be specifically enforceable under the prevailing law of any court having jurisdiction.

B. No demand for arbitration of any claim or counterclaim, dispute, or other matter that is required to be referred to ENGINEER initially for decision in accordance with paragraph 9.09 will be made until the earlier of: (1) the date on which ENGINEER has rendered a written decision, or (2) the 31<sup>st</sup> day after the parties have presented their final evidence to ENGINEER if a written decision has not been rendered by ENGINEER before that date. No demand for arbitration of any such Claim or counterclaim, dispute, or other matter will be made later than 30 days after the date on which ENGINEER has rendered a written decision in respect thereof in accordance with paragraph 10.05; and the failure to demand arbitration within said 30 day period will result in ENGINEER's decision being final and binding upon OWNER and CONTRACTOR. If ENGINEER renders a decision after arbitration proceedings have been initiated, such decision may be entered as evidence but will not supersede the arbitration proceedings, except where the decision is acceptable to the parties concerned.

C. Notice of the demand for arbitration will be filed in writing with the other party to the Contract

and with the selected arbitrator, and a copy will be sent to ENGINEER for information. The demand for arbitration will be made within the 30 day period specified in paragraph SC-16.03.B, and in all other cases within a reasonable time after the Claim or counterclaim, dispute, or other matter in question has arisen, and in no event shall any such demand be made after the date when institution of legal or equitable proceedings based on such Claim or other dispute or matter in question would be barred by the applicable statute of limitations.

D. Except as provided in paragraph SC-16.03.E, no arbitration arising out of or relating to the Contract Documents shall include by consolidation, joinder, or in any other manner any other individual or entity (including ENGINEER, and ENGINEER's consultants and the officers, directors, partners, agents, employees or consultants of any of them) who is not a party to this Contract unless:

1. The inclusion of such other individual or entity is necessary if complete relief is to be afforded among those who are already parties to the arbitration; and
2. Such other individual or entity is substantially involved in a question of law or fact which is common to those who are already parties to the arbitration and which will arise in such proceedings; and
3. The written consent of the other individual or entity sought to be included and of OWNER and CONTRACTOR has been obtained for such inclusion, which consent shall make specific reference to this paragraph; but no such consent shall constitute consent to arbitration of any dispute not specifically described in such consent or to arbitration with any party not specifically identified in such consent.

E. Notwithstanding paragraph SC-16.03.D, if a claim or counterclaim, dispute, or other matter in question between OWNER and CONTRACTOR involves the Work of a subcontractor, either OWNER or CONTRACTOR may join such Subcontractor as a party to the arbitration between OWNER and CONTRACTOR hereunder. CONTRACTOR shall include in all subcontracts required by paragraph 6.06.G a specific provision whereby the Subcontractor consents to being joined in an arbitration between OWNER and CONTRACTOR involving the Work of such Subcontractor. Nothing in this paragraph SC-16.03.E nor in the provisions of such subcontract consenting to joinder shall create any claim, right, or cause of action in favor of Subcontractor against OWNER, ENGINEER, or ENGINEER's Consultants that does not otherwise exist.

F. The award rendered by the arbitrators will be final, judgment may be entered upon it in any court having jurisdiction thereof, and it will not be subject to modification or appeal.

END OF SUPPLEMENTARY CONDITIONS



DOCUMENT 01000  
**GENERAL REQUIREMENTS**



SECTION 01010  
SUMMARY OF WORK

PART I) GENERAL

1.1 SECTION INCLUDES

- A) Contract Description.
- B) Work by Owner.
- C) Owner supplied Products.
- D) Contractor use of site.
- E) Future work.
- F) Work Sequence.
- G) Owner occupancy.
- H) Definitions.

1.2 CONTRACT DESCRIPTION

- A) Contract Type: Agreement - EJCDC.

1.3 WORK BY OWNER

- A) The Owner will award a contract installation of the Project indicated in the Bid Documents
- B) Work under this contract includes all work associated with the Project as indicated on the Contract Drawings.

1.4 CONTRACTOR USE OF SITE

- A) Access to Site: Contractor to have necessary access to site to complete the Work.
- B) Others Access to Site: Contractor to ensure that roads necessary for others ingress/egress to property is left open or alternate access provided. Ensure all construction on or near DOT maintained roads is coordinated with local DOT personnel and is in accordance with local DOT procedures.

- C) Utility Outages and Shutdown: Work that requires interference with other utilities to be coordinated with utility owner.

1.6 OWNER USE

- A) The Owner intends to begin operation of the system by the date indicated in the Bid and Contract Documents.
- B) Cooperate with Owner to minimize conflict, and to facilitate Owner's operations.
- C) Schedule the Work to accommodate owner operation.

PART 2) PRODUCTS

Not Used.

PART 3) EXECUTION

Not Used.

END OF SECTION

SECTION 01025

MEASUREMENT AND PAYMENT

PART I GENERAL

1.1 SECTION INCLUDES

- A Measurement and payment criteria applicable to the Work performed under a unit price payment method.
- B Defect assessment and non-payment for rejected work.

1.2 AUTHORITY

- A Measurement methods delineated in the individual specification sections complement the criteria of this section. In the event of conflict, the requirements of this section governs.
- B Take all measurements and compute quantities. The Engineer will verify measurements and quantities.
- C Assist by providing necessary equipment, workers, and survey personnel as required.

1.3 UNIT QUANTITIES SPECIFIED

- A Quantities indicated in the Bid Form are for bidding and contract purposes only. Quantities and measurements supplied or placed in the Work and verified by the Engineer determine payment.
- B If the actual Work requires more or fewer quantities than those quantities indicated, provide the required quantities at the unit sum/prices contracted.

1.4 MEASUREMENT OF QUANTITIES

- A Measurement Devices:
  - (1) Weigh Scales: Inspected, tested and certified by the applicable agency within the past year.
  - (2) Platform Scales: Of sufficient size and capacity to accommodate the conveying vehicle.
  - (3) Metering Devices: Inspected, tested and certified by the applicable agency within the past year.
- B Measurement by Weight: Concrete reinforcing steel, rolled or formed steel or other metal shapes will be measured by handbook weights. Welded assemblies will be measured by handbook or scale weight.
- C Measurement by Volume: Measured by cubic dimension using mean length, width and

height or thickness.

- D Measurement by Area: Measured by square dimension using mean length and width or radius.
- E Linear Measurement: Measured by linear dimension, at the item centerline or mean chord.
- F Stipulated Sum/Price Measurement: Items measured by weight, volume, area, or linear means or combination, as appropriate, as a completed item or unit of the Work.

#### 1.5 PAYMENT

- A Payment Includes: Full compensation for all required labor, Products, tools, equipment, plant, transportation, services and incidentals; erection, application or installation of an item of the Work; overhead and profit.
- B Final payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities accepted by the Engineer multiplied by the unit sum/price for Work which is incorporated in or made necessary by the Work.

#### 1.6 DEFECT ASSESSMENT

- A Replace the Work, or portions of the Work, not conforming to specified requirements.
- B If, in the opinion of the Engineer, it is not practical to remove and replace the Work, the Engineer will direct one of the following remedies:
  - (1) The defective Work may remain, but the unit sum/price will be adjusted to a new sum/price at the discretion of the Owner.
  - (2) The defective Work will be partially repaired to the instructions of the Engineer, and the unit sum/price will be adjusted to a new sum/price at the discretion of the Owner.
- C The individual specification sections may modify these options or may identify a specific formula or percentage sum/price reduction.
- D The authority of the Engineer and Owner to assess the defect and identify payment adjustment, is final.

I.7 NON-PAYMENT FOR REJECTED PRODUCTS

- A Payment will not be made for any of the following:
- (1) Products wasted or disposed of in a manner that is not acceptable.
  - (2) Products determined as unacceptable before or after placement.
  - (3) Products not completely unloaded from the transporting vehicle.
  - (4) Products placed beyond the lines and levels of the required Work.
  - (5) Products remaining on hand after completion of the Work.
  - (6) Loading, hauling, and disposing of rejected Products.

END OF SECTION



## SECTION 01039

### COORDINATION AND MEETINGS

#### PART I GENERAL

##### 1.1 SECTION INCLUDES

- A Coordination and project conditions.
- B Field engineering.
- C Preconstruction meeting.
- D Site mobilization meeting.
- E Progress meetings.
- F Reinstallation meetings.
- G Equipment electrical characteristics and components.
- H Examination.
- I Preparation.
- J Cutting and Patching.
- K Alteration project procedures.

##### 1.2 RELATED SECTIONS

- A Section 01300 - Submittals.
- B Section 01400 - Quality Control.

##### 1.3 COORDINATION AND PROJECT CONDITIONS

- A Coordinate scheduling, submittals, and Work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements , with provisions for accommodating items installed later.

- B Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- C Coordinate space requirements, supports, and installation of mechanical and electrical Work which are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- D In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- E Coordinate completion and clean-up of Work of separate sections in preparation for Substantial Completion.
- F After Owner occupancy of premises, coordinate access to site for correction of defective Work and Work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

#### 1.4 FIELD ENGINEERING

- A Employ a Land Surveyor registered in the State of the Work and acceptable to Engineer.
- B Contractor shall locate and protect survey control and reference points.
- C Control datum for survey is that shown on Drawings.
- D Verify set-backs and easements; confirm drawing dimensions and elevations.
- E Provide field engineering services. Establish elevations, lines, and levels, utilizing recognized engineering survey practices.

#### 1.5 PRECONSTRUCTION MEETING

- A Engineer will schedule a meeting after Notice of Award.
- B Attendance Required: Engineer, and Contractor.
- C Agenda:
  - (1) Execution of Owner-Contractor Agreement.
  - (2) Submission of executed bonds and insurance certificates.
  - (3) Distribution of Contract Documents.
  - (4) Submission of list of Products, schedule of values, and progress schedule.
  - (5) Designation of personnel representing the parties in Contract and the Engineer.
  - (6) Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
  - (7) Scheduling.

## 1.6 SITE MOBILIZATION MEETING

- A Engineer will schedule a meeting at the Project site prior to Contractor occupancy.
- B Attendance Required: Engineer, Contractor, Contractor's Superintendent, and major Subcontractors.
- C Agenda:
  - (1) Use of premises by Owner and Contractor.
  - (2) Owner's requirements.
  - (3) Construction facilities and controls provided by Owner.
  - (4) Temporary utilities provided by Owner.
  - (5) Survey and layout.
  - (6) Security and housekeeping procedures.
  - (7) Schedules.
  - (8) Application for payment procedures.
  - (9) Procedures for testing.
  - (10) Procedures for maintaining record documents.
  - (11) Requirements for start-up of equipment.
  - (12) Inspection and acceptance of equipment put into service during construction period.

## 1.7 PROGRESS MEETINGS

- A Schedule and administer meetings throughout progress of the Work at maximum monthly intervals.
- B Engineer will make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.
- C Attendance Required: Job superintendent, major Subcontractors and suppliers, Engineer, as appropriate to agenda topics for each meeting.
- D Agenda:
  - (1) Review minutes of previous meetings.
  - (2) Review of Work progress.
  - (3) Field observations, problems, and decisions.
  - (4) Identification of problems which impede planned progress.
  - (5) Review of submittals schedule and status of submittals.
  - (6) Review of off-site fabrication and delivery schedules.
  - (7) Maintenance of progress schedule.
  - (8) Corrective measures to regain projected schedules.
  - (9) Planned progress during succeeding work period.
  - (10) Coordination of projected progress.
  - (11) Maintenance of quality and work standards.
  - (12) Effect of proposed changes on progress schedule and coordination.
  - (13) Other business relating to Work.

## 1.8 REINSTALLATION MEETING

- A When required in individual specification sections, convene a reinstallation meeting at the site prior to commencing work of the section.
- B Require attendance of parties directly affecting, or affected by, work of the specific section.
- C Notify Engineer four days in advance of meeting date.
- D Prepare agenda and preside at meeting:
  - (1) Review conditions of installation, preparation and installation procedures.
  - (2) Review coordination with related work.

## PART 2 PRODUCTS

### 2.1 EQUIPMENT ELECTRICAL CHARACTERISTICS AND COMPONENTS

- A Motors: Refer to Section 15170, NEMA MG1 Type. Specific motor type is specified in individual specification sections.
- B Wiring Terminations: Provide terminal lugs to match branch circuit conductor quantities, sizes, and materials indicated. Size terminal lugs to NFPA 70, include lugs for terminal box.
- C Cord and Plug: Provide minimum 6 foot cord and plug including grounding connector for connection to electric wiring system. Cord of longer length is specified in individual specification sections.

## PART 3 EXECUTION

### 3.1 CUTTING AND PATCHING

- A Employ skilled and experienced installer to perform cutting and patching.
- B Submit written request in advance of cutting or altering elements which affect:
  - (1) Structural integrity of element.
  - (2) Integrity of weather-exposed or moisture-resistant elements.
  - (3) Efficiency, maintenance, or safety of element.
  - (4) Visual qualities of sight exposed elements.
  - (5) Work of Owner or separate contractor.
- C Execute cutting, fitting, and patching including excavation and fill, to complete Work, and to:
  - (1) Fit the several parts together, to integrate with other Work.
  - (2) Uncover Work to install or correct ill-timed Work.
  - (3) Remove and replace defective and non-conforming Work.
  - (4) Remove samples of installed Work for testing.
  - (5) Provide openings in elements of Work for penetrations of mechanical and electrical Work.

- D Execute work by methods to avoid damage to other Work, and which will provide proper surfaces to receive patching and finishing.
- E Cut masonry and concrete materials using masonry saw or core drill.
- F Restore Work with new Products in accordance with requirements of Contract Documents.
- G Fit Work tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- H Maintain integrity of wall, ceiling, or floor construction; completely seal voids.
- I Refinish surfaces to match adjacent finishes. For continuous surfaces, refinish to nearest intersection; for an assembly, refinish entire unit.
- J Identify hazardous substances or conditions exposed during the Work to the Engineer for decision or remedy.

### 3.2 ALTERATION PROJECT PROCEDURES

- A Materials: As specified in Product sections; match existing Products and work for patching and extending work.
- B Employ skilled and experienced installer to perform alteration work.
- C Close openings in exterior surfaces to protect existing work from weather and extremes of temperature and humidity.
- D Remove, cut, and patch Work in a manner to minimize damage and to provide means of restoring Products and finishes to original or specified condition.
- E Where new Work abuts or aligns with existing, provide a smooth and even transition. Patch Work to match existing adjacent Work in texture and appearance.
- F When finished surfaces are cut so that a smooth transition with new Work is not possible, terminate existing surface along a straight line at a natural line of division and submit recommendation to Engineer for review.
- G Patch or replace portions of existing surfaces which are damaged, lifted, discolored, or showing other imperfections.
- H Finish surfaces as specified in individual Product sections.

END OF SECTION



SECTION 01090

REFERENCE STANDARDS

PART 1 GENERAL

1.1 SECTION INCLUDES

A Quality assurance.

1.2 RELATED SECTIONS

A Document 00700 - General Conditions

1.3 QUALITY ASSURANCE

A For Products or workmanship specified by association, trade, or other consensus standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.

B Conform to reference standard by date of issue current on date of Contract Documents.

C Obtain copies of standards when required by the Contract Documents.

D Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.

E Should specified reference standards conflict with Contract Documents, request clarification from the Engineer before proceeding.

F Neither the contractual relationship, duties, and responsibilities of the parties in Contract nor those of the Engineer shall be altered by the Contract Documents by mention or inference otherwise in any reference document.

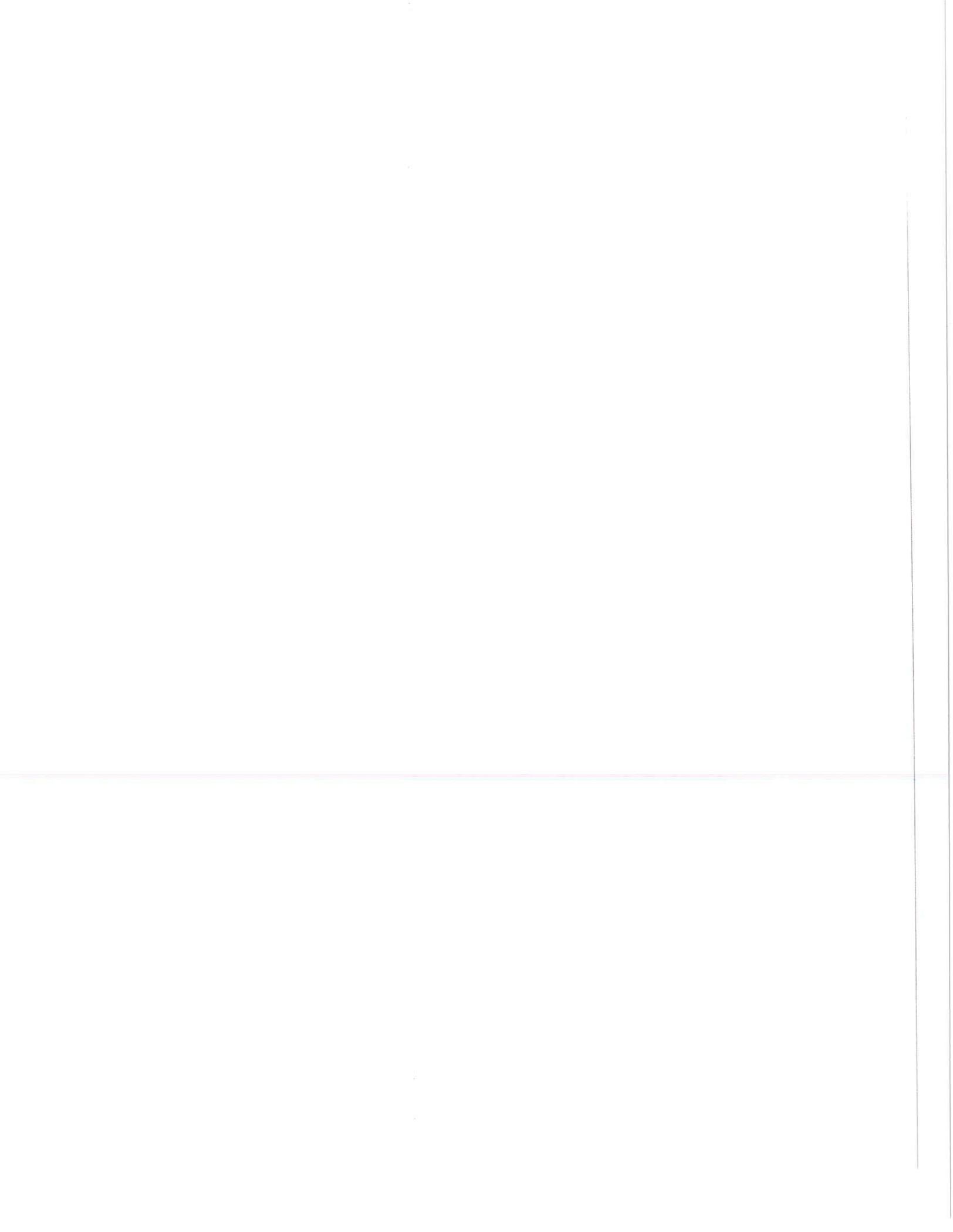
PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION



## SECTION 01300

### SUBMITTALS

#### PART 1) GENERAL

##### 4.1 SECTION INCLUDES

- A Submittal procedures.
- B Construction progress schedules.
- C Proposed Products list.
- D Product Data.
- E Shop Drawings.
- F Samples.
- G Design data.
- H Test reports.
- I Certificates.
- J Manufacturer's instructions.
- K Manufacturer's field reports.
- L Erection drawings.

##### 4.2 RELATED SECTIONS

- A Section 01400 - Quality Control: Manufacturers' field services and reports.
- B Section 01700 - Contract Closeout: Contract warranties, bonds, manufacturers' certificates, and closeout submittals.

##### 4.3 REFERENCES

- A AGC (Associated General Contractors of America) publication "The Use of CPM in Construction - A Manual for General Contractors and the Construction Industry".

#### 4.4 SUBMITTAL PROCEDURES

- A Transmit each submittal with Engineer accepted form.
- B Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.
- C Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate.
- D Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.
- E Schedule submittals to expedite the Project, and deliver to Engineer.
- F For each submittal for review, allow 15 days excluding delivery time to and from the contractor.
- G Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work.
- H Provide space for Contractor and Engineer review stamps.
- I When revised for resubmission, identify all changes made since previous submission.
- J Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.
- K Submittals not requested will not be recognized or processed.

#### 4.5 CONSTRUCTION PROGRESS SCHEDULES

- A Submit initial schedule in duplicate within 15 days after date of Owner-Contractor Agreement.
- B Revise and resubmit as required.
- C Submit revised schedules with each Application for Payment, identifying changes since previous version.
- D Submit a horizontal bar chart with separate line for each major portion of Work or operation section of Work, identifying first work day of each week.
- E Show complete sequence of construction by activity, identifying Work of separate stages and other logically grouped activities. Indicate the early and late start, early and late finish, float dates, and duration.

- F Indicate estimated percentage of completion for each item of Work at each submission.
- G Indicate submittal dates required for shop drawings, product data, samples, and product delivery dates, including those furnished by Owner and required by Allowances.

#### 4.6 PROPOSED PRODUCTS LIST

- A Within 15 days after date of Owner-Contractor Agreement, submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
- B For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

#### 4.7 PRODUCT DATA

- A Product Data For Review:
  - (1) Submitted to Engineer for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
  - (2) After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article above and for record documents purposes described in Section 01700 - CONTRACT CLOSEOUT.
- B Product Data For Information:
  - (1) Submitted for the Engineer's knowledge as contract administrator or for the Owner.
- C Product Data For Project Close-out:
  - (1) Submitted for the Owner's benefit during and after project completion.
- D Submit the number of copies which the Contractor requires, plus two copies which will be retained by the Engineer.
- E Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- F Indicate Product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- G After review distribute in accordance with the Submittal Procedures article above and provide copies for record documents described in Section 01700 - CONTRACT CLOSEOUT.

#### 4.8 SHOP DRAWINGS

- A Shop Drawings For Review:
- (1) Submitted to Engineer for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
  - (2) After review, produce copies and distribute in accordance with SUBMITTAL PROCEDURES article above and for record documents purposes described in Section 01700 - CONTRACT CLOSEOUT.
- B Shop Drawings For Information:
- (1) Submitted for the Engineer's knowledge as contract administrator or for the Owner.
- C Shop Drawings For Project Close-out:
- (1) Submitted for the Owner's benefit during and after project completion.
- D Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- (1) Submit the number of opaque reproductions which Contractor requires, plus two copies which will be retained by Engineer.

#### 4.9 SAMPLES

- A Samples For Review:
- (1) Submitted to Engineer for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
  - (2) After review, produce duplicates and distribute in accordance with SUBMITTAL PROCEDURES article above and for record documents purposes described in Section 01700 - CONTRACT CLOSEOUT.
- B Samples For Information:
- (1) Submitted for the Engineer's knowledge as contract administrator or for the Owner.
- C Samples For Selection:
- (1) Submitted to Engineer for aesthetic, color, or finish selection.
  - (2) Submit samples of finishes from the full range of manufacturers' standard colors, textures, and patterns for Engineer selection.
  - (3) After review, produce duplicates and distribute in accordance with SUBMITTAL PROCEDURES article above and for record documents purposes described in Section 01700 - CONTRACT CLOSEOUT.
- D Submit samples to illustrate functional and aesthetic characteristics of the Product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
- E Include identification on each sample, with full Project information.

- F Submit the number of samples specified in individual specification sections; one of which will be retained by Engineer.
- G Reviewed samples which may be used in the Work are indicated in individual specification sections.
- H Samples will not be used for testing purposes unless specifically stated in the specification section.

#### 4.10 DESIGN DATA

- A Submit for the Engineer's knowledge as contract administrator or for the Owner.
- B Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

#### 4.11 TEST REPORTS

- A Submit for the Engineer's knowledge as contract administrator or for the Owner.
- B Submit test reports for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

#### 4.12 CERTIFICATES

- A When specified in individual specification sections, submit certification by the manufacturer, installation/application subcontractor, or the Contractor to Engineer, in quantities specified for Product Data.
- B Indicate material or Product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C Certificates may be recent or previous test results on material or Product, but must be acceptable to Engineer.

#### 4.13 MANUFACTURER'S INSTRUCTIONS

- A When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, to Engineer for delivery to owner in quantities specified for Product Data.
- B Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
- C Refer to Section 01400 - Quality Control, Manufacturers' Field Services article.

#### 4.14 MANUFACTURER'S FIELD REPORTS

- A Submit reports for the Engineer's benefit as contract administrator or for the Owner.
- B Submit report within 30 days of observation to Engineer for information.
- C Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

#### 4.15 ERECTION DRAWINGS

- A Submit drawings for the Engineer's benefit as contract administrator.
- B Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.
- C Data indicating inappropriate or unacceptable Work may be subject to action by the Engineer or Owner.

END OF SECTION

SECTION 01400

QUALITY CONTROL

PART 1 GENERAL

1.1 SECTION INCLUDES

- A Quality assurance - control of installation.
- B Tolerances
- C References and standards.
- D Mock-up.
- E Inspecting and testing laboratory services.
- F Manufacturers' field services.

1.2 RELATED SECTIONS

- A Section 01090 - Reference Standards.
- B Section 01300 - Submittals: Submission of manufacturers' instructions and certificates.
- C Section 01410 - Testing Services.
- D Section 01600 - Material and Equipment: Requirements for material and product quality.
- E Section 01650 - Starting of Systems.

1.3 QUALITY ASSURANCE - CONTROL OF INSTALLATION

- A Monitor quality control over suppliers, manufacturers, Products, services, site conditions, and workmanship, to produce Work of specified quality.
- B Comply with manufacturers' instructions, including each step in sequence.
- C Should manufacturers' instructions conflict with Contract Documents, request clarification from Engineer before proceeding.
- D Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E Perform Work by persons qualified to produce required and specified quality.

- F Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- G Secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

#### 1.4 TOLERANCES

- A Monitor fabrication and installation tolerance control of Products to produce acceptable Work. Do not permit tolerances to accumulate.
- B Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Engineer before proceeding.
- C Adjust Products to appropriate dimensions; position before securing Products in place.

#### 1.5 REFERENCES AND STANDARDS

- A For Products or workmanship specified by association, trade, or other consensus standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B Conform to reference standard by date of issue current on date of Contract Documents, except where a specific date is established by code.
- C Obtain copies of standards where required by product specification sections.
- D Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of the Engineer shall be altered from the Contract Documents by mention or inference otherwise in any reference document.

#### 1.6 MOCK-UP

- A Tests will be performed under provisions identified in this section and identified in the respective product specification sections.
- B Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.
- C Accepted mock-ups shall be a comparison standard for the remaining Work.
- D Where mock-up has been accepted by Engineer and is specified in product specification sections to be removed; remove mock-up and clear area when directed to do so.

#### 1.7 TESTING SERVICES

- A Owner may appoint, employ, and pay for specified services of an independent firm to perform testing.

- B The independent firm will perform tests and other services specified in individual specification sections and as required by the Engineer.
- C Testing and source quality control may occur on or off the project site. Perform off-site testing as required by the Engineer or the Owner.
- D Reports will be submitted by the independent firm to the Engineer and Contractor, in duplicate, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.
- E Cooperate with independent firm; furnish samples of materials, design mix, equipment, tools, storage, safe access, and assistance by incidental labor as requested.
  - (1) Notify Engineer and independent firm 24 hours prior to expected time for operations requiring services.
  - (2) Make arrangements with independent firm and pay for additional samples and tests required for Contractor's use.
- F Testing does not relieve Contractor to perform Work to contract requirements.
- G Re-testing required because of non-conformance to specified requirements shall be performed by the same independent firm on instructions by the Engineer. Payment for re-testing will be charged to the Contractor by deducting testing charges from the Contract Sum/Price.

#### 1.8 INSPECTION SERVICES

- A Owner may appoint, employ, and pay for specified services of an independent firm to perform inspection.
- B The independent firm will perform inspections and other services specified in individual specification sections and as required by the Engineer.
- C Inspecting may occur on or off the project site. Perform off-site inspecting as required by the Engineer or the Owner.
- D Reports will be submitted by the independent firm to the Engineer and Contractor, in duplicate, indicating inspection observations and indicating compliance or non-compliance with Contract Documents.
- E Cooperate with independent firm; furnish safe access and assistance by incidental labor as requested.
  - (1) Notify Engineer and independent firm 24 hours prior to expected time for operations requiring services.
- F Inspecting does not relieve Contractor to perform Work to contract requirements.

## 1.9 MANUFACTURERS' FIELD SERVICES

- A When specified in individual specification sections, require material or Product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment and test, adjust and balance of equipment as applicable, and to initiate instructions when necessary.
- B Submit qualifications of observer to Engineer 30 days in advance of required observations.
- C Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.
- D Refer to Section 01300 - SUBMITTALS, MANUFACTURERS' FIELD REPORTS article.

## PART 2 PRODUCTS

Not Used.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A Verify that existing site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.
- B Verify that existing substrate is capable of structural support or attachment of new Work being applied or attached.
- C Examine and verify specific conditions described in individual specification sections.
- D Verify that utility services are available, of the correct characteristics, and in the correct locations.

### 3.2 PREPARATION

- A Clean substrate surfaces prior to applying next material or substance.
- B Seal cracks or openings of substrate prior to applying next material or substance.
- C Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

END OF SECTION

SECTION 01600

MATERIAL AND EQUIPMENT

PART 1 GENERAL

1.1 SECTION INCLUDES

- A Products.
- B Transportation and handling.
- C Storage and protection.
- D Product options.
- E Substitutions.

1.2 RELATED SECTIONS

- A Document 00105 - Instructions to Bidders: Product options and substitution procedures.
- B Section 01400 - Quality Control: Product quality monitoring.

1.3 PRODUCTS

- A Do not use materials and equipment removed from existing premises, except as specifically permitted by the Contract Documents.
- B Provide interchangeable components of the same manufacture for components being replaced.

1.4 TRANSPORTATION AND HANDLING

- A Transport and handle Products in accordance with manufacturer's instructions.
- B Promptly inspect shipments to ensure that Products comply with requirements, quantities are correct, and Products are undamaged.
- C Provide equipment and personnel to handle Products by methods to prevent soiling, disfigurement, or damage.

1.5 STORAGE AND PROTECTION

- A Store and protect Products in accordance with manufacturers' instructions.
- B Store with seals and labels intact and legible.
- C Store sensitive Products in weather tight, climate controlled, enclosures in an

environment favorable to Product.

- D For exterior storage of fabricated Products, place on sloped supports above ground.
- E Provide off-site storage and protection when site does not permit on-site storage or protection.
- F Cover Products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of Products.
- G Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- H Provide equipment and personnel to store Products by methods to prevent soiling, disfigurement, or damage.
- I Arrange storage of Products to permit access for inspection. Periodically inspect to verify Products are undamaged and are maintained in acceptable condition.

#### 1.6 PRODUCT OPTIONS

- A Products Specified by Reference Standards or by Description Only: Any Product meeting those standards or description.
- B Products Specified by Naming One or More Manufacturers: Products of manufacturers named and meeting specifications, no options or substitutions allowed.
- C Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named in accordance with the following article.

#### 1.7 SUBSTITUTIONS

- A Instructions to Bidders specify time restrictions for submitting requests for Substitutions during the bidding period to requirements specified in this section.
- B Substitutions may be considered when a Product becomes unavailable through no fault of the Contractor.
- C Document each request with complete data substantiating compliance of proposed Substitution with Contract Documents.
- D A request constitutes a representation that the Bidder:
  - (1) Has investigated proposed Product and determined that it meets or exceeds the quality level of the specified Product.
  - (2) Will provide the same warranty for the Substitution as for the specified Product.
  - (3) Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to Owner.
  - (4) Waives claims for additional costs or time extension which may subsequently

become apparent.

- (5) Will reimburse Owner and Engineer for review or redesign services associated with re-approval by authorities.

E Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.

F Substitution Submittal Procedure:

- (1) Submit three copies of request for Substitution for consideration. Limit each request to one proposed Substitution.
- (2) Submit shop drawings, product data, and certified test results attesting to the proposed Product equivalence. Burden of proof is on proposer.
- (3) The Engineer will notify Contractor in writing of decision to accept or reject request.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION



## SECTION 01650

### STARTING OF SYSTEMS

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A Starting systems.
- B Demonstration and instructions.
- C Testing, adjusting, and balancing.

##### 1.2 RELATED SECTIONS

- A Section 01400 - Quality Control: Manufacturers field reports.
- B Section 01700 - Contract Closeout: System operation and maintenance data and extra materials.

##### 1.3 STARTING SYSTEMS

- A Coordinate schedule for start-up of various equipment and systems.
- B Notify Engineer seven days prior to start-up of each item.
- C Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions which may cause damage.
- D Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- E Verify that wiring and support components for equipment are complete and tested.
- F Execute start-up under supervision of applicable manufacturer's representative [in accordance with manufacturers' instructions.
- G When specified in individual specification Sections, require manufacturer to provide authorized representative to be present at site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise placing equipment or system in operation.
- H Submit a written report in accordance with Section 01300 that equipment or system has been properly installed and is functioning correctly.

#### 1.4 DEMONSTRATION AND INSTRUCTIONS

- A Demonstrate operation and maintenance of Products to Owner's personnel two weeks prior to date of Substantial Completion.
- B For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.
- C Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owners' personnel in detail to explain all aspects of operation and maintenance.
- D Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at agreed time designated location.
- E Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.
- F The amount of time required for instruction on each item of equipment and system is that specified in individual sections.

#### 1.5 TESTING, ADJUSTING, AND BALANCING

- A Owner may appoint, employ, and pay for services of an independent firm to perform testing, adjusting, and balancing.
- B Reports will be submitted by the independent firm to the Engineer indicating observations and results of tests and indicating compliance or non-compliance with the requirements of the Contract Documents.

#### PART 2 PRODUCTS

Not Used.

END OF SECTION

## SECTION 01700

### CONTRACT CLOSEOUT

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A Closeout procedures.
- B Final cleaning.
- C Adjusting.
- D Project record documents.
- E Operation and maintenance data.
- F Spare parts and maintenance Products.
- G Warranties and bonds.
- H Maintenance service.

##### 1.2 RELATED SECTIONS

- A Section 01650 - Starting of Systems: System start-up, testing, adjusting, and balancing.
- B Section 01700 - Contract Closeout

##### 1.3 CLOSEOUT PROCEDURES

- A Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Engineer's review.
- B Provide submittals to Engineer Owner that are required by governing or other authorities.
- C Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.

##### 1.4 FINAL CLEANING

- A Execute final cleaning prior to final project assessment.
- B Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances and polish transparent and glossy surfaces.

- C Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
- D Clean filters of operating equipment.
- E Clean debris from roofs, gutters, downspouts, and drainage systems.
- F Clean site; sweep paved areas, rake clean landscaped surfaces.
- G Remove waste and surplus materials, rubbish, and construction facilities from the site.

#### 1.5 ADJUSTING

- A Adjust operating Products and equipment to ensure smooth and unhindered operation.

#### 1.6 PROJECT RECORD DOCUMENTS

- A Maintain on site one set of the following record documents; record actual revisions to the Work:
  - (1) Drawings.
  - (2) Specifications.
  - (3) Addenda.
  - (4) Change Orders and other modifications to the Contract.
  - (5) Reviewed Shop Drawings, Product Data, and Samples.
  - (6) Manufacturer's instruction for assembly, installation, and adjusting.
- B Ensure entries are complete and accurate, enabling future reference by Owner.
- C Store record documents separate from documents used for construction.
- D Record information concurrent with construction progress.
- E Specifications: Legibly mark and record at each Product section description of actual Products installed, including the following:
  - (1) Manufacturer's name and product model and number.
  - (2) Product substitutions or alternates utilized.
  - (3) Changes made by Addenda and modifications.
- F Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
  - (1) Measured depths of foundations in relation to finish floor datum.
  - (2) Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
  - (3) Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
  - (4) Field changes of dimension and detail.
  - (5) Details not on original Contract drawings.
- G Submit documents to Engineer with claim for final Application for Payment.

## 1.7 OPERATION AND MAINTENANCE DATA

- A Submit data bound in 8-1/2 x 11 inch (A4) text pages, three D side ring binders with durable plastic covers.
- B Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project , and subject matter of binder when multiple binders are required.
- C Internally subdivide the binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.
- D Contents: Prepare a Table of Contents for each volume, with each Product or system description identified, typed on pound white paper, in three parts as follows:
  - (1) Part 1: Directory, listing names, addresses, and telephone numbers of Engineer, Contractor, Subcontractors, and major equipment suppliers.
  - (2) Part 2: Operation and maintenance instructions, arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
    - (a) Significant design criteria.
    - (b) List of equipment.
    - (c) Parts list for each component.
    - (d) Operating instructions.
    - (e) Maintenance instructions for equipment and systems.
    - (f) Maintenance instructions for special finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
  - (3) Part 3: Project documents and certificates, including the following:
    - (a) Shop drawings and product data.
    - (b) Air and water balance reports.
    - (c) Certificates.
    - (d) Originals of warranties and bonds.
- E Submit 1 draft copy of completed volumes 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Engineer comments. Revise content of all document sets as required prior to final submission.
- F Submit two sets of revised final volumes, within 10 days after final inspection.

## 1.8 SPARE PARTS AND MAINTENANCE PRODUCTS

- A Provide spare parts, maintenance, and extra Products in quantities specified in individual specification sections.
- B Deliver to Engineer; obtain receipt prior to final payment.

1.9 WARRANTIES AND BONDS

- A Provide duplicate notarized copies.
- B Execute and assemble transferable warranty documents from Subcontractors, suppliers, and manufacturers.
- C Provide Table of Contents and assemble in three D side ring binder with durable plastic cover.
- D Submit prior to final Application for Payment.
- E For items of Work delayed beyond date of Substantial Completion, provide updated submittal within 10 days after acceptance, listing date of acceptance as start of warranty period.

1.10 MAINTENANCE SERVICE

- A Furnish service and maintenance of components indicated in specification sections for one year from date of Substantial Completion.
- B Examine system components at a frequency consistent with reliable operation. Clean, adjust, and lubricate as required.
- C Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.
- E Maintenance service shall not be assigned or transferred to any agent or Subcontractor without prior written consent of the Owner.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

DOCUMENT 02000  
**TECHNICAL SPECIFICATIONS**



TECHNICAL SPECIFICATIONS

I. Scope of Work

Work done under this item shall consist of the construction of a one-course Portland cement concrete pad, a one-course Portland cement concrete loading dock & ramp, and concrete masonry unit (CMU) containment wall for the purpose of handling white goods, in accordance with these specifications, and in conformity to the plans, as provided by the County. It shall also consist of the removal of existing gravel, soil, roots, and other obstructions for the purpose of excavation & fill, for fine grading & compaction of subgrade, and for all backfilling necessary to complete the work, including the stockpiling of surplus material and cleaning up of the work.

II. Subgrade Preparation

A. DESCRIPTION

The Contractor shall furnish all labor, material, and equipment required to complete Subgrade Preparation including borrowing, hauling, screening, scarifying, drying, wetting, compacting, control of surface and subsurface water, final grading, sealing, and all other necessary and incidental items, as detailed or required, within the project area and in accordance with the Contract Drawings and these Specifications herein.

B. REFERENCE STANDARDS

The latest revision of the following standards of the American Society of Testing and Materials (ASTM) are hereby made a part of these specifications.

ASTM D 698	Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort.
ASTM D 1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method.
ASTM D 2167	Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.
ASTM D 2216	Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil & Rock by Mass.
ASTM D 2488	Standard Practice for Description and Identification of Soils (Visual-Manual Procedure).

ASTM D 4643 Standard Test Method for Determination of Water (Moisture) Content of Soil by the Microwave Oven Method.

ASTM D 4959 Standard Test Method for Determination of Water (Moisture) Content of Soil by Direct Heating Method.

C. DEFINITIONS

1. Excavation: shall include the removal of all gravel, soil, rock, roots, and all other obstacles encountered and shown on the Contract Drawings or specified herein.
2. Select Borrow: shall consist of approved off-site material required for backfilling, structural fill, subgrade preparation, or for other portions of the work as shown on Contract Drawings or in these specifications herein. The Contractor shall make his own arrangements for obtaining select borrow and shall pay all costs involved.
3. Unsuitable Material: is any in-place or excavated material which contains undesirable materials, or is in a condition which is not appropriate, in the opinion of the County, for the intended use or support of planned structures. This may include, but not be limited to organic material, waste, refuse, soft, or wet material not meeting required specifications.
4. Prepared Subgrade: the ground surface after stripping, excavation, scarification, compaction, and/or proof rolling.
5. Earthwork: shall include construction of all site earthwork, to include grading, structural fill, and general preparation of all areas upon which materials are to be placed.
6. Well-Graded: A mixture of particle sizes that has no specific concentration, or lack thereof, of one or more sizes. Well-graded does not define any numerical value that must be placed on the coefficient of uniformity, coefficient of curvature, or other specific grain size distribution parameters. Well-graded is used to define a material type that, when compacted, produces a strong and relatively incompressible soil mass free from detrimental voids.

D. CONSTRUCTION

1. Contractor is responsible for limiting sedimentation and controlling erosion in all work areas. The Contractor will be responsible for employing suitable Erosion & Sediment (E&S) Control measures to protect natural resources.
2. The Contractor shall excavate according to the Contract Drawings and stockpile materials on-site, in an area approved by the County. Stockpile(s) shall be properly sloped and sealed by the Contractor, to the satisfaction of the County, and one (1) row of filter fabric or silt fence installed around the perimeter of stockpile(s).
3. The Contractor shall protect all existing facilities and structures including, but not limited to, existing structures, monitoring wells, fencing, signs, etc., during grading and stockpiling operations.
4. The Contractor shall be responsible for the control of surface and subsurface water, when necessary.
5. The bottom of all Excavations for structures shall be examined by the County for the presence of Unsuitable Material and may be proof-rolled using a loaded tandem axle dump truck, or other suitable equipment, to determine bearing value. If additional Excavation is required due to the low bearing value of the Prepared Subgrade materials, or if the in-place materials are soft, yielding, pumping and/or wet, the Contractor shall remove such material to the required width and depth and replace it with thoroughly compacted structural fill. No payments will be made for subgrade disturbance caused by inadequate dewatering and/or improper construction methods.
6. Any areas excavated below subgrade elevations by the Contractor, unless directed by the County, shall be brought back to design elevations at no cost to the Owner. The Contractor shall place and compact such material in accordance with this section of these specifications.
7. Surfaces on which Select Borrow is to be placed, shall be scarified or stepped in such a manner that will permit bonding of the Select Borrow with the existing surface.
8. The Contractor shall be responsible for preparing the Select Borrow including, but not limited to, in-place drying or wetting of the soil, as necessary, to achieve 98% compaction. If Select Borrow does not meet the specified requirements, the Contractor shall rework the

material, as needed, and continue compaction to achieve these requirements, or remove and replace the material to achieve the specified requirements, all at the Contractors expense.

9. Select Borrow or structural fill materials shall be placed in a manner permitting drainage and in continuous, approximately horizontal layers. Each layer shall be compacted prior to placement of succeeding lifts. Maximum lift thickness shall be 8" compacted.
10. Lift compaction shall be performed with an appropriately heavy, properly ballasted, penetrating-foot or smooth-drum vibratory compactor, or equivalent, depending on the soil type. In confined areas, mechanical equipment, suitable for working in tight spaces and capable of achieving the density requirements, shall be used.

### III. Geotextiles

#### A. DESCRIPTION

The Contractor shall furnish all labor, material, and equipment to complete installation of Geotextiles including all necessary and incidental items as detailed or required for the Contractor to complete the installation in accordance with the Contract Drawings and these Specifications. This excludes Geotextiles used as Silt Fence.

#### B. REFERENCE STANDARDS

The latest revision of the following standards of the American Society of Testing and Materials (ASTM) and the American Association of State Highway and Transportation Officials (AASHTO) are hereby made a part of these specifications.

ASTM D 3786	Test Method for Hydraulic Bursting Strength of Knitted Goods and Nonwoven Fabrics: Diaphragm Bursting Strength Tester Method.
ASTM D 4355	Standard Test Method for Deterioration of Geotextiles from Exposure to Ultraviolet Light and Water (Xenon-Arc Type Apparatus).
ASTM D 4491	Standard Test Methods for Water Permeability of Geotextiles by Permittivity.
ASTM D 4533	Standard Test Method for Trapezoid Tearing Strength of Geotextiles.

ASTM D 4632	Standard Test Method for Grab Breaking Load and Elongation of Geotextiles.
ASTM D 4751	Standard Test Method for Determining Apparent Opening Size of a Geotextile.
ASTM D 4833	Standard Test Method for Index Puncture Resistance of Geotextiles, Geomembranes and Related Products
ASTM D 5261	Standard Test Method for Measuring Mass per Unit Area of Geotextiles.
AASHTO M 288	Standard Specification of Geotextiles. C.

#### MATERIALS

1. The materials supplied under these Specifications shall consist of new, first-quality products designed and manufactured specifically for the purpose of this work, which shall have been satisfactorily demonstrated, by prior use, to be suitable and durable for such purposes. Labels on each roll of Geotextile shall identify the length, width, lot and roll numbers, and name of Manufacturer.
2. The Type GT-S Geotextile shall be a nonwoven spunbonded or nonwoven needled punched synthetic fabric consisting of polyester or polypropylene manufactured in a manner approved by the Engineer. Woven fabrics may be used in certain applications if approved in advance by the County.
3. All Geotextiles shall conform to the properties listed in Table 1 of this section.

#### D. SUBMITTALS

1. Prior to shipment to the jobsite, the Contractor shall submit a mill certificate or affidavit signed by a legally authorized official of the Manufacturer attesting that the Geotextiles used meet the physical and manufacturing requirements stated in these Specifications. The Contractor shall also submit a sample of each Geotextile to be used. The samples shall be labeled with the product name and be accompanied by the Manufacturer's specifications.
2. The Contractor shall furnish copies of the delivery tickets or other approved receipts as evidence for materials received that will be incorporated into the construction.

E. CONSTRUCTION

1. All Geotextiles shall be shipped, handled, and stored in strict accordance with the Manufacturer's recommendations.
2. The surface receiving the Geotextiles shall be prepared to a relatively smooth condition, free of obstructions, standing water, excessive depressions, debris, and very soft, excessively wet, and/or loose pockets of soil.
3. Geotextiles shall be rejected if they have defects, rips, holes, flaws, evidence of deterioration, or other damage.
4. Geotextiles shall be placed smooth and free of excessive wrinkles.
5. All Geotextile seams shall be overlapped a minimum of 12 inches or shall be continuously sewn or heat bonded with methods approved by the manufacturer.
6. Any Geotextile that is torn, punctured, or otherwise damaged shall be repaired or replaced, by the Contractor at no additional cost to the Owner. The repair shall consist of a patch of the same type of Geotextile placed over the failed areas and shall overlap the existing Geotextile a minimum of 18 inches from any point of the rupture. Patches shall be spot sewn or heat bonded so as not to shift during cover placement.

TABLE 1: REQUIRED GEOTEXTILE PROPERTIES

PROPERTY	TEST METHOD	UNITS	VALUE
			TYPE GT-S
Geotextile Construction (NW = Nonwoven) (W = Woven)	-----	-----	NW <sup>2</sup> or W <sup>3</sup>
Mass per Unit Area (Unit Weight)	ASTM D 5261	oz/yd <sup>2</sup>	N/A
Ultraviolet Resistance (500 hrs.)	ASTM D 4355	%	70
Strength Class <sup>4</sup>	AASHTO M 288	Class	2
Tensile Properties:	ASTM D 4833		
Grab Strength		lbs	160(NW) 250 (W)
Grab Elongation		%	≥ 50 (NW) < 50 (W)
Puncture Resistance	ASTM D 4833	lbs	55 (NW) 90 (W)
Trapezoidal Tear Strength	ASTM D 4533	lbs	55 (NW) 90 (W)
Burst Strength	ASTM D 3786	psi	200 (NW) 400 (W)
Apparent Opening Size (AOS)	ASTM D 4751	U.S. Sieve	70+
Permittivity	ASTM D 4491	Sec <sup>-1</sup>	1.0

Notes:

1. Minimum Average Roll Value (MARV)
2. Nonwoven geotextiles that have been heat calendered are not acceptable, unless approved by the Engineer in advance.
3. Woven geotextiles shall be approved in advance by the Engineer. Woven geotextiles formed exclusively with slit film fibers are not acceptable.
4. AASHTO M 288 criteria includes the above listed requirements for: Tensile Properties, Puncture Resistance, Trapezoidal Tear Strength, and Burst Strength.

### III. Concrete Work

#### A. DESCRIPTION

The Contractor shall furnish all labor, material, and equipment to complete installation of all concrete including all necessary and incidental items, in accordance with the Contract Drawings and these Specifications.

#### B. REFERENCE STANDARDS

The latest revision of the following standards of the American Association of State and Transportation Officials (AASHTO), the American Concrete Institute (ACI), the American Society for Testing and Materials (ASTM), the Concrete Reinforcing Steel Institute (CRSI), and the U.S. Army Corps of Engineers (COE) are hereby made a part of these specifications.

AASHTO M 182	Standard Specification for Burlap Cloth Made from Jute or Kenaf.
ACI 301	Specifications for Structural Concrete for Buildings. ACI 304R Recommended Practice for Measuring, Mixing, Transporting, and Placing Concrete. ACI
305R	Hot Weather Concreting.
ACI 306R	Cold Weather Concreting.
ACI 315	Manual of Standard Practice for Detailing Reinforced Concrete Structures.
ACI 318	Building Code Requirements for Structural Concrete ACI 347 Recommended Practice for Concrete Formwork. ASTM A 185 Standard Specification for Welded Steel Wire Fabric for Concrete Reinforcement
ASTM A 615	Standard Specification for Deformed and Plain Billet Steel Bars for Concrete Reinforcement Including Supplementary Requirements S1.
ASTM C 31	Standard Method of Making and Curing Concrete Test Specimens in the Field.
ASTM C 33	Standard Specification for Concrete Aggregates.

ASTM C 39	Standard Method of Test for Compressive Strength of Cylindrical Concrete Specimens.
ASTM C 42	Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete. ASTM C
94	Standard Specification for Ready Mixed Concrete.
ASTM C 143	Standard Method of Test for Slump of Portland Cement Concrete.
ASTM C 150	Standard Specification for Portland Cement.
ASTM C 171	Standard Specification for Sheet Materials for Curing Concrete.
ASTM C 172	Standard Method of Sampling Fresh Concrete.
ASTM C 173	Standard Method of Test for Air Content of Freshly Mixed Concrete by the Volumetric Method.
ASTM C 231	Standard Method of Test for Air Content of Freshly Mixed Concrete by the Pressure Method.
ASTM C 260	Standard Specification for air Entraining Admixtures for Concrete.
ASTM C 494	Standard Specification for Chemical Admixtures for Concrete.
ASTM C 881	Standard Specification for Epoxy-Resin-Base Bonding System for Concrete.
ASTM D 1751	Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Non-extruding and Resilient Bituminous Types).
ASTM E 154	Standard Test Methods for Water Vapor Retarders used in Contact with Earth Under Concrete Slabs, On Walls, or as Ground Cover.
CRSI	Manual of Standard Practice.

COE CRD-C 513      Specification for Rubber Waterstops.

COE CRD-C 621.      Specification for Non-Shrink Grout.

C. QUALITY CONTROL

The Contractor shall engage a testing laboratory acceptable to the County to perform material evaluation tests and design concrete mixes. Materials and installed work may require testing and retesting, as requested by the County, at any time during progress of work. Free access will be allowed to material stockpiles and facilities. Tests, including retesting of rejected materials and installed work, shall be done at Contractor's expense.

D. MATERIALS

1. Form Materials:

a. Forms for Exposed Finished Concrete:

Unless otherwise indicated, construct formwork for exposed concrete surfaces with plywood, metal, metal-framed plywood faced, or other acceptable panel-type materials, to provide continuous, straight, smooth, exposed surfaces. Furnish in largest practicable sizes to minimize the number of joints and to conform to the joint system shown on the Contract Drawings. Provide form material with sufficient thickness to withstand pressure of newly-placed concrete without bow or deflection.

b. Forms of Unexposed Finish Concrete:

Form concrete surfaces which will be unexposed in finished structure with plywood, lumber, metal, or other acceptable material. Provide lumber dressed on at least two edges and one side for tight fit.

c. Form Coatings:

Provide commercial formulation form-coating compounds that will not bond with, stain, or adversely affect concrete surfaces, and will not impair subsequent treatments of concrete surfaces.

2. Reinforcing Materials:

a. Reinforcing Bars:

ASTM A 615, Grade 60, deformed. b.

Welded Wire Fabric:

ASTM A 185, welded steel wire fabric.

c. Supports for Reinforcement:

Provide supports for reinforcement including bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire fabric in place. Use wire bar type supports complying with CRSI specifications, unless otherwise acceptable.

For slabs-on-grade, use supports with sand plates or horizontal runners where base material will not support chair legs.

For exposed-to-view concrete surfaces, where legs of supports are in contact with forms, provide supports with legs which are plastic protected (CRSI, Class 1) or stainless steel protected (CRSI, Class 2).

3. Concrete Materials:

a. Portland Cement:

ASTM C 150, Type I or Type II, unless otherwise acceptable to the County.

Use one brand of cement throughout project, unless otherwise acceptable to the County.

b. Normal Weight Aggregates:

ASTM C 33, and as herein specified. Provide aggregates from a single source for exposed concrete.

For exterior exposed surfaces, do not use fine or coarse aggregates containing spalling-causing deleterious substances.

Local aggregates not complying with ASTM C 33, but which have shown by special test or actual service, to produce concrete of adequate strength and durability may be used, when acceptable to the County.

c. Water:

Potable.

d. Air-Entraining Admixture:

ASTM C 260

Subject to compliance with requirements, products which may be incorporated in the work include, but are not limited to, the following:

Air-Mix or Perma-Air, Euclid Chemical Corp. Air-Tite, Cormix Construction Chemicals Darex AEA or Daravair, W.R. Grace & Co. MB-VR or MB-AE, Master Builders, Inc.  
Monex Air or Monex NVR, Monex Resources, Inc.  
Sealtight AEA, W.R. Meadows, Inc.  
Sika AER, Sika Corp.

e. Water-Reducing Admixture:

ASTM C 494, Type A or Type D, and contain not more than 0.1% chloride ions.

Subject to compliance with requirements, products which may be incorporated in the work include, but are not limited to, the following:

Chemtard, ChemMasters Corp. Eucon WR-75, Euclid Chemical Co. Metco W.R., Metalcrete Industries Monex Resources, Inc.  
Plastocrete 161, Sika Corp.  
Pozzolith Normal or Polyheed, Master Builders, Inc.  
Prokrete-N, Prokrete Industries  
PSI N, Cormix Construction Chemicals  
WRDA, W.R. Grace & Co.

f. High-Range Water-Reducing Admixture:

ASTM C 494, Type F or Type G, and containing not more than 0.1% chlorine ions.

Subject to compliance with requirements, products which may be incorporated in the work include, but are not limited to, the following:

Eucon 37, Euclid Chemical Company

Monex SP or Mighty RD, Monex Resources, Inc.

PSP, Prokrete Industries  
Rheobuild or Polyheed, Master Builders, Inc.  
Sikament 300, Sika Corp.  
Super P, Anti-Hydro Company, Inc.  
Superslump, Metalcrete Industries  
WRDA 19 or Daracem, W.R. Grace and Company

4. Related Materials:

a. Non-Shrink Grout:

Subject to compliance with requirements, products which may be incorporated in the work include, but are not limited to, the following:

Masterflow 713, Master Builders  
Sonogrout, Sonneborn-Contech Euco-  
NS, Euclid Chemical Corp. Crystex, L &  
M Const. Chemical Co.  
Sure-Grip Grout, Dayton Superior Corp.  
Horngrout, A.C. Horn

b. Chemical Hardener:

Colorless aqueous solution containing a blend of magnesium fluorosilicate and zinc fluorosilicate combined with a wetting agent containing no less than 2 lbs. of fluorosilicates per gal.

Subject to compliance with requirements, products which may be incorporated in the work include, but are not limited to, the following:

Surfhard, Euclid Chemical Co.  
Lapidolith, Sonneborn-Contect  
Saniseal, Master Builders  
Burk-O-Lith, The Burke Co.

c. Absorptive Cover:

Burlap cloth made from jute or kenaf, weighing approx. 9 oz. per sq. yd., complying with AASHTO M 182, Class 2.

d. Moisture-Retaining Cover:

Use one of the following, comply with ASATM C 171.

Waterproof paper  
Polyethylene film  
Polyethylene-coated burlap

e. Bonding Compound:

Polyvinyl acetate, or acrylic base, rewettable type.

Subject to compliance with requirements, products which may be incorporated in the work include, but are not limited to, the following:

J-40 Bonding Agent, Dayton Superior Corp.  
Weldcrete, Larsen Products  
Everbond, L & M Construction Chemical  
Euroweld, Euclid Chemical Co. Hornweld,  
A.C. Horn  
Sonocrete, Sonneborn-Contech  
Acrylic Bondcrete, The Burke Co.

f. Epoxy Adhesive:

ASTM C 881, two-component material suitable for use on dry or damp surfaces. Provide material Type, Grade, and Class to suit project requirements.

Subject to compliance with requirements, products which may be incorporated in the work include, but are not limited to, the following:

Burke Epoxy M.V., The Burke Co.  
Concresive Standard Liquid, Master Builders, Inc.  
Epabond, L&M Construction Chemicals, Inc. Epoxitite  
Binder 2390, A.C. Horn, Inc.  
Euco Epoxy System #452 or #620, Euclid Chemical Co. Metco  
Hi-Mod Epoxy, Metalcrete Industries  
Resi-Bond (J-58), Dayton Superior Rezi-  
Weld 1000, W.R. Meadows, Inc. Series,  
Symons Corp.  
Sikadur 32 HI-Mod, Sika Corp.  
Spec-Bond 100, Conspec Marketing and Mfg. Co.  
Stonset LV5, Stonhard, Inc.

g. Waterstops:

Provide flat, dumbbell type waterstops at construction joints and other joints as indicated. Size to suit joints.

Rubber Waterstops: Corps of Engineers CRD-C 513

Subject to compliance with requirements, products which may be incorporated in the work include, but are not limited to, the following:

BOMetals, Inc.

The Burke Co.

Greensteak Plastic Products Co.

Meadows, Inc.

Progress Unlimited

Schlegel Corp.

Vinylex Corp.

h. Moisture Barrier:

Provide moisture barrier cover over prepared base material where indicated. Use only materials resistant to decay when tested in accordance with ASTM E 154, as follows:

Polyethylene sheet not less than 6 mils thick.

5. Proportioning And Design Of Mixes:

a. Prepare design mixes for each type and strength of concrete by either laboratory trial batch or field experience methods as specified in ACI 301. If trial batch method is used, use an independent testing facility for preparing and reporting proposed mix designs. The testing facility shall not be the same as used for field quality control testing unless otherwise acceptable to the County.

b. Design mixes to provide normal weight concrete with the following properties, as indicated on the Contract Drawings and schedules:

Structural Concrete (Class A) shall be used for construction of walls, slabs, etc. Class A concrete shall conform to the following requirements:

Compressive Strength: 4,000 psi (28 days)

W/C ratio: 0.46 max. (air-entrained)

c. Adjustment to Concrete Mixes:

Mix design adjustments may be requested by the Contractor when characteristics of materials, job conditions, weather, test results, or other circumstances warrant, at no additional cost to the Owner. Laboratory test data for revised mix design and strength results must be submitted to the County before using in work.

d. Admixtures:

Use water-reducing admixture in concrete as required for placement and workability.

Use non-chloride accelerating admixture in concrete slabs placed at ambient temperatures below 50° F (10° C).

Use air-entraining admixture in exterior exposed concrete, unless otherwise indicated. Add air-entraining admixture at the manufacturer's prescribed rate to result in concrete at point of placement having total air content with a tolerance of plus-or-minus 1-1/2 % within the following limits:

Concrete structures and slabs exposed to freezing and thawing, deicer chemicals, or subjected to hydraulic pressure:

4.5% (moderate exposure); 6.0% (sever exposure): 1" max aggregate

5.0% (moderate exposure); 6.0% (severe exposure): 3/4" max aggregate

Other Concrete: 3% to 5% air

Use admixtures for water-reducing and set-control in strict compliance with manufacturer's directions.

e. Water-Cement Ratio:

Provide concrete for the following conditions with maximum water-cement (W/C) ratios as follows:

Subjected to freezing and thawing: W/C 0.46%

- f. Slump Limits:  
Proportion and design mixes to result in concrete slump at point of placement as follows:

Ramps, slabs, and sloping surfaces: Not more than 3" Reinforced

walls and foundation systems: Not less than 2"  
and not more than 5"

Other concrete: Not more than 6"

6. Concrete Mixes:

a. Ready-Mix Concrete:

Comply with requirements of ASTM C 94, as specified.

During hot weather, or under conditions contributing to rapid setting of concrete, a shorter mixing time than specified in ASTM C 94 may be required.

When the air temperature is between 85° F (30°C) and 90° F (32° C), reduce mixing and delivery time from 1-1/2" hours to 75 minutes, and when air temperature is above 90° F (32° C) reduce mixing and delivery time to 60 minutes.

E. SUBMITTALS

1. Product Data:

Submit data for proprietary materials and items, including reinforcement and forming accessories, admixtures, patching compounds, waterstops, joint systems, curing compounds, dry- shake finish materials, and others as requested.

2. Samples:

Submit samples of materials as specified, and as otherwise requested, including names, sources, and descriptions.

3. Laboratory Test Reports:

Submit laboratory test reports for concrete materials and mix design test as specified, and as otherwise requested.

4. Material Certificates:

Provide material certificates in lieu of material laboratory test reports when permitted. Material certificates shall be signed by manufacturer and Contractor, certifying that each material item complies with, or exceeds, specified requirements.

F. CONSTRUCTION

1. Forms:

- a. Installation of formwork shall conform to ACI 347. Design, engineering, and construction of formwork shall be the responsibility of the Contractor.
- b. Design formwork to be readily removable without impact, shock, or damage to cast-in-place concrete surfaces and adjacent materials.
- c. Construct forms to sizes, shapes, lines, and dimensions shown and to obtain accurate alignment, location, grades, level and plumb work in finished structures. Use selected materials to obtain required finishes. Solidly butt joints and provide back-up at joints to prevent leakage of cement paste.
- d. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush plates or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces where slope is too steep to place concrete with bottom forms only. Kerf wood inserts for forming keyways, reglets, recesses, and the like, to prevent swelling and for easy removal.
- e. Chamfer exposed corners and edges as indicated, using wood, metal, PVC, or rubber chamfer strips fabricated to product uniform smooth lines and tight edge joints.

f. Form Ties:

Factory-fabricated, adjustable-length, removable, or snap-off metal form ties, designed to prevent form deflection, to prevent spalling concrete surfaces upon removal, and to be watertight.

g. Cleaning and Tightening:

Thoroughly clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, or other debris just before concrete is placed. Retighten forms and bracing after concrete placement, as required, to eliminate mortar leaks and maintain proper alignment.

2. Placing Reinforcement:

Details of concrete reinforcement, unless otherwise shown, shall be in accordance with ACI 318, ACI 3115, and ACI 301. Comply with Concrete Reinforcing Steel Institute's recommended practice for "Placing Reinforcing Bars" for details and methods of reinforcement placement and supports, and as herein specified.

- a. Clean reinforcement of loose rust, mill scale, earth, ice, and other materials which reduce or destroy bond with concrete.
- b. Accurately position, support, and secure reinforcement against displacement by formwork, construction, or concrete placement operations. Locate and support reinforcing by metal chairs, runners, bolsters, spacers, and hangers.
- c. Place reinforcement to obtain at least minimum cover for concrete protection. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement operations. Set wire ties so ends are directed into concrete, not toward exposed concrete surfaces.

3. Joints:

a. Construction Joints:

Locate and install construction joints, as indicated or, if not indicated, locate so as not to impair strength and appearance of the structure, as acceptable to the County.

- b. Provide keyways at least 1-1/2" deep in construction joints in walls, slabs, and between walls and footings.
- c. Place construction joints perpendicular to main reinforcement. Continue reinforcement across construction joints.

d. Isolation Joints in Slabs-on-Ground:

Construct isolation joints in slabs-on-ground at points of contact between slabs on ground and vertical surfaces, such as column pedestals, foundation walls, grade beams, and elsewhere as indicated.

Pre-molded expansion joint filler shall conform to ASTM D 1751.

e. Contraction (Control) Joints in Slabs-on-Ground:

Construct contraction joints in slabs-on-ground to form panels of patterns shown. Use inserts 1/8" to 1/4" wide by 1/4" of slab depth, unless otherwise indicated.

- f. Form contraction joints by inserting pre-molded plastic, hardboard, or fiberboard strip onto fresh concrete until top surface of strip is flush with concrete slab surface. Tool slab edges round on each side of insert. After concrete has cured, remove inserts and clean groove of loose debris.

Contraction joints may be formed by saw cuts as soon as possible after slab finishing as may be safely done without dislodging aggregate.

4. Installation of Embedded Items:

Set edge forms or bulkheads and intermediate screed strips for slabs to obtain required elevations and contours in finished slab surface. Provide and secure units sufficiently strong to support types of screed strips by use of strike-off templates or accepted compaction type screeds.

5. Preparation of Form Surfaces:

Clean re-used surfaces of concrete matrix residue. Repair and patch required to return forms to acceptable surface conditions.

Coat contact surfaces of forms with a form-coating compound before reinforcement is placed.

Thin form-coating compounds only with thinning agent of type, and in amount and under conditions of form-coating compound manufacturer's directions. Do not allow excess form-coating material to accumulate in forms or to come in contact with in-place



concrete surfaces against which fresh concrete will be placed. Apply in compliance with manufacturer's instructions. Coat steel forms with a non-staining, rust-preventative form oil or otherwise protect against rusting. Rust-stained steel formwork is not acceptable.

6. Concrete Placement:

a. Pre-placement Inspection:

Before placing concrete, inspect and complete formwork installation, reinforcing steel, and items to be embedded or cast-in. Moisten wood forms immediately before placing concrete where form coatings are not used.

b. Coordinate the installation of joint materials and moisture barriers with placement of forms and reinforcing steel.

c. General:

Comply with ACI 304 and as herein specified.

Deposit concrete continuously or in layers of such thickness that no concrete will be placed on concrete which has hardened sufficiently to cause the formation of seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as herein specified. Deposit concrete as nearly as practicable to its final location to avoid segregation.

d. Placing Concrete in Forms:

Deposit concrete in forms in horizontal layers not deeper than 24" and in a manner to avoid inclined construction joints. Where placement consists of several layers, place each layer while the preceding layer is still plastic to avoid cold joints.

e. Consolidate placed concrete by mechanical vibrating equipment supplemented by hand-spading, rodding, or tamping. Use equipment and procedures for consolidation of concrete in accordance with ACI recommended practices.

f. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced

locations not farther than visible effectiveness of machine. Place vibrators to rapidly penetrate placed layer and at least 6" into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to set. At each intersection, limit duration of vibration to the time necessary to consolidate the concrete and complete the embedment of reinforcement and other embedded items without causing segregation of mix.

g. Placing Concrete Slabs:

Deposit and consolidate concrete slabs in a continuous operation, within the limits of construction joints, until the placing of a panel or section is completed.

h. Consolidate concrete during placing operation so that concrete is thoroughly worked around reinforcement and other embedded items and into corners.

i. Bring slab surfaces to correct level with straight-edge and strike-off. Use bull floats or darbies to smooth surfaces prior to beginning finishing operations.

j. Maintain reinforcing in proper position during concrete placement operations.

k. Cold Weather Placing:

Protect concrete work from physical damage or reduced strength which could be caused by frost, freezing actions, or low temperatures, in compliance with ACI 306R and as herein specified.

When the air temperature has fallen to or is expected to fall below 40°F (4°C), uniformly heat water and aggregates before mixing to obtain a concrete mixture temperature of not less than 50°F (10°) and not more than 80°F (27°C) at point of placement.

Do not use calcium chloride, salt, and other materials containing antifreeze agents or chemical accelerators, unless otherwise accepted in mix designs.

I. Hot Weather Placing:

When hot weather conditions exist that would seriously impair the quality and strength of concrete, place concrete in compliance with ACI 305R and as herein specified.

Cool ingredients before mixing to maintain a concrete temperature at time of placement below 90°F (32°C). Mixing water may be chilled, or chopped ice may be used to control temperature provided water equivalent of ice is calculated to total amount of mixing water. Use of liquid nitrogen to cool concrete is Contractor's option.

Cover reinforcing steel with water-soaked burlap if it becomes too hot, so that the steel temperature will not exceed the ambient air temperature immediately before embedment in concrete.

Fog spray forms, reinforcing steel, and subgrade just before concrete is placed.

7. Finish of Formed Surfaces:

a. Rough Form Finish:

For formed concrete surfaces not exposed-to-view in the finish work or by other construction, unless otherwise indicated. This is the concrete surface having texture imparted by the form facing material used, with tie holes and defective areas repaired and patched, and fins and other projections exceeding 1/4" in height rubbed down or chipped off.

b. Smooth Form Finish:

For formed concrete surfaces exposed-to-view, or that are to be covered with a coating material applied directly to concrete, or a covering material applied directly to concrete, such as waterproofing, painting, or other similar system. This is as-cast concrete surface obtained with selected form facing material, arranged orderly and symmetrically with a minimum of seams. Repair and patch defective areas with fins or other projections completely removed and smoothed.

c. Related Unformed Surfaces:

At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike-off smooth and

finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated.

8. Monolithic Slab Finishes:

a. Non-Slip Broom Finish:

Apply non-slip broom finish to exterior concrete platforms, slabs, steps, and ramps, and elsewhere as indicated.

Soon after float finishing, slightly roughen concrete surface by brooming with fiber bristle broom perpendicular to main traffic route. Coordinate required final finish with the County before application.

9. Concrete Curing and Protection:

a. General:

Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.

Start initial curing as soon as free water has disappeared from concrete surface after placing and finishing. Weather permitting; keep continuously moist for no less than 7 days.

Begin final curing procedures immediately following initial curing and before concrete has dried.

Continue final curing for at least 7 days in accordance with ACI 301 procedures. Avoid rapid drying at end of final curing period.

b. Curing Methods:

Perform curing of concrete by curing and sealing compound, by moist curing, by moisture-retaining cover curing, and by combinations thereof, as herein specified.

Provide Moisture Curing by Following Methods:

Keep concrete surface continuously wet by covering with water or continuous water-fog spray.

Cover concrete surface with specified absorptive cover, thoroughly saturating cover with water and keeping continuously wet. Place absorptive cover as to provide coverage of concrete surfaces and edges, with 4" lap overlap with adjacent absorptive covers.

Provide Moisture-Cover Curing as Follows:

Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width with sides and ends lapped at least 3" and sealed by waterproof tape or adhesive. Immediately repair any holes or tears during curing period using cover material and waterproof tape.

Provide Curing and Sealing Compound as Follows:

Apply specified curing and sealing compound to concrete slabs as soon as final finishing operations are complete (within 2 hours). Apply uniformly in continuous operation by power-spray or roller in accordance with manufacturer's directions. Recoat areas subject to heavy rainfall within 3 hours after initial application. Maintain continuity of coating and repair damage during curing period.

c. Curing Formed Surfaces:

Cure formed concrete surfaces by using moist curing method, with forms in-place for full curing period, or until forms are removed. If forms are removed, continue curing by methods specified above, as applicable.

d. Curing Unformed Surfaces:

Cure unformed surfaces, such as slabs, and other flat surfaces by application of appropriate curing method.

10. Removal of Forms:

Formwork not supporting the weight of concrete, such as columns, walls, and similar parts of the work, may be removed after cumulatively curing at not less than 50°F (10°C) for 24 hours after placing of concrete, provided concrete is sufficiently hard to not be damaged by form removal operations, and provide curing and protection operations are maintained.

11. Re-use of Forms:

Clean and repair surfaces of forms to be re-used in the work. Split, frayed, delaminated, or otherwise damaged form facing material will not be acceptable for exposed surfaces. Apply new form coating compound as specified for new formwork.

When forms are extended for successive concrete placement, thoroughly clean surfaces, remove fins and laitance, and tighten forms to close joints. Align and secure joint to avoid offsets. Do not use "patched" forms for exposed concrete surfaces.

12. Concrete Surface Repairs:

a. Patching Defective Areas:

Repair and patch defective areas with cement mortar immediately after removal of forms.

Cutout honeycomb, rock pockets, voids over 1/4" in any dimension, and holes left by tie rods and bolts, down to solid concrete but, in no case to a depth less than 1". Make edges of cuts perpendicular to the concrete surface. Thoroughly clean, dampen with water, and brush-coat the area to be patched with specified bonding agent. Place patching mortar after bonding compound has dried.

For exposed-to-view surfaces, blend white Portland cement and standard Portland cement so that, when dry, patching mortar will match color surrounding. Provide test areas at inconspicuous locations to verify mixture and color match before proceeding with patch. Compact mortar in-place and strike-off slightly higher than the surrounding surface.

b. Repair of Formed Surfaces:

Remove and replaced concrete having defective surfaces if defects cannot be repaired to satisfaction of the County. Surface defects, as such, include color and texture irregularities, cracks, spalls, air bubbles, honeycomb, rock pockets; fins and other projections on surface; and stains and other discolorations that cannot be removed by cleaning. Flush out form tie holes, fill with dry pack mortar, or recast cement cone lugs secured in-place with bonding agent.

Repair concealed formed surfaces, where possible, that contain defects that affect the durability of concrete. If defects cannot be repaired, remove and replace concrete.

c. Repair of Unformed Surfaces:

Test unformed surfaces, such as monolithic slabs, for smoothness and verify surface plane to tolerances specified for each surface and finish. Correct low and high areas as herein specified. Test unformed surfaces sloped to drain for trueness of slope, in addition to smoothness, using a template having a required slope.

Repair finished unformed surfaces that contain defects which affect the durability of concrete. Surface defects, as such, include crazing, cracks in excess of 0.01" wide regardless of length, spalling, pop-outs, honeycomb, rock pockets, and other objectionable conditions.

Correct high areas in unformed surfaces by grinding, after concrete has cured at least 14 days.

Correct low areas in unformed surfaces during, or immediately after completion of surface finishing operations by cutting out low areas and replacing with fresh concrete. Finish repaired areas to blend into adjacent concrete. Proprietary patching compounds may be used when acceptable to the Engineer.

d. Repair defective areas, except random cracks and single holes not exceeding 1" diameter, by cutting-out and replacing with fresh concrete. Remove defective areas to sound concrete with clean, square cuts and expose reinforcing steel with at least 3/4" clearance all around. Dampen concrete surfaces in contact with patching concrete and apply bonding compound. Mix patching concrete of same materials to provide concrete of same type or class as original concrete. Place, compact, and blend with adjacent finished concrete. Cure in same manner as adjacent concrete.

e. Repair isolated random cracks and single holes not over 1" in diameter by dry-pack method. Groove top of cracks and cut-out holes to sound concrete and clean of dust, compound. Mix dry-pack, consisting of one part Portland cement to 2-1/2 parts fine aggregate passing a No. 16 mesh sieve, using only enough water as required for handling and

placing. Place dry-pack after bonding compound has dried. Compact dry-pack mixture in-place and finish to match adjacent concrete. Keep patched area continuously moist for not less than 72 hours.

- f. Perform structural repairs with prior approval of the County for method and procedure, using specified epoxy adhesive and mortar.
- g. Repair methods not specified above may be used, subject to acceptance of the County.

13. Quality Control Testing During Construction:

The Contractor shall employ a testing laboratory to perform tests and to submit test reports for all Class A concrete. Sampling and testing for quality control during placement of concrete shall include the following, or as otherwise directed.

a. Sampling Fresh Concrete:

Follow ASTM C 172, except modified for slump to comply with ASTM C 94.

Slump: ASTM C 143; one test at point of discharge for each day's pour of each type of concrete; additional test when concrete consistency seems to have changed.

Air Content: ASTM C 143; volumetric method for lightweight or normal weight concrete; ASTM C 231 pressure method for normal weight concrete; one for each day's pour of each type of air-entrained concrete.

Concrete Temperature: Test hourly when air temperature is 40°F (4°C) and below, and when 80°F (27°C) and above; and each time a set of compression test specimens are made.

Compression Test Specimens: ASTM C 31; one set of 4 standard cylinders for each compressive strength test, unless otherwise directed. Mold and store cylinders for laboratory cured test specimens except when field-cure test specimens are required.

Compression Strength Tests: ASTM C 39; one set for each day's pour exceeding 5 cubic yards plus additional sets for

each 50 cu. yards over and above the first 25 cu. yards of each concrete class placed in any one day; two specimens tested at 28 days, and one specimen retained in reserve for later testing, if required.

When frequency of testing will provide less than 5 strength tests for a given class of concrete, conduct testing from at least 5 randomly selected batches or from each batch, if fewer than 5 are used.

- b. Test results shall be reported in writing to the Engineer and Contractor within 24 hours that tests are made. Reports of compressive strength tests shall contain the project name, date of concrete placement, name of concrete testing service, concrete type and class, location of concrete batch in structure, design compressive strength at 28 days, concrete mix proportions and materials; compressive breaking strength and type of break for both 7-day tests and 28-day tests.

- c. Nondestructive Testing:

Impact hammer, sonoscope, or other nondestructive device may be permitted, but shall not be used as the sole basis for acceptance or rejection.

- d. Additional Tests:

The testing service shall make additional test of in-place concrete when test results indicate specified concrete strengths and other characteristics have not been attained in the structure. The testing service, may conduct tests to determine the adequacy of concrete cored cylinders complying with ASTM C 42, or by other methods as directed. The Contractor shall pay for such test conducted, and any other additional testing and/or repairs and/or replacement, as may be required, when unacceptable concrete is verified.



DOCUMENT 03000  
DRAWINGS

