

**Contract Documents and Specifications for
the Construction of**



**The Bartlett Soccer Complex
Burleson, Texas**

October 2022
City Job No. ITB 2023- 004



801 Cherry Street
Suite 1300, Unit 11
Fort Worth, TX 76102

CONTRACT DOCUMENTS

CITY OF BURLESON
PLANS FOR THE BARTLETT SOCCER COMPLEX
TABLE OF CONTENTS

CONTRACT DOCUMENTS

Notice to Bidders
Instructions to Bidders
Conflict of Interest Questionnaire
Bid Form
Bid Bond
Standard Form of Agreement
Performance Bond
Payment Bond
Maintenance Bond
Certificate of Insurance
Form 1295
Standard General Conditions of the Construction Contract
Supplementary Conditions
Wage Rates

TECHNICAL SPECIFICATIONS

Division 01 – General Requirements

Section 01010	Summary of Work
Section 01020	Contract Considerations
Section 01039	Coordination and Meetings
Section 01300	Submittals
Section 01340	Shop Drawings, Product Data, and Submittals
Section 01410	Testing Laboratory Services
Section 01500	Construction Facilities and Temporary Controls
Section 01580	Project Signs
Section 01600	Materials and Equipment
Section 01630	Substitutions and Product Options
Section 01700	Project Closeout

Division 02 – Sitework

Section 02100	Site Preparation/Tree Protection Fencing
Section 02200	Earthwork
Section 02220	Excavation, Trenching, and Backfilling
Section 02875	Site and Street Shelters
Section 02930	Turfgrass

Division 32 – Irrigation

Section 328400	Site Irrigation
----------------	-----------------

NOTICE TO BIDDERS

Electronic Bids addressed to the Purchasing Agent of the City of Burleson, Texas will be received electronically on Bonfire (<https://burlesontx.bonfirehub.com/portal/?tab=openOpportunities>) until **December 27, 2022 at 2 PM** for the purpose of furnishing all labor, materials and equipment and the performing of all work required in the construction of THE BARTLETT SOCCER COMPLEX and other improvements incidental thereto, at which time and place, the proposals will be publicly opened and read aloud and retained by the City for tabulation, checking and evaluation. No hard copy bids will be accepted. This project involves Site Preparation, Demolition, Grading, Erosion Control Measures, Fencing, Landscape and Irrigation to construct complete and in place as shown in the plans and specifications.

Please submit questions through bonfire (<https://burlesontx.bonfirehub.com/portal/?tab=openopportunities>). Last day to submit questions is **December 15, 2022.**

Bidders shall submit BIDS electronically on Bonfire. No hard copies will be accepted. (<https://burlesontx.bonfirehub.com/portal/?tab=openOpportunities>).

The successful BIDDER may be required to submit written evidence, such as financial data, present commitments and available equipment, and will submit such data within five days of OWNER'S written request.

Bid security in the form of Cashier's Check, Bid Bond in the amount of 5% of the greatest amount bid must accompany each bid as a guarantee that, if awarded the contract, the bidder will promptly enter into a contract and execute bonds and insurance as outlined in the specifications and Instructions to Bidders.

In case of ambiguity or lack of clearness in stating proposal prices, the Owner reserves the right to adopt the most advantageous construction thereof, or to reject any or all bids. No bid may be withdrawn within forty-five (45) days after date on which bids are opened.

Advertisement Dates:

November 23, 2022

November 30, 2022

INSTRUCTIONS TO BIDDERS

TABLE OF CONTENTS

ARTICLE 1 - DEFINED TERMS.....	1
ARTICLE 2 - COPIES OF BIDDING DOCUMENTS.....	2
ARTICLE 3 - QUALIFICATIONS OF BIDDERS.....	2
ARTICLE 4 - EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA, AND SITE	2
ARTICLE 5 - PRE-BID CONFERENCE	
ARTICLE 6 - SITE AND OTHER AREAS.....	3
ARTICLE 7 - INTERPRETATIONS AND ADDENDA.....	4
ARTICLE 8 - BID SECURITY	4
ARTICLE 9 - CONTRACT TIMES	4
ARTICLE 10 - LIQUIDATED DAMAGES.....	4
ARTICLE 11 - SUBSTITUTE AND “OR-EQUAL” ITEMS	5
ARTICLE 12 - SUBCONTRACTORS, SUPPLIERS, AND OTHERS.....	5
ARTICLE 13 - PREPARATION OF BID	5
ARTICLE 14 - BASIS OF BID; COMPARISON OF BIDS	6
ARTICLE 15 - SUBMITTAL OF BID	6
ARTICLE 16 - MODIFICATION AND WITHDRAWAL OF BID	7
ARTICLE 17 - OPENING OF BIDS	7
ARTICLE 18 - BIDS TO REMAIN SUBJECT TO ACCEPTANCE	7
ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT	7
ARTICLE 20 - CONTRACT SECURITY AND INSURANCE.....	8
ARTICLE 21 - SIGNING OF AGREEMENT	8
ARTICLE 22 - SALES AND USE TAXES	8

TABLE OF ARTICLES (Alphabetical by Subject)

<u>Subject</u>	<u>Article</u>
Award of Contract.....	19
Basis of Bid; Comparison of Bids	14
Bid Security	8
Bids to Remain Subject to Acceptance	18
Contract Security and Insurance.....	20
Contract Times.....	9
Copies of Bidding Documents.....	2
Defined Terms.....	1
Examination of Bidding Documents, Other Related Data, and Site.....	4
Interpretations and Addenda	7
Liquidated Damages	10
Modification and Withdrawal of Bid.....	16
Opening of Bids	17
Pre-Bid Conference	
Preparation of Bid	13
Qualifications of Bidders.....	3
Sales and Use Taxes.....	22
Signing of Agreement	21
Site and Other Areas.....	6
Subcontractors, Suppliers and Others.....	12
Submittal of Bid.....	15
Substitute or “Or-Equal” Items	11

ARTICLE 1 - DEFINED TERMS

Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:

A. *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.

B. *Agreement*--The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

C. *Bid*--The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

D. *Bidder*--The individual or entity who submits a Bid directly to Owner.

E. *Bidding Documents*--The Bidding Requirements and the proposed Contract Documents (including all Addenda).

F. *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.

G. *Engineer*--The individual or entity named as such in the Agreement.

H. *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.

I. *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.

J. *Owner*--The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.

K. *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.

L. *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.

M. *Successful Bidder*--The Bidder submitting a responsive Bid to whom Owner makes an award.

N. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements these General Conditions.

O. *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.

P. *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.

Q. *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.

ARTICLE 2 - COPIES OF BIDDING DOCUMENTS

2.01 Complete sets of the Bidding Documents shall be obtained online from the City only.

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

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

ARTICLE 3 - QUALIFICATIONS OF BIDDERS

3.01 Pre-qualification of bidders is not required. The successful BIDDER may be required to submit written evidence, such as financial data, present commitments and available equipment, and will submit such data within five days of OWNER'S written request. A qualification statement of bidders form has been included to represent the type of information the BIDDER should be ready to provide upon request.

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

4.01 Subsurface and Physical Conditions

A. The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Bidding Documents.

2. Those drawings of physical conditions in or relating to existing surface and subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Bidding Documents.

B. Copies of reports and drawings referenced in Paragraph 4.01.A will be made available by Owner to any Bidder on request. Those reports and drawings are not part of the Contract Documents, but the “technical data” contained therein upon which Bidder is entitled to rely as provided in Paragraph 4.02 of the General Conditions has been identified and established in Paragraph 4.02 of the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any “technical data” or any other data, interpretations, opinions or information contained in such reports or shown or indicated in such drawings.

4.02 Underground Facilities

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

4.03 Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to subsurface conditions, other physical conditions and Underground Facilities, and possible changes in the Bidding Documents due to differing or unanticipated conditions appear in Paragraphs 4.02, 4.03, and 4.04 of the General Conditions. Provisions concerning responsibilities for the adequacy of data furnished to prospective Bidders with respect to a Hazardous Environmental Condition at the Site, if any, and possible changes in the Contract Documents due to any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work appear in Paragraph 4.06 of the General Conditions.

4.04 On request, Owner will provide Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies as Bidder deems necessary for submission of a Bid. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies. Bidder shall comply with all applicable Laws and Regulations relative to excavation and utility locates.

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

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

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

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

D. obtain and carefully study (or accept consequences of not doing 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 any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents, and safety precautions and programs incidentthereto;

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(s) 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 confirm that the written resolution thereof by Engineer is acceptable to Bidder; and

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

4.06 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 MEETING

5.01 A non-mandatory pre-bid meeting will be held virtually or in person on December 8, 2022 at 1:00 PM at City Hall (141 W. Renfro St., Burleson, Texas, 76028). Parks and Recreation Department staff will be in attendance if the meeting is held in person.

ARTICLE 6 - SITE AND OTHER AREAS

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

ARTICLE 7 - INTERPRETATIONS AND ADDENDA

7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to the Purchasing Manager through Bonfire only. Interpretations or clarifications considered necessary by Purchasing Manager in response to such questions will be issued by Addenda to all parties by posting in Bonfire with existing bid documents. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

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

ARTICLE 8 - BID SECURITY

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

8.02 The Bid security of the Successful Bidder will be retained until such Bidder has executed the Contract Documents, furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, Owner may 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 the Bid opening.

ARTICLE 9 - CONTRACT TIMES

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

ARTICLE 10 - LIQUIDATED DAMAGES

10.01 Provisions for liquidated damages, if any, are set forth in the Agreement.

ARTICLE 11 - SUBSTITUTE AND "OR-EQUAL" ITEMS

11.01 The Contract, if awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration of possible substitute or "or-equal" items. Whenever it is specified or described in the Bidding Documents that a substitute or "or-equal" item of material or equipment may be furnished or used by Contractor if acceptable to Engineer, application for such acceptance will not be considered by Engineer until after the Effective Date of the Agreement.

ARTICLE 12 - SUBCONTRACTORS, SUPPLIERS, AND OTHERS

12.01 If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, individuals, or entities to be submitted to Owner in advance of a specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner a list of

all such Subcontractors, Suppliers, individuals, or entities proposed for those portions of the Work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, individual, or entity if requested by Owner. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit a substitute, and the Bidder's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.

12.02 Contractor shall not be required to employ any Subcontractor, Supplier, individual, or entity against whom Contractor has reasonable objection.

ARTICLE 13 - PREPARATION OF BID

13.01 The Bid Form is included with the Bidding Documents.

13.02 All blanks on the Bid Form shall be completed by printing in ink or by typewriter and the Bid signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each Bid item, listed therein, or the words "No Bid," "No Change," or "Not Applicable" entered.

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

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

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

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

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

ARTICLE 14 - BASIS OF BID; COMPARISON OF BIDS

14.01 Unit Price

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

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

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

14.02 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.

14.03 Both price bid and project duration bid will be considered when awarding this project.

ARTICLE 15 - SUBMITTAL OF BID

15.01 The Bid Form and Bid Bond Form are included in each copy of the Bidding Documents. The bound copy of the Bid Form is to be completed and submitted with the Bid security (in the form of a Bid Bond).

15.02 Computer-generated pages of the bid form may be used in lieu of the Bid Form provided. This option is provided for the convenience of the Bidder.

The use of an electronic Bid Form shall not contain added wording intended to modify or amend the wording in the OWNER's Bid Form, or the provisions of the Contract Documents, including the plans, specifications, or Special Conditions. All bid items, bid amounts (unit prices and extended totals), subtotals, and total bid must be submitted, and the risk of error, omission, or failure to include each in accordance with the OWNER's final published Bid Form shall be borne solely by the bidder; and in the event the electronic bid form is not provided in accordance with the OWNER's final published Bid Form, the bid shall be declared non-responsive.

The Bidder shall provide the following disclaimer on the electronic bid form; otherwise, the bid will be considered non-responsive and rejected:

(Company) certifies that the Bid Item Number, Specification Item, Name of Pay Item, Estimated Quantity, Unit, Unit Price Bid, and Amount Bid shown on this electronic bid form for all of the bid items contained in this Bid Form are consistent with the Bid Form provided herein, and that its bid will be tabulated using these Unit Prices and no other information from this electronic bid form.

The Company further acknowledges and agrees the Total Bid Amount shown will be read as its Total Bid and further agrees that the official Total Bid Amount will be determined by multiplying the Unit Prices shown in the electronic bid form by the respective estimated quantities shown in the Bid Form and then totaling all of the extended amounts.

Electronic bids will not be accepted unless accompanied by a hard copy with required signatures and as long as all legal and bid requirements are met.

The OWNER reserves the right to reject any or all bids and to waive any irregularities or formalities. The CONTRACTOR accepts all risks associated with bidding in this manner. It is understood and agreed that the bid may not be withdrawn once the bid-opening process has begun.

15.03 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 submitted electronically on Bonfire (<https://burlesontx.bonfirehub.com/portal/?tab=openOpportunities>), and shall be accompanied by the Bid security and other required documents. No hard copies will be accepted.

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 TO REMAIN SUBJECT TO ACCEPTANCE

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

ARTICLE 19 – EVALUATION OF BIDS AND AWARD OF CONTRACT

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

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

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

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

19.05 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders, proposed Subcontractors, Suppliers, individuals, or entities 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 Bidder whose Bid is in the best interests of the Project.

19.07 If the contract is to be awarded, Owner intends to give the Successful Bidder a Notice of Award within forty-five days after the day of the Bid Opening.

19.08 Successful Bidder will be required to provide completed documents to the Owner including the following: the attached Qualification Statement of Bidder, the attached Conflict of Interest Questionnaire, and IRS form W-9.

ARTICLE 20 - CONTRACT SECURITY AND INSURANCE

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

ARTICLE 21 - SIGNING OF AGREEMENT

21.01 When Owner 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.

ARTICLE 22 - SALES AND USE TAXES

22.01 Owner is exempt from State of Texas sales and use taxes on materials and equipment to be incorporated in the Work. Said taxes shall not be included in the Bid. Refer to Paragraph SC-6.10 of the Supplementary Conditions for additional information.

CONFLICT OF INTEREST QUESTIONNAIRE CIQ

FORM

For vendor or other person doing business with local governmental entity

OFFICE USE ONLY

Date Received

This questionnaire is being filed in accordance with chapter 176 of the Local Government Code by a person doing business with the governmental entity.

By law this questionnaire must be filed with the records administrator of the local government not later than the 7th business day after the date the person becomes aware of facts that require the statement to be filed. See Section 176.006, Local Government Code.

A person commits an offense if the person violates Section 176.006, Local Government Code. An offense under this section is a Class C misdemeanor.

1 Name of person doing business with local governmental entity.

2

Check this box if you are filing an update to a previously filed questionnaire.

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than September 1 of the year for which an activity described in Section 176.006(a), Local Government Code, is pending and not later than the 7th business day after the date the originally filed questionnaire becomes incomplete or inaccurate.)

3 Describe each affiliation or business relationship with an employee or contractor of the local governmental entity who makes recommendations to a local government officer of the local governmental entity with respect to expenditure of money.

4 Describe each affiliation or business relationship with a person who is a local government officer and who appoints or employs a local government officer of the local governmental entity that is the subject of this questionnaire.

CONFLICT OF INTEREST QUESTIONNAIRE**FORM CIQ**

For vendor or other person doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 1491, 80th Leg., Regular Session.

This questionnaire is being filed in accordance with Chapter 176, Local Government Code by a person who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the person meets requirements under Section 176.006(a).

By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the person becomes aware of facts that require the statement to be filed. See Section 176.006, Local Government Code.

A person commits an offense if the person knowingly violates Section 176.006, Local Government Code. An offense under this section is a Class C misdemeanor.

OFFICE USE ONLY

Date Received

1 Name of person who has a business relationship with local governmental entity.

GRod Construction LLC

2 ☐ Check this box if you are filing an update to a previously filed questionnaire.

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date the originally filed questionnaire becomes incomplete or inaccurate.)

3 Name of local government officer with whom filer has employment or business relationship.

N/A

Name of Officer

This section (item 3 including subparts A, B, C & D) must be completed for each officer with whom the filer has an employment or other business relationship as defined by Section 176.001(1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the filer of the questionnaire?

☐ Yes☐ No

B. Is the filer of the questionnaire receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity?

☐ Yes☐ No

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership of 10 percent or more?

☐ Yes☐ No

D. Describe each employment or business relationship with the local government officer named in this section.

4

Signature of person doing business with the governmental entity

12/27/2022

Date

Adopted 06/29/2007

**BID FORM
FOR
Plans for the Bartlett Soccer Complex**

Date 12/27/2022

TO: City of Burleson
141 W. Renfro
Burleson, TX 76028

FROM: GRod Construction LLC
(Name of Contractor)
889 E. Rock Island Ave. Boyd, TX 76023
(Address)
(682) 302-3219
(Phone) (Fax)

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

2. 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. This Bid will remain subject to acceptance for forty-five days after the day of Bid opening. BIDDER will sign and deliver the required number of counterparts of the Agreement with the Bonds and other documents required by the Bidding Requirements within ten days after the date of OWNER's Notice of Award.

3. In submitting this Bid, BIDDER represents, as more fully set forth in the Agreement, that:

- (a) BIDDER has examined and carefully studied the Bidding Documents and the following Addenda receipt of all which is hereby acknowledged: (List Addenda by Addendum Number and Date)

Addenda #1 12/21/2022

- (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, performance and furnishing of the Work.
- (d) BIDDER has carefully studied all 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 of subsurface structures at or contiguous to the site (except Underground Facilities) which have been identified in the Supplementary Conditions as provided in paragraph 4.02.A of the General Conditions. BIDDER accepts the determination set forth in paragraphs SC-4.02 and 4.03 of the Supplementary Conditions of the extent of the "technical data" contained in such reports and drawings upon which BIDDER is entitled to rely as provided in paragraphs 4.02 and 4.03 of the General Conditions. BIDDER acknowledges that such reports and drawings are not Contract Documents and may not be complete for BIDDER's purposes. BIDDER acknowledges that OWNER and Engineer do not assume responsibility for the accuracy or completeness of information and data shown or indicated in the Bidding Documents with respect to Underground Facilities at or contiguous to the site.

BIDDER has obtained and carefully studied (or assumes responsibility for having done so) all such additional or supplementary examinations, 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, performance or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences and procedures of construction to be employed by BIDDER and safety precautions and programs incident thereto. BIDDER does not consider that any additional examinations, investigations, explorations, tests, studies or data are necessary for the determination of this Bid for performance and furnishing of the Work in accordance with the times, price and other terms and conditions of the Contract Documents.

- (e) BIDDER is aware of the general nature of Work to be performed by Owner and others at the site that relates to Work for which this Bid is submitted as indicated in the Contract Documents.
- (f) BIDDER has correlated the information known to BIDDER, 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.
- (g) BIDDER has thoroughly reviewed the project and has submitted to the Purchasing Manager, at least seven (7) days in advance of the date for opening bids, all questions regarding the meaning or intent of the contract documents and particularly all questions regarding issues which may affect the pricing or measurement and payment of the project.
- (h) BIDDER is aware of the general timeline for work to be completed. Project to be substantially complete within 90 days from notice to proceed.

4. Bid Form.

Unit prices have been computed in accordance with paragraph 11.03 of the General Conditions.

BIDDER acknowledges that, for unit price contracts, quantities are not guaranteed and final payment will be based on actual quantities determined as provided in the Contract Documents. For lump sum contracts, the amounts bid shall be full compensation for the associated work and changes in the final payment amount may only be made by change order as provided for in the Contract.

CITY OF BURLESON, TEXAS
BARTLETT SOCCER COMPLEX PROJECT
KH PROJECT NO. 061166089

BID SUMMARY

BASE BID

ITEM #	ITEM DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
101	Mobilization, Bonds, Insurance	1	LS	\$ 50,000.00	\$ 50,000.00
102	Demolition, Remove Landscape	1	LS	\$ 35,000.00	\$ 35,000.00
103	Demolition and Removal Concrete	2,355	SF	\$ 4.50	\$ 10,597.50
104	Remove 4' Vinyl Chain Link Fence	12	LF	\$ 50.00	\$ 600.00
105	Grading/Earthwork/Topsoil	1	LS	\$ 350,000.00	\$ 350,000.00
106	Install 4' Vinyl Chain Link Fence	12	LF	\$ 400.00	\$ 4,800.00
107	Install Latitude 36 Sod	501,769	SF	\$ 0.70	\$ 351,238.30
108	Irrigation System	1	LS	\$ 171,419.20	\$ 171,419.20
109	Install Temporary Erosion, Sedimentation, and Water Pollution Prevention and Control	3,946	LF	\$ 6.00	\$ 23,676.00
110	Remove Temporary Erosion, Sedimentation, and Water Pollution Prevention and Control	3,946	LF	\$ 0.60	\$ 2,367.60
111	SW3P Plan/Permitting/Approval	1	LS	\$ 3,000.00	\$ 3,000.00
112	Contingency (10%)	1	LS	\$ 100,269.86	\$ 100,269.86
TOTAL BASE BID					\$ 1,102,968.46

ALTERNATE BID

112	Install Tif Tuf Sod	501,769	SF	\$0.00 0.70	\$ 351,238.30
TOTAL ALT. BID					\$ 351,238.30

TOTAL BID **\$ 1,102,968.46**

5. BIDDER agrees that the Work will be substantially completed and ready for final payment in accordance with Article 14 of the General Conditions within the number of calendar days indicated in the Agreement.
6. BIDDER accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work within the times specified in the Agreement.
7. The following documents are attached to and made a condition of this Bid:
 - (a) Required Bid Security in the form of a certified or cashier's check or a Bid Bond in an amount of five percent of the Bidder's maximum bid price, made payable to the OWNER, in accordance with Article 8 of the Instructions to Bidders.
6. Communications concerning this Bid shall be addressed to:

The address of BIDDER indicated below.
7. Terms used in this Bid which are defined in the General Conditions or Instructions will have the meanings indicated in the General Conditions or Instructions.

SUBMITTED on December 27th, 2022

Signed: _____

Company: GRod Construction LLC

Address: 889 E. Rock Island Ave.

Boyd, TX 76023

Telephone: 682-302-3219

Fax: 682-204-0191

Submitted by: GRod Construction LLC

Doing Business As: _____

SEAL:

(if Bidder is a corporation)

- ☐ an individual
- ☐ a partnership
- ☐ a corporation
- ☐ a joint venture
- ☒ an LLC

BID BOND

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

BIDDER (Name and Address):

GRod Construction, LLC
889 E. Rock Island Ave.
Boyd, TX 76023

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

Merchants Bonding Company (Mutual)
P.O. Box 14498,
Des Moines, IA 50306-3498

OWNER (Name and Address):

City of Burleson
141 W. Renfro
Burleson, Texas, 76028

BID

Bid Due Date: December 27, 2022

Project (Brief Description Including Location):

BARTLETT SOCCER COMPLEX

Bid # 2023-004 / Site Preparation, Demolition, Grading, Fencing, Landscape and Irrigation

BOND

Bond Number: N/A

Date (Not later than Bid due date): December 27, 2022

Penal sum Five Percent of the Greatest Amount Bid

5% G.A.B.

(Words)

(Figures)

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

BIDDER

GRod Construction, LLC

(Seal)

Bidder's Name and Corporate Seal

By: 

Signature and Title

Attest: 

Signature and Title

SURETY

Merchants Bonding Company (Mutual)

(Seal)

Surety's Name and Corporate Seal

By: 

Signature and Title Crystal Langhorn / Attorney-in-Fact
(Attach Power of Attorney)

Attest: 

Signature and Title Elena Sells, Witness

Note: Above addresses are to be used for giving required notice.

MERCHANTS
BONDING COMPANYTM
POWER OF ATTORNEY

Know All Persons By These Presents, that MERCHANTS BONDING COMPANY (MUTUAL) and MERCHANTS NATIONAL BONDING, INC., both being corporations of the State of Iowa (herein collectively called the "Companies") do hereby make, constitute and appoint, individually, Crystal Langhorn; Elena Sells; Kathy Sells; Lanny Land; Steven W Lewis

their true and lawful Attorney(s)-in-Fact, to sign its name as surety(ies) and to execute, seal and acknowledge any and all bonds, undertakings, contracts and other written instruments in the nature thereof, on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

This Power-of-Attorney is granted and is signed and sealed by facsimile under and by authority of the following By-Laws adopted by the Board of Directors of Merchants Bonding Company (Mutual) on April 23, 2011 and amended August 14, 2015 and adopted by the Board of Directors of Merchants National Bonding, Inc., on October 16, 2015.

"The President, Secretary, Treasurer, or any Assistant Treasurer or any Assistant Secretary or any Vice President shall have power and authority to appoint Attorneys-in-Fact, and to authorize them to execute on behalf of the Company, and attach the seal of the Company thereto, bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof."

"The signature of any authorized officer and the seal of the Company may be affixed by facsimile or electronic transmission to any Power of Attorney or Certification thereof authorizing the execution and delivery of any bond, undertaking, recognizance, or other suretyship obligations of the Company, and such signature and seal when so used shall have the same force and effect as though manually fixed."

In connection with obligations in favor of the Florida Department of Transportation only, it is agreed that the power and authority hereby given to the Attorney-in-Fact includes any and all consents for the release of retained percentages and/or final estimates on engineering and construction contracts required by the State of Florida Department of Transportation. It is fully understood that consenting to the State of Florida Department of Transportation making payment of the final estimate to the Contractor and/or its assignee, shall not relieve this surety company of any of its obligations under its bond.

In connection with obligations in favor of the Kentucky Department of Highways only, it is agreed that the power and authority hereby given to the Attorney-in-Fact cannot be modified or revoked unless prior written personal notice of such intent has been given to the Commissioner-Department of Highways of the Commonwealth of Kentucky at least thirty (30) days prior to the modification or revocation.

In Witness Whereof, the Companies have caused this instrument to be signed and sealed this 13th day of June, 2022.



MERCHANTS BONDING COMPANY (MUTUAL)
MERCHANTS NATIONAL BONDING, INC.

By

Larry Taylor
President

STATE OF IOWA
COUNTY OF DALLAS ss.

On this 13th day of June, 2022, before me appeared Larry Taylor, to me personally known, who being by me duly sworn did say that he is President of MERCHANTS BONDING COMPANY (MUTUAL) and MERCHANTS NATIONAL BONDING, INC.; and that the seals affixed to the foregoing instrument are the Corporate Seals of the Companies; and that the said instrument was signed and sealed in behalf of the Companies by authority of their respective Boards of Directors.



POLLY MASON
Commission Number 750576
My Commission Expires
January 07, 2023

Polly Mason
Notary Public

(Expiration of notary's commission does not invalidate this instrument)

I, William Warner, Jr., Secretary of MERCHANTS BONDING COMPANY (MUTUAL) and MERCHANTS NATIONAL BONDING, INC., do hereby certify that the above and foregoing is a true and correct copy of the POWER-OF-ATTORNEY executed by said Companies, which is still in full force and effect and has not been amended or revoked.

In Witness Whereof, I have hereunto set my hand and affixed the seal of the Companies on this 27th day of December, 2022.



William Warner Jr.
Secretary

STANDARD FORM OF AGREEMENT

STATE OF TEXAS

§

COUNTY OF JOHNSON

§

§

THIS AGREEMENT is dated as of the 9th day of January

in the year 2023 by and between City of Burleson

(hereinafter called OWNER) and GRod Construction

(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 indicated in the Contract Documents. The Work is generally described as follows:

BARTLETT SOCCER COMPLEX

The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

BARTLETT SOCCER COMPLEX

Article 2. ENGINEER.

The Project has been designed by:

KIMLEY-HORN AND ASSOCIATES, INC.
801 CHERRY STREET, UNIT 11, SUITE 1300
FORT WORTH, TX 76102-6803
TX REGISTRATION No. F-928

Kimley-Horn and Associates, Inc.. is hereinafter called ENGINEER and 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 completion of the Work in accordance with the Contract Documents.

Article 3. CONTRACT TIME.

3.1. GRAND TOTAL CONTRACT TIME – All sections of work, as identified in the Bid Form, for Unit 1 will be substantially completed within **90** Calendar Days from the date when the Contract Time commences to run as provided in paragraph 2.03 of the General Conditions, and completed and ready for final payment in accordance with paragraphs 14.07.B and 14.07.C of the General Conditions within 30 calendar days from the date when the each unit in the Contract is substantially complete.

3.2. Liquidated Damages. OWNER and CONTRACTOR 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 times specified in paragraph 3.1. above plus any extensions thereof allowed in accordance with Article 12.02 of the General Conditions. They 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

One Thousand dollars (\$ 1,000) for each day that expires after the time specified in paragraph 3.1. 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 One Thousand dollars (\$ 1,000.00) for each day that expires after the time specified in paragraph 3.1 for completion and readiness for final payment.

Article 4. CONTRACT PRICE.

4.1. OWNER shall pay CONTRACTOR for completion of the Work in accordance with the Contract Documents in current funds as follows:

TOTAL BID OF \$ 1,102,968.46 AS IDENTIFIED IN THE BID FORM
CONTAINED HEREIN.

Article 5. PAYMENT PROCEDURES.

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

5.1. Progress Payments. 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 25th day of each month during construction as provided below. All progress payments will be on the basis of the progress of the Work measured by the schedule of values established in paragraph 2.07 of the General Conditions (and in the case of Unit Price Work based on the number of units completed) or, in the event there is no schedule of values, as provided in the General Conditions.

5.1.1. 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, in accordance with paragraph

14.02.B.5 of the General Conditions.

95 % of Work completed. If Work has been 50% completed as determined by ENGINEER, and if the character and progress of the Work have been satisfactory to OWNER and ENGINEER, OWNER on recommendation of ENGINEER, may determine that as long as the character and progress of the Work remain satisfactory to them, there will be no additional retainage on account of Work completed in which case the remaining progress payments prior to Substantial Completion will be in an amount equal to 100% of the Work completed.

95 % of materials and equipment not incorporated in the Work (but delivered, suitably stored and accompanied by documentation satisfactory to OWNER as provided in paragraph 14.02.A of the General Conditions).

5.1.2. Upon Substantial Completion, in an amount sufficient to increase total payments to CONTRACTOR to 95 % of the Contract Price, less such amounts as ENGINEER shall determine, or OWNER may withhold, in accordance with paragraph 14.02.B.5 of the General Conditions.

5.2. Final Payment. Upon final completion and acceptance of the Work in accordance with paragraphs 14.07.B and 14.07.C of the General Conditions, OWNER shall pay the remainder of the Contract Price as recommended by ENGINEER as provided in said paragraphs 14.07.B and 14.07.C.

Article 6. INTEREST.

All moneys not paid when due as provided in Article 14 of the General Conditions shall bear interest at the maximum rate allowed by law at the place of the Project.

Article 7. CONTRACTOR'S REPRESENTATIONS.

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

7.1. CONTRACTOR has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality, and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance or furnishing of the Work.

7.2. CONTRACTOR has studied carefully all reports of explorations and tests of subsurface conditions and drawings of physical conditions which are identified in the Supplementary Conditions as provided in paragraph 4.02.A and 4.02.B of the General Conditions, and accepts the determination set forth in paragraphs SC-4.02 and 4.03 of the Supplementary Conditions of the extent of the technical data contained in such reports and drawings upon which CONTRACTOR is entitled to rely.

7.3. CONTRACTOR has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) all such examinations, investigations, explorations, tests, reports and studies (in addition to or to supplement those referred to in paragraph 7.2 above) which pertain to the subsurface or physical conditions at or contiguous to the site or otherwise may affect the cost, progress, performance or furnishing of the Work as CONTRACTOR considers necessary for the performance or furnishing of the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraphs 4.02 and 4.03 of the General Conditions; and no additional examinations, investigations, explorations, tests, reports, studies or similar information or data are or will be required by CONTRACTOR for such purposes.

7.4. CONTRACTOR has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the accurate location of said Underground Facilities. No additional examinations, investigations, explorations, tests, reports, studies or similar information or data in respect of said Underground Facilities are or will be required by CONTRACTOR in order to perform and furnish the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraph 4.04 of the General Conditions.

7.5. CONTRACTOR has correlated the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.

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

Article 8. CONTRACT DOCUMENTS.

The Contract Documents which comprise the entire agreement between OWNER and CONTRACTOR concerning the Work consist of the following:

- 8.1. This Agreement.
- 8.2. Performance, Payment and Maintenance Bonds as contained herein.
- 8.3. Certificate of Insurance.
- 8.4. General Conditions.
- 8.5. Supplementary Conditions.
- 8.6. Specifications bearing the title CONTRACT DOCUMENTS AND SPECIFICATIONS FOR THE BARTLETT SOCCER COMPLEX**
- 8.7. Drawings bearing the following general title:
THE BARTLETT SOCCER COMPLEX
- 8.8. Addenda numbers _____ to _____, inclusive.
- 8.9. CONTRACTOR's Bid Form as contained herein.
- 8.10. Documentation submitted by CONTRACTOR prior to Notice of Award (pages _____ to _____, inclusive).
- 8.11. The following which may be delivered or issued after the Effective Date of the Agreement and are not attached hereto: All Written Amendments and other documents amending, modifying, or

supplementing the Contract Documents pursuant to paragraph 3.04 of the General Conditions.

There are no Contract Documents other than those listed above in this Article 8. The Contract Documents may only be amended, modified or supplemented as provided in paragraph 3.04 of the General Conditions.

Article 9. MISCELLANEOUS.

9.1. Terms used in this Agreement which are defined in Article 1 of the General Conditions will have the meanings indicated in the General Conditions.

9.2. 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.

9.3. 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 of all covenants, agreements and obligations contained in the Contract Documents.

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

This Agreement will be effective on _____, 20_.

OWNER:
City of Burleson

CONTRACTOR:
GRod Construction LLC.

By Bryan Langley, City Manager
(Print Name)

By Guillermo Rodriguez, Managing Member
(Print Name)

(CORPORATE SEAL)

(CORPORATE SEAL)

Attest _____

Attest Jessica Rodriguez

Address for giving notices:

Address for giving notices:

141 W. Renfro

889 E. Rock Island Ave.

Burleson, TX 76028

Boyd, TX 76023

PERFORMANCE BOND

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

CONTRACTOR (Name and Address):

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

OWNER (Name and Address):

**City of Burleson
141 W. Renfro
Burleson, Texas, 76028**

CONTRACT

Date:

Amount:

Description (Name and Location):

THE BARTLETT SOCCER COMPLEX

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 Performance Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

Company:

Signature: _____ (Seal)

Name and Title:

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

CONTRACTOR AS PRINCIPAL

Company:

Signature: _____ (Seal)

Name and Title:

SURETY

(Seal)

Surety's Name and Corporate Seal

By: _____

Signature and Title

(Attach Power of Attorney)

Attest: _____

Signature and Title

SURETY

(Seal)

Surety's Name and Corporate Seal

By: _____

Signature and Title

(Attach Power of Attorney)

Attest: _____

Signature and Title:

EJCDC No. C-610 (2002 Edition)

Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, and the American Institute of Architects.

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

2. If Contractor performs the Contract, Surety and Contractor have no obligation under this Bond, except to participate in conferences as provided in Paragraph 3.1.

3. If there is no Owner Default, Surety's obligation under this Bond shall arise after:

3.1. Owner has notified Contractor and Surety, at the addresses described in Paragraph 10 below, that Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with Contractor and Surety to be held not later than 15 days after receipt of such notice to discuss methods of performing the Contract. If Owner, Contractor and Surety agree, Contractor shall be allowed a reasonable time to perform the Contract, but such an agreement shall not waive Owner's right, if any, subsequently to declare a Contractor Default; and

3.2. Owner has declared a Contractor Default and formally terminated Contractor's right to complete the Contract. Such Contractor Default shall not be declared earlier than 20 days after Contractor and Surety have received notice as provided in Paragraph 3.1; and

3.3. Owner has agreed to pay the Balance of the Contract Price to:

1. Surety in accordance with the terms of the Contract;
2. Another contractor selected pursuant to Paragraph 4.3 to perform the Contract.

4. When Owner has satisfied the conditions of Paragraph 3, Surety shall promptly and at Surety's expense take one of the following actions:

4.1. Arrange for Contractor, with consent of Owner, to perform and complete the Contract; or

4.2. Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or

4.3. Obtain bids or negotiated proposals from qualified contractors acceptable to Owner for a contract for performance and completion of the Contract, arrange for a contract to be prepared for execution by Owner and Contractor selected with Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Contract, and pay to Owner the amount of damages as described in Paragraph 6 in excess of the Balance of the Contract Price incurred by Owner resulting from Contractor Default; or

4.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness under the circumstances:

1. After investigation, determine the amount for which it may be liable to Owner and, as soon as practicable after the amount is determined, tender payment therefor to Owner; or
2. Deny liability in whole or in part and notify Owner citing reasons therefor.

5. If Surety does not proceed as provided in Paragraph 4 with reasonable promptness, Surety shall be deemed to be in default on this Bond 15 days after receipt of an additional written notice from Owner to Surety demanding that Surety perform its obligations under this Bond, and Owner shall be entitled to enforce any remedy available to Owner. If Surety proceeds as provided in Paragraph 4.4, and Owner refuses the payment tendered or Surety has denied liability, in whole or in part, without further notice Owner shall be entitled to enforce any remedy available to Owner.

6. After Owner has terminated Contractor's right to complete the Contract, and if Surety elects to act under Paragraph 4.1, 4.2, or 4.3 above, then the responsibilities of Surety to Owner shall not be greater than those of Contractor under the Contract, and the responsibilities of Owner to Surety shall not be greater than those of Owner under the Contract. To a limit of the amount of this Bond, but subject to commitment by Owner of the Balance of the Contract Price to mitigation of costs and damages on the Contract, Surety is obligated without duplication for:

6.1. The responsibilities of Contractor for correction of defective Work and completion of the Contract;

6.2. Additional legal, design professional, and delay costs resulting from Contractor's Default, and resulting from the actions or failure to act of Surety under Paragraph 4; and

6.3. Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or non-performance of Contractor.

7. Surety shall not be liable to Owner or others for obligations of Contractor that are unrelated to the Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than Owner or its heirs, executors, administrators, or successors.

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

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

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

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

12. Definitions.

12.1 Balance of the Contract Price: The total amount payable by Owner to Contractor under the Contract after all proper adjustments have been made, including allowance to Contractor of any amounts received or to be received by Owner in settlement of insurance or other Claims for damages to which Contractor is entitled, reduced by all valid and proper payments made to or on behalf of Contractor under the Contract.

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

12.3. Contractor Default: Failure of Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.

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

FOR INFORMATION ONLY – Name, Address and Telephone
Surety Agency or Broker
Owner's Representative (engineer or other party)

PAYMENT BOND

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

CONTRACTOR (Name and Address):

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

OWNER (Name and Address):

**City of Burleson
141 W. Renfro
Burleson, Texas, 76028**

CONTRACT

Date:

Amount:

Description (Name and Location):

THE BARTLETT SOCCER COMPLEX

BOND

Bond Number:

Date (Not earlier than Contract Date):

Amount (for full coverage of the project):

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 PRINCIPAL

Company:

Signature: _____(Seal)

Name and Title:

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

SURETY

_____(Seal)

Surety's Name and Corporate Seal

By: _____

Signature and Title

(Attach Power of Attorney)

Attest: _____

Signature and Title

CONTRACTOR AS PRINCIPAL

Company:

Signature: _____(Seal)

Name and Title:

SURETY

_____(Seal)

Surety's Name and Corporate Seal

By: _____

Signature and Title

(Attach Power of Attorney)

Attest: _____

Signature and Title:

EJCDC No. C-615 (2002 Edition)

Originally prepared through the joint efforts of the Surety Association of America, Engineers Joint Contract Documents Committee, the Associated General Contractors of America, the American Institute of Architects, the American Subcontractors Association, and the Associated Specialty Contractors.

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to Owner to pay for labor, materials, and equipment furnished by Claimants for use in the performance of the Contract, which is incorporated herein by reference.

2. With respect to Owner, this obligation shall be null and void if Contractor:

- 2.1. Promptly makes payment, directly or indirectly, for all sums due Claimants, and
- 2.2. Defends, indemnifies, and holds harmless Owner from all claims, demands, liens, or suits alleging non-payment by Contractor by any person or entity who furnished labor, materials, or equipment for use in the performance of the Contract, provided Owner has promptly notified Contractor and Surety (at the addresses described in Paragraph 12) of any claims, demands, liens, or suits and tendered defense of such claims, demands, liens, or suits to Contractor and Surety, and provided there is no Owner Default.

3. With respect to Claimants, this obligation shall be null and void if Contractor promptly makes payment, directly or indirectly, for all sums due.

4. Surety shall have no obligation to Claimants under this Bond until:

- 4.1. Claimants who are employed by or have a direct contract with Contractor have given notice to Surety (at the addresses described in Paragraph 12) and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.
- 4.2. Claimants who do not have a direct contract with Contractor:
 1. Have furnished written notice to Contractor and sent a copy, or notice thereof, to Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials or equipment were furnished or supplied, or for whom the labor was done or performed; and
 2. Have either received a rejection in whole or in part from Contractor, or not received within 30 days of furnishing the above notice any communication from Contractor by which Contractor had indicated the claim will be paid directly or indirectly; and
 3. Not having been paid within the above 30 days, have sent a written notice to Surety and sent a copy, or notice thereof, to Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to Contractor.

5. If a notice by a Claimant required by Paragraph 4 is provided by Owner to Contractor or to Surety, that is sufficient compliance.

6. When a Claimant has satisfied the conditions of Paragraph 4, the Surety shall promptly and at Surety's expense take the following actions:

- 6.1. Send an answer to that Claimant, with a copy to Owner, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.
- 6.2. Pay or arrange for payment of any undisputed amounts.

7. Surety's total obligation shall not exceed the amount of this Bond, and the amount of this Bond shall be credited for any payments made in good faith by Surety.

8. Amounts owed by Owner to Contractor under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any performance bond. By Contractor furnishing and Owner accepting this Bond, they agree that all funds earned by Contractor in the performance of the Contract are dedicated to satisfy obligations of Contractor and Surety under this Bond, subject to Owner's priority to use the funds for the completion of the Work.

9. Surety shall not be liable to Owner, Claimants, or others for obligations of Contractor that are unrelated to the Contract. Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.

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

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

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

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

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

15. DEFINITIONS

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

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

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

FOR INFORMATION ONLY – Name, Address and Telephone
Surety Agency or Broker:
Owner's Representative (engineer or other party):

MAINTENANCE BOND
PAVING, DRAINAGE, WATER, SEWER AND RELATED IMPROVEMENTS

THE STATE OF TEXAS §

COUNTY OF JOHNSON AND TARRANT §

KNOW ALL MEN BY THESE PRESENTS, that _____
Contractor

_____, _____, _____
Address City State

as principal, and _____,
a corporate surety authorized to do business in Texas, as surety, do hereby
acknowledge themselves to be held and bound to pay unto the City of Burleson, a
municipal corporation, chartered by virtue of Constitution and laws of the State of
Texas, at Burleson, in Johnson/Tarrant County, Texas, the sum of _____
_____ Dollars (\$ _____), lawful money of the United States, for payment of
which sum well and truly to be made unto said City of Burleson and its successors,
said Contractor and surety do hereby bind themselves, their heirs, executors,
administrators, assigns, and successors, jointly and severally.

This obligation is conditioned, however, that,

WHEREAS, said Contractor has this day entered into a written contract with
_____, for
improvements consisting of the installation and construction of:

THE BARTLETT SOCCER COMPLEX
City of Burleson Project No. ITB 2023-004

which Contract and the Specifications therein mentioned approved by the City are
expressly made a part hereof, as though written herein in full; and,

WHEREAS, in said contract, Contractor binds itself to use such materials
and to so construct said improvements that they will remain in good repair and
condition for and during the period two (2) years after the date of final acceptance of
the work by the City; and,

WHEREAS, said Contractor binds itself to maintain said improvements in
good repair and condition for said term of two (2) years; and,

WHEREAS, said Contractor binds itself to repair or reconstruct the said improvements in whole or in part at any time within said period, regardless of the cause of the defects, if in the opinion of the City Engineer of the City of Burleson, it be necessary, and,

WHEREAS, said Contractor binds itself, upon receiving notice of the need therefore to maintain, repair, reconstruct or replace said improvements as herein provided.

NOW THEREFORE, if said Contractor shall keep and perform its said agreement to maintain, repair, reconstruct or replace said improvements, in accordance with all Ordinances, specifications, and regulations of the City of Burleson, these presents shall be null and void, and have no force or effect. Otherwise, this Bond shall be and remain in full force and effect, and said City shall have and recover from the said Contractor and its surety damages in the premises as above prescribed. This obligation shall be a continuing one and successive recoveries may be had hereon for successive breaches until the full amount hereof is exhausted.

IN WITNESS WHEREOF, the Contractor _____,
has caused these presents to be executed by its authorized Attorney in Fact, and said _____, surety, has caused these presents to be executed
by its Attorney in Fact, and attested by its corporate seal, this _____
day of ___, A.D. _____.

CONTRACTOR

By: _____

SURETY

By: _____
Attorney-in-fact

ATTEST:

(SEAL)

SECRETARY

(SAMPLE FORM)
CERTIFICATE OF INSURANCE

TO:

Owner

Address

Date _____
Project No. _____
Type of _____
Project _____

THIS IS TO CERTIFY THAT _____
(Name and address of insured)

is, at the date of this certificate, insured by this Company with respect to the business operations hereinafter described, for the types of insurance and in accordance with the provisions of the standard policies used by this Company, and further hereinafter described. Exceptions to standard policy noted on reverse side hereof.

TYPE OF INSURANCE

	Policy No.	Effective	Expires	Limits of Liability
Workman's Compensation				1 Person \$ _____
Public Liability				1 Accident \$ _____
Contingent Liability				1 Person \$ _____ 1 Accident \$ _____
Property Damage				
Builder's Risk				
Automobile				
Other				

The forgoing policies (do) (do not) cover all sub-contractors.

Locations Covered: _____

Descriptions of Operations Covered: _____

The above policies either in the body thereof or by appropriate endorsement provide that they may not be changed or cancelled by the insurer in less than fifteen days after the insured has received written notice of such change or cancellation.

Where applicable local laws or regulations require more than fifteen days actual notice of change or cancellation to the assured, the above policies contain such special requirements, either in the body thereof or by appropriate endorsement thereto attached.

(Name of Insurer)

By _____

Title _____

CERTIFICATE OF INTERESTED PARTIES**FORM 1295**

Complete Nos. 1 - 4 and 6 if there are interested parties.
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

OFFICE USE ONLY

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the goods or services to be provided under the contract.

4 Name of Interested Party	City, State, Country (place of business)	Nature of Interest (check applicable)	
		Controlling	Intermediary

5 Check only if there is NO Interested Party.

☐**6 AFFIDAVIT**

I swear, or affirm, under penalty of perjury, that the above disclosure is true and correct.

Signature of authorized agent of contracting business entity

AFFIX NOTARY STAMP / SEAL ABOVE

Sworn to and subscribed before me, by the said _____, this the _____ day
of _____, 20_____, to certify which, witness my hand and seal of office.

Signature of officer administering oath Printed name of officer administering oath Title of officer administering oath

ADD ADDITIONAL PAGES AS NECESSARY

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

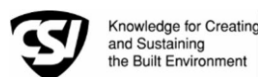
AMERICAN COUNCIL OF ENGINEERING COMPANIES

AMERICAN SOCIETY OF CIVIL ENGINEERS

This document has been approved and endorsed by



The Associated General Contractors of America



Construction Specifications Institute

Copyright ©2002

**National Society of Professional Engineers
1420 King Street, Alexandria, VA 22314**

**American Council of Engineering Companies
1015 15th Street, N.W., Washington, DC 20005**

**American Society of Civil Engineers
1801 Alexander Bell Drive, Reston, VA 20191-4400**

These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor Nos. C-520 or C-525 (2002 Editions). 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).

TABLE OF CONTENTS

Page

ARTICLE 1 - DEFINITIONS AND TERMINOLOGY	1
1.01 <i>Defined Terms</i>	1
1.02 <i>Terminology</i>	3
ARTICLE 2 - PRELIMINARY MATTERS	4
2.01 <i>Delivery of Bonds and Evidence of Insurance</i>	4
2.02 <i>Copies of Documents</i>	4
2.03 <i>Commencement of Contract Times; Notice to Proceed</i>	4
2.04 <i>Starting the Work</i>	4
2.05 <i>Before Starting Construction</i>	4
2.06 <i>Preconstruction Conference</i>	4
2.07 <i>Initial Acceptance of Schedules</i>	4
ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE	5
3.01 <i>Intent</i>	5
3.02 <i>Reference Standards</i>	5
3.03 <i>Reporting and Resolving Discrepancies</i>	5
3.04 <i>Amending and Supplementing Contract Documents</i>	6
3.05 <i>Reuse of Documents</i>	6
3.06 <i>Electronic Data</i>	6
ARTICLE 4 - AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS	6
4.01 <i>Availability of Lands</i>	6
4.02 <i>Subsurface and Physical Conditions</i>	7
4.03 <i>Differing Subsurface or Physical Conditions</i>	7
4.04 <i>Underground Facilities</i>	8
4.05 <i>Reference Points</i>	8
4.06 <i>Hazardous Environmental Condition at Site</i>	8
ARTICLE 5 - BONDS AND INSURANCE	9
5.01 <i>Performance, Payment, and Other Bonds</i>	9
5.02 <i>Licensed Sureties and Insurers</i>	10
5.03 <i>Certificates of Insurance</i>	10
5.04 <i>Contractor's Liability Insurance</i>	10
5.05 <i>Owner's Liability Insurance</i>	11
5.06 <i>Property Insurance</i>	11
5.07 <i>Waiver of Rights</i>	12
5.08 <i>Receipt and Application of Insurance Proceeds</i>	12
5.09 <i>Acceptance of Bonds and Insurance; Option to Replace</i>	12
5.10 <i>Partial Utilization, Acknowledgment of Property Insurer</i>	13
ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES	13
6.01 <i>Supervision and Superintendence</i>	13
6.02 <i>Labor; Working Hours</i>	13
6.03 <i>Services, Materials, and Equipment</i>	13
6.04 <i>Progress Schedule</i>	13
6.05 <i>Substitutes and "Or-Equals"</i>	14
6.06 <i>Concerning Subcontractors, Suppliers, and Others</i>	15
6.07 <i>Patent Fees and Royalties</i>	16
6.08 <i>Permits</i>	16
6.09 <i>Laws and Regulations</i>	16
6.10 <i>Taxes</i>	17
6.11 <i>Use of Site and Other Areas</i>	17
6.12 <i>Record Documents</i>	17
6.13 <i>Safety and Protection</i>	17
6.14 <i>Safety Representative</i>	18
6.15 <i>Hazard Communication Programs</i>	18

6.16	<i>Emergencies</i>	18
6.17	<i>Shop Drawings and Samples</i>	18
6.18	<i>Continuing the Work</i>	19
6.19	<i>Contractor's General Warranty and Guarantee</i>	19
6.20	<i>Indemnification</i>	19
6.21	<i>Delegation of Professional Design Services</i>	20
ARTICLE 7 - OTHER WORK AT THE SITE		20
7.01	<i>Related Work at Site</i>	20
7.02	<i>Coordination</i>	21
7.03	<i>Legal Relationships</i>	21
ARTICLE 8 - OWNER'S RESPONSIBILITIES		21
8.01	<i>Communications to Contractor</i>	21
8.02	<i>Replacement of Engineer</i>	21
8.03	<i>Furnish Data</i>	21
8.04	<i>Pay When Due</i>	21
8.05	<i>Lands and Easements; Reports and Tests</i>	21
8.06	<i>Insurance</i>	21
8.07	<i>Change Orders</i>	21
8.08	<i>Inspections, Tests, and Approvals</i>	21
8.09	<i>Limitations on Owner's Responsibilities</i>	22
8.10	<i>Undisclosed Hazardous Environmental Condition</i>	22
8.11	<i>Evidence of Financial Arrangements</i>	22
ARTICLE 9 - ENGINEER'S STATUS DURING CONSTRUCTION		22
9.01	<i>Owner's Representative</i>	22
9.02	<i>Visits to Site</i>	22
9.03	<i>Project Representative</i>	22
9.04	<i>Authorized Variations in Work</i>	22
9.05	<i>Rejecting Defective Work</i>	22
9.06	<i>Shop Drawings, Change Orders and Payments</i>	23
9.07	<i>Determinations for Unit Price Work</i>	23
9.08	<i>Decisions on Requirements of Contract Documents and Acceptability of Work</i>	23
9.09	<i>Limitations on Engineer's Authority and Responsibilities</i>	23
ARTICLE 10 - CHANGES IN THE WORK; CLAIMS		23
10.01	<i>Authorized Changes in the Work</i>	23
10.02	<i>Unauthorized Changes in the Work</i>	24
10.03	<i>Execution of Change Orders</i>	24
10.04	<i>Notification to Surety</i>	24
10.05	<i>Claims</i>	24
ARTICLE 11 - COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK		25
11.01	<i>Cost of the Work</i>	25
11.02	<i>Allowances</i>	26
11.03	<i>Unit Price Work</i>	26
ARTICLE 12 - CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES		27
12.01	<i>Change of Contract Price</i>	27
12.02	<i>Change of Contract Times</i>	27
12.03	<i>Delays</i>	28
ARTICLE 13 - TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK		28
13.01	<i>Notice of Defects</i>	28
13.02	<i>Access to Work</i>	28
13.03	<i>Tests and Inspections</i>	28
13.04	<i>Uncovering Work</i>	29
13.05	<i>Owner May Stop the Work</i>	29
13.06	<i>Correction or Removal of Defective Work</i>	29
13.07	<i>Correction Period</i>	29
13.08	<i>Acceptance of Defective Work</i>	30
13.09	<i>Owner May Correct Defective Work</i>	30
ARTICLE 14 - PAYMENTS TO CONTRACTOR AND COMPLETION		30
14.01	<i>Schedule of Values</i>	30
14.02	<i>Progress Payments</i>	31
14.03	<i>Contractor's Warranty of Title</i>	32
14.04	<i>Substantial Completion</i>	32

14.05	<i>Partial Utilization</i>	33
14.06	<i>Final Inspection</i>	33
14.07	<i>Final Payment</i>	33
14.08	<i>Final Completion Delayed</i>	34
14.09	<i>Waiver of Claims</i>	34
ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION		34
15.01	<i>Owner May Suspend Work</i>	34
15.02	<i>Owner May Terminate for Cause</i>	34
15.03	<i>Owner May Terminate For Convenience</i>	35
15.04	<i>Contractor May Stop Work or Terminate</i>	35
ARTICLE 16 - DISPUTE RESOLUTION		35
16.01	<i>Methods and Procedures</i>	35
ARTICLE 17 - MISCELLANEOUS		36
17.01	<i>Giving Notice</i>	36
17.02	<i>Computation of Times</i>	36
17.03	<i>Cumulative Remedies</i>	36
17.04	<i>Survival of Obligations</i>	36
17.05	<i>Controlling Law</i>	36
17.06	<i>Headings</i>	36

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. *Agreement*--The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.

3. *Application for Payment*--The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Asbestos*--Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.

5. *Bid*--The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

6. *Bidder*--The individual or entity who submits a Bid directly to Owner.

7. *Bidding Documents*--The Bidding Requirements and the proposed Contract Documents (including all Addenda).

8. *Bidding Requirements*--The Advertisement or Invitation to Bid, Instructions to Bidders, bid security of acceptable form, if any, and the Bid Form with any supplements.

9. *Change Order*--A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

10. *Claim*--A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. *Contract*--The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. *Contract Documents*-- Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor's submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

13. *Contract Price*--The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).

14. *Contract Times*--The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any, (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.

15. *Contractor*--The individual or entity with whom Owner has entered into the Agreement.

16. *Cost of the Work*--See Paragraph 11.01.A for definition.

17. *Drawings*--That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

18. *Effective Date of the Agreement*--The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

19. *Engineer*--The individual or entity named as such in the Agreement.

20. *Field Order*--A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.

21. *General Requirements*--Sections of Division 1 of the Specifications. The General Requirements pertain to all sections of the Specifications.

22. *Hazardous Environmental Condition*--The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.

23. *Hazardous Waste*--The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.

24. *Laws and Regulations; Laws or Regulations*--Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

25. *Liens*--Charges, security interests, or encumbrances upon Project funds, real property, or personal property.

26. *Milestone*--A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.

27. *Notice of Award*--The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Owner will sign and deliver the Agreement.

28. *Notice to Proceed*--A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.

29. *Owner*--The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.

30. *PCBs*--Polychlorinated biphenyls.

31. *Petroleum*--Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.

32. *Progress Schedule*--A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.

33. *Project*--The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.

34. *Project Manual*--The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.

35. *Radioactive Material*--Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.

36. *Related Entity* -- An officer, director, partner, employee, agent, consultant, or subcontractor.

37. *Resident Project Representative*--The authorized representative of Engineer who may be assigned to the Site or any part thereof.

38. *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.

39. *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.

40. *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.

41. *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.

42. *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.

43. *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.

44. *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.

45. *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.

46. *Successful Bidder*--The Bidder submitting a responsive Bid to whom Owner makes an award.

47. *Supplementary Conditions*--That part of the Contract Documents which amends or supplements these General Conditions.

48. *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.

49. *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.

50. *Unit Price Work*--Work to be paid for on the basis of unit prices.

51. *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.

52. *Work Change Directive*--A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times

but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 Terminology

1. The following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following meaning.

2. 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.

3. Day

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

4. 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).

5. 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.

6. 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. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 Starting the Work

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

2.05 Before Starting Construction

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

A. a preliminary Progress Schedule; indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;

B. a preliminary Schedule of Submittals; and

C. 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, 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.

A. 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.

B. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

C. 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 or other individual or entity performing or furnishing all of the Work under a direct or indirect contract with Contractor, 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 adaption 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 stop-

page 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 insured (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, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:

1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, 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;

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, false work, 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. Owner 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.

E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 Waiver of Rights

A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions 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 Owner as trustee or otherwise payable under any policy so issued.

B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, 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 Owner and made payable to Owner 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. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.

B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 Acceptance of Bonds and Insurance; Option to Replace

A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract

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

5.10 Partial Utilization, Acknowledgment of Property Insurer

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

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.01 Supervision and Superintendence

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.

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

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 Draw-

ings 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*: Contractor shall also submit Samples to Engineer for review and approval in accordance with the acceptable schedule of Shop Drawings and Sample submittals.

- 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 Drawing's 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

7. any correction of defective Work by Owner.

6.20 Indemnification

A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, 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

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

under this Paragraph 9.08, Engineer will not show

10.01 *Authorized Changes in the Work*

Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).

A. 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:

A. 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;

B. 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

C. 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, expresses, 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 quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

2. there is no corresponding adjustment with respect 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

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

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

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.C.

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 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. repair such defective land or areas; or
2. correct such defective Work; or
3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.

B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications .

D. Where defective Work (and damage to other Work resulting 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. there are other items entitling Owner to a set-off against the amount recommended; or
- d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.

2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor 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, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a 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 and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals

that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 Final Payment

A. Application for Payment

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:

a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.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 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 Waiver of Claims

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

A. 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

B. 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 expenses sustained prior to the effective date of reasonable sums for overhead and profit on such Work;

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;

2. 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

3. reasonable expenses directly attributable to termination.

B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 Contractor May Stop Work or Terminate

A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 - DISPUTE RESOLUTION

16.01 Methods and Procedures

A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a

decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.

B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:

1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions, or

2. agrees with the other party to submit the Claim to another dispute resolution process, or

3. gives written notice to the other party of 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.

SUPPLEMENTARY CONDITIONS
for
City of Burleson
THE BARTLETT SOCCER COMPLEX

INDEX

<u>Section</u>	<u>Title</u>
SC-1.01	Definitions
SC-2.02	Copies of Documents
SC-2.03	Notice to Proceed
SC-2.04	Starting the Project
SC-2.05.A	Schedules
SC-3.03.B	Resolving Discrepancies
SC-4.02	Subsurface and Physical Conditions
SC-4.03	Differing Subsurface or Physical Conditions
SC-5.01	Performance, Payment and Other Bonds
SC-5.04	Contractor's Liability Insurance
SC-5.04.B.4	Contractual Liability Insurance
SC-5.04.B.8	Worker's Compensation and Insurance Coverage
SC-5.05	Owner's Liability Insurance
SC-5.06	Property Insurance
SC-5.06.B	Property Insurance
SC-6.02.A	Labor; Working Hours
SC-6.05.E	Engineer's Cost Reimbursement
SC-6.06.A	Subcontracts
SC-6.08.A	Permits
SC-6.10.A	Taxes
SC-6.12	Record Documents
SC-6.13	Safety and Protection
SC-6.17	Shop Drawings and Samples
SC-6.22	Wage Rates
SC-9.08	Decisions on Requirements of Contract Documents and Acceptability of Work
SC-13.03	Tests and Inspections
SC-13.07	Two Year Correction Period
SC-14.02.A.1	Applications for Payment
SC-14.02.C	Review of Applications for Progress Payment
SC-17	Miscellaneous
SC-18	Pay Items

SUPPLEMENTARY CONDITIONS

These Supplementary Conditions amend or supplement the General Conditions 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.

SC-1.01 DEFINITIONS:

The terms used in these Supplementary Conditions have the meanings assigned to them in the General Conditions or as amended below, which are applicable to both the singular and plural forms thereof.

SC-1.01.A.19 *Engineer*

Add the following language to the end of the definition:

"The word "Engineer" in these specifications shall be understood as referring to Kimley-Horn and Associates, Inc., 801 Cherry Street, Fort Worth, Texas 76102-6803, Engineer of the Owner, or such other representative as may be authorized by said Owner to act in any particular position."

SC-1.01.A.29 *Owner*

Add the following language to the end of the definition:

"The words "Owner" or "City" in these documents shall be understood as referring to the City of Burleson, 141 W. Renfro, Burleson, Texas, 76028."

SC-1.01.A.33 *Project*

Add the following language to the end of the definition:

This project involves Site Preparation, Demolition, Grading, Soccer Field Requirements, Fencing, Landscape and Irrigation and to construct complete and in place as shown in the plans and specifications.

SC-1.01.A.43 *Specifications*

Add the following language to the end of the definition:

"Except as herein amended or supplemented, Division 100 through 800 of the Standard Specifications for Public Works Construction adopted by the North Central Texas Council of Governments (NCTCOG) Fifth Edition in 2017, with all amendments shall constitute the specifications. They are not physically bound with other contract documents but are incorporated by reference."

SC-1.01.A.47 *Supplementary Conditions*

Add the following language to the end of the definition:

"Where in the Bonds and elsewhere in the contract, the terms "Special Provisions," and "Special Conditions" appear, they shall be read to mean "Supplementary Conditions."

SC-2.02 COPIES OF DOCUMENTS:

Delete the first sentence of paragraph 2.02 of the General Conditions and replace with the following sentence:

"Owner shall furnish to Contractor up to five copies of the Contract Documents as are reasonably necessary for the execution of the Work."

SC-2.03 NOTICE TO PROCEED:

Delete paragraph 2.03 of the General Conditions in its entirety and replace with the following paragraph:

"The Contract Time will commence to run on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within thirty days after the Effective Date of the Agreement."

SC-2.04 STARTING THE PROJECT:

Delete paragraph 2.04 of the General Conditions in its entirety and replace with the following paragraph:

"Contractor shall start to perform the Work within ten (10) calendar days of the date when the Contract Time commences to run, but no work shall be done at the site prior to the Notice to Proceed."

SC-2.05.A SCHEDULES:

Amend the first sentence of paragraph 2.05.A of the General Conditions to read as follows:

"Within five (5) days after the Effective Date of the Agreement, Contractor shall submit to ENGINEER for review:"

"...and as amended paragraph 2.05.A remains in effect."

SC-3.03.B RESOLVING DISCREPANCIES

Add the following new paragraph immediately after Paragraph 3.03.B.1.6:

"2. Should a discrepancy arise in the Contract Documents, the Drawings shall take precedence over the Specifications."

SC-4.03 DIFFERING SUBSURFACE OR PHYSICAL CONDITIONS:

Delete 4.03 in its entirety.

SC-5.01 PERFORMANCE, PAYMENT AND OTHER BONDS:

SC-5.01.A Delete Paragraph 5.01.A. in its entirety and insert the following in its place:

"A Contractor shall furnish performance and payment Bonds in accordance with Chapter 2253, Texas Government Code, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of the Contractor's obligations under the Contract Documents. Contractor shall also furnish a maintenance bond in the amount of one hundred (100%) of the Contract Amount guaranteeing the Work and workmanship against defects. The performance, payment, and maintenance bonds will remain in effect at least two years after the date of when final payment becomes due or until completion of the correction period specified in paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents."

SC-5.01.B Amend the last sentence of Paragraph 5.01.B to read as follows:

“All bonds signed by an agent must be accompanied by a certified copy of the agent’s authority to act and must be issued by sureties licensed by the State of Texas to provide surety bonds.”

SC-5.04 CONTRACTOR'S LIABILITY INSURANCE:

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

- | | | |
|-----|---|-----------|
| (1) | State: | Statutory |
| (2) | Applicable Federal (e.g. Longshoreman's): | Statutory |
| (3) | Employer's Liability: | \$500,000 |

5.04.A.3, 5.04.A.4, 5.04.A.5, and 5.04.A.6. Comprehensive General Liability (under paragraphs 5.04.A.3 through 5.04.A.6 of the General Conditions):

- | | | |
|-----|--|------------------|
| (1) | Bodily Injury (including completed operations and products liability): | |
| | \$500,000 | Each Occurrence |
| | \$1,000,000 | Annual Aggregate |
| | Property Damage: | |
| | \$200,000 | Each Occurrence |
| | \$500,000 | Annual Aggregate |
| (2) | Property Damage liability insurance will provide Explosion, Collapse and Under-ground coverage where applicable. | |
| (3) | Personal Injury, with employment exclusion deleted | |
| | \$500,000 | Annual Aggregate |

5.04.B.1. Comprehensive Automobile Liability:

- | | |
|------------------|-----------------|
| Bodily Injury: | |
| \$200,000 | Each Person |
| \$500,000 | Each Occurrence |
| Property Damage: | |
| \$200,000 | Each Occurrence |

SC-5.04.B.4 CONTRACTUAL LIABILITY INSURANCE:

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

- | | |
|------------------|------------------|
| Bodily Injury: | |
| \$500,000 | Each Occurrence |
| Property Damage: | |
| \$200,000 | Each Occurrence |
| \$500,000 | Annual Aggregate |

SC-5.04.B.8 WORKERS' COMPENSATION INSURANCE COVERAGE:

Add the following paragraphs to Article 5 of the General Conditions:

"5.04.B.8 Workers' Compensation Insurance Coverage.

"In addition to other insurance requirements stipulated herein, the Contractor shall comply with all requirements of 28 TAC 110.110 and other requirements outlined in this section. Definitions contained in this section are for this section only."

"5.04.B.8.1 Definitions:

Certificate of coverage ("certificate") - A copy of a certificate of insurance, a certificate of authority to self-insure issued by the commission, or a coverage agreement (TWCC-81, TWCC- 82, TWCC-83, or TWCC-84), showing statutory workers' compensation insurance coverage for the person's or Owner's employees providing services on a project, for the duration of the project."

Duration of the project - includes the time from the beginning of the work on the project until the Contractor's/person's work on the project has been completed and accepted by the Owner.

"Persons providing services on the project ("subcontractor") - includes all persons or entities performing all or part of the services the Contractor has undertaken to perform on the project regardless of whether that person contracted directly with the Contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractors, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. Services include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets."

"5.04.B.8.2 The Contractor shall provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the Contractor providing services on the project, for the duration of the project."

"5.04.B.8.3 The Contractor must provide a certificate of coverage to the Owner prior to being awarded the contract."

"5.04.B.8.4 If the coverage period shown on the Contractor's current certificate of coverage ends during the duration of the project, the Contractor must, prior to the end of the coverage period, file a new certificate of coverage with the Owner showing that coverage has been extended."

"5.04.B.8.5 The Contractor shall obtain from each person providing services on a project, and provide to the Owner:

- (1) a certificate of coverage, prior to that person beginning work on the project, so the Owner will have on file certificates of coverage showing coverage for all persons providing services on the project; and
- (2) no later than seven days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project."

"5.04.B.8.6 The Contractor shall retain all required certificates of coverage for the duration of the project and for one year thereafter."

"5.04.B.8.7 The Contractor shall notify the governmental entity in writing by certified mail or personal delivery, within 10 days after the Contractor knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project."

"5.04.B.8.8 The Contractor shall post on each project site a notice, in the text, form and manner prescribed by the Texas Workers' Compensation Commission, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage."

"5.04.B.8.9 The Contractor shall contractually require each person with whom it contracts to provide services on a project, to:

- (1) provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, which meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all of its employees providing services on the project, for the duration of the project;
- (2) provide to the Contractor, prior to that person beginning work on the project, a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project;
- (3) provide the Contractor, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project;
- (4) obtain from each other person with whom it contracts, and provide to the Contractor:
 - (a) a certificate of coverage, prior to the other person beginning work on the project; and
 - (b) a new certificate of coverage showing extension of coverage, prior to the end of the coverage period, if the coverage period shown on the current certificate of coverage ends during the duration of the project;
- (5) retain all required certificates of coverage on file for the duration of the project and for one year thereafter;
- (6) notify the Owner in writing by certified mail or personal delivery, within 10 days after the person knew or should have known, of any change that materially affects the provision of coverage of any person providing services on the project; and
- (7) contractually require each person with whom it contracts, to perform as required by paragraphs (1) - (7), with the certificates of coverage to be provided to the person for whom they are providing services."

"5.04.B.8.10 By signing this contract or providing or causing to be provided a certificate of

coverage, the Contractor is representing to the Owner that all employees of the Contractor who will provide services on the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the CONTRACTOR to administrative penalties, criminal penalties, civil penalties, or other civil actions."

"5.04.B.8.11 The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor which entitles the Owner to declare the contract void if the Contractor does not remedy the breach within ten days after receipt of the notice of breach from the Owner."

"5.04.B.8.12 The text for the notice prescribed in 5.04.B.8.8 shall read as follows:

REQUIRED WORKERS' COMPENSATION COVERAGE

The law requires that each person working on this site or providing services related to this construction project must be covered by workers' compensation insurance. This includes persons providing, hauling, or delivering equipment or materials, or providing labor or transportation or other service related to the project, regardless of the identity of their employer or status as an employee."

"Call the Texas Workers' Compensation Commission at 512-440-3789 to receive information on the legal requirement for coverage, to verify whether your employer has provided the required coverage, or to report an employer's failure to provide coverage."

SC-5.05 OWNER'S LIABILITY INSURANCE:

Delete Paragraph 5.05 of the General Conditions in its entirety and replace with the following:

"The Contractor shall file with Owner a Certificate of Insurance naming the Owner as an additional insured with regard to the contract project and evidencing insurance coverage of limits not less than the limits indicated in SC-5.04 and SC-5.04.B.4."

SC-5.06 PROPERTY INSURANCE:

Delete Paragraph 5.06.A of the General Conditions in its entirety and insert the following in its place:

"5.06.A. Contractor shall purchase and maintain until final payment property insurance upon the Work at the site to the full insurable value thereof (subject to such deductible amounts as may be provided in these Supplementary Conditions or required by Laws and Regulations). This insurance shall include the interests of Owner, Contractor, Subcontractors, Engineer and Engineer's consultants in the Work (all of whom shall be listed as insured or additional insured parties), shall insure against the perils of fire and extended coverage, shall include "all-risk" insurance for physical loss and damage including theft, vandalism and malicious mischief, collapse and water damage, and such other perils as may be provided in these Supplementary Conditions, and shall include damages, losses and expenses arising out of or resulting from any insured loss or incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers, architects, attorneys and other professionals). If not covered under the "all-risk" insurance or otherwise provided in these Supplementary Conditions, Contractor shall purchase and maintain similar property insurance on portions of the Work stored on and off the site or in transit when such portions of the Work are to be included in an Application for Payment. The policies of insurance required to be purchased and maintained by

Contractor in accordance with this paragraph 5.06.A shall comply with the requirements of GC-5.06.C."

SC-5.06.B PROPERTY INSURANCE:

Delete Paragraph 5.06.B of the General Conditions in its entirety.

SC-6.05.E ENGINEER'S COST REIMBURSEMENT:

Add the following language at the end of the last sentence of Paragraph 6.05.E:

"Contractor shall not be required to reimburse Owner for Engineer's charges if the substitution is beyond the control of the Contractor."

SC-6.06.A SUBCONTRACTS:

Add the following sentence to paragraph 6.06.A of the General Conditions:

"Contractor shall not award Work under the Contract to a Subcontractor(s) that is (are) in excess of 50% of the total contract price without written approval of the Owner."

SC-6.08.A PERMITS:

Add the following paragraph to GC 6.08.A

"Under the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 et.seq.; the Act), except as provided by NPDES General Permits for Storm Water Discharges from Construction Activities Part I, as published in Federal Register/Vol. 63, No. 128/Monday, July 6, 1998 for disturbances 5 acres or greater and Part II, as published in Federal Register/Vol. 64, No. 235/Wednesday, December 8, 1999 for disturbances less than 5 acres but greater than or equal to 1 acre. Federal law prohibits discharges of pollutants in storm water from construction activities without a National Pollutant Discharge Elimination System Permit (NPDES). Operator(s) of construction sites where 1 or more acres are disturbed, smaller sites that are part of a larger common plan of development or sale where there is a cumulative disturbance of at least 1 acre, or any site designated by the Director, must submit an NOI to obtain coverage under an NPDES Storm Water Construction General Permit.

For the purpose of this project the contractor shall be the "Operator". If required to submit a Notice of Intent (NOI) for storm water discharges associated with construction activities under the NPDES General Permit with EPA, the contractor shall submit the NOI at least two (2) days prior to commencement of construction. In addition to submitting the NOI, the Contractor shall prepare and retain on-site a Storm Water Pollution Prevention Plan in accordance the EPA requirements and submit to city.

"B. Notwithstanding the reference herein stated, nothing shall obligate the Owner or Engineer to advise Contractor of the applicable Laws and Regulations, or waives or modifies Contractor's obligations under this Section 6.08."

SC-6.10.A TAXES:

Add the following paragraphs to paragraph 6.10.A of the General Conditions:

"The Contractor's attention is directed to Amendment No. 7 in Section 6a, Article 20.01, Chapter 20, Title 122A, Taxation-General of the Revised Civil Statutes of Texas and the recent

amendments contained in H.B. 11 as passed by the Legislature of the State of Texas and enacted August 13, 1991."

"These statutes provide that all items used by a Contractor, and incorporated into the project, can be purchased free of State and City sales tax when the project is being performed by an exempt agency. Excluded are equipment rentals and other items which are consumed by the Contractor but are not incorporated into the project."

"This contract is issued by an organization which qualifies for exemption pursuant to the provisions of Article 20.04 (F) of the Texas Limited Sales, Excise and Use Tax Act."

"The Contractor performing this contract may purchase all materials, supplies, equipment used in the performance of this contract by issuing to his supplier an exemption or resale certificate."

"It shall be the sole responsibility of the Contractor under the terms of this agreement to determine the applicability of the revisions to the tax code and pay all applicable taxes associated with this project without additional or separate pay for the same from the Owner."

SC-6.12 RECORD DOCUMENTS:

Add the following sentence to paragraph 6.12 of the General Conditions:

"Drawings submitted upon completion of the project will be submitted by the Contractor on full size set of construction plans."

SC-6.13 SAFETY AND PROTECTION:

Revise paragraph 6.13.A.3 of the General Conditions to read as follows:

"other property at the site or adjacent thereto, including trees, shrubs, lawns, lawn irrigation systems,..."

Add the following paragraphs to Article 6.13.B of the General Conditions:

"The Contractor shall comply with the provisions of the Occupational Safety and Health Act of 1970, and the standards and regulations issued thereunder and warrant that all work, materials, and products furnished under this contract will conform to and comply with said standards and regulations which are in existence on the date of this contract. The Contractor further agrees to indemnify and hold harmless the Owner and the Engineer for all damages suffered by the Owner and the Engineer as a result of the Contractor's failure to comply with the Act and the Standards issued thereunder and for the failure of any material and/or equipment furnished under this contract to so comply."

"The Contractor shall also comply with all pertinent provisions of the "Manual of Accident Prevention in Construction" issued by the Associated General Contractors of America, Inc., if not in conflict with those of the Occupational Safety and Health Act of 1970 and shall maintain an accurate record of all cases of death, occupational disease, and injury requiring medical attention or causing loss of time from work, arising out of and in the course of employment or work under the contract."

"The Contractor alone shall be responsible for the safety, efficiency, and adequacy of his equipment and employees, and for any damage which may result from their failure or their improper construction, maintenance or operation."

"Per Texas House Bill 1569 effective as of September 1, 1989, it shall be the responsibility of the contractor to provide and maintain a viable trench safety system at all times during construction activities. The contractor is directed to become knowledgeable and familiar with the standards as set forth by the Occupational Safety and Health Administration (OSHA) for trench safety that will be in effect during the period of construction of the project and the contract is responsible for conforming to such regulations as prescribed by OSHA standards. A bid item for trench excavation safety protection and shoring is included in the proposal."

SC-6.17 SHOP DRAWINGS AND SAMPLES:

Amend the first sentence of paragraph 6.17.A of the General Conditions to read as follows:

"After checking and verifying all field measurements and after complying with applicable procedures specified herein, Contractor shall submit to Engineer for review and approval in accordance with the accepted schedule of Shop Drawing Submissions, or for other appropriate action, if so indicated in the Supplementary Conditions, Shop Drawings which will bear a stamp that CONTRACTOR has satisfied Contractor's responsibility under the Contract Documents with respect to the review of the submission."

SC-6.22 WAGE RATES:

Add a new paragraph to ARTICLE 6 – CONTRACTOR’S RESPONSIBILITIES of the General Conditions as follows:

"6.22 Wage Rates

A. The prevailing wage rates applicable for this project are attached and made a part of these Contract Documents. Wages not less than these rates must be paid on this project."

SC-9.08 DECISIONS ON REQUIREMENTS OF CONTRACT DOCUMENTS AND ACCEPTABILITY OF WORK:

Amend the second sentence of Paragraph 9.08.A to read as follows:

"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 7 days of the event giving rise to the question."

SC-13.03 TESTS AND INSPECTIONS:

Amend paragraph G.C. 13.03.B of the General Conditions to read as follows:

"Contractor shall employ and pay for the services of an independent testing laboratory to perform all inspections, test, or approvals required by the contract."

SC-13.07 TWO YEAR CORRECTION PERIOD:

Revise the title of paragraph 13.07 of the General Conditions to read "TWO YEAR CORRECTION PERIOD" and revise the content of paragraphs 13.07, 13.07.A, 13.07.B, 13.07.C and 13.07.D to reflect "two (2) years" where "one (1) year" is indicated.

SC-14.02.A.1 APPLICATIONS FOR PAYMENTS:

Add a new sentence to the end of paragraph 14.02.A.1 of the General Conditions to read as follows:

"Prior to submitting Application for Payment to Engineer for review, the Contractor shall obtain the Project Inspector's signature verifying that record documents have been updated to reflect variations from the "As Bid" drawings up to the date for which the Contractor seeks payment."

SC-14.02.C REVIEW OF APPLICATIONS FOR PROGRESS PAYMENT:

Revise the last sentence of paragraph 14.02.C.1 of the General Conditions to read as follows:

"Thirty (30) days after presentation of the Application for Payment 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."

SC-17 MISCELLANEOUS:

Add the following paragraphs to Article 17 of the General Conditions:

"17.07 Explosives

A. The use of explosives will not be allowed under this contract for the construction of the proposed facilities without approval of the Engineer and Owner."

"17.08 Use of Domestic Construction Materials

The Contractor is encouraged to abide by the Buy American Provision of Public Law 95-217 (Section 215) of Public Law 92-500 as amended) generally requiring that preference be given to the use of domestic construction materials in the performance of this contract."

"17.09 Field Office

The Contractor will not be required to furnish a field office on this contract."

SC-18 PAY ITEMS:

Add a new Article to the General Conditions entitled ARTICLE 18 - PAY ITEMS with the following paragraphs to be included:

Any and all Work specifically called for in the Contract Documents or which is required for the proper construction of items called for in the Contract Documents is to be performed by Contractor unless specifically indicated otherwise. **The cost of all work for which there is no separate pay item in the proposal shall be included in the price for a related pay item such that work called for or required by the Contract Documents will be constructed for the Contract Price.**

The following descriptions are intended to clarify the nature of the work required for this project, the provisions of the standard technical specifications shall apply, except as otherwise noted herein:

"Each pay item includes all labor, materials, equipment and incidentals necessary to construct that item. The contract shall be awarded based on the "TOTAL BID" for the funding that the Owner has budgeted."

PAY ITEMS

Mobilization

The work under this item shall include the establishment of offices and other facilities on the project site and the movement of personnel, construction equipment and supplies to the project site or to the vicinity of the project site in order to enable the Contractor to begin work on the contract. This includes the construction entrance and temporary construction fencing. The cost of all bonds and insurance for the project will also be considered part of this specification.

Mobilization will be measured as a lump sum item as the work progresses. Partial payments for mobilization shall be paid for at the Total Unit Price as shown in the bid proposal with the regular monthly estimates as follows: The adjusted contract amount for construction items as used below is defined as the total contract amount less the lump sum bid for Mobilization.

- e. When 1% and less than 5% of the adjusted contract amount for construction items is completed, 50% of the mobilization lump sum bid will be paid.
- f. When 5% and less than 10% of the adjusted contract amount for construction items is completed, 75% of the mobilization lump sum bid will be paid. Previous payments under this section will be deducted from this amount.
- g. When 10% or more of the adjusted contract amount for construction items is completed, 95% of the mobilization lump sum bid will be paid. Previous payments under this section will be deducted from this amount.
- h. Payment for the remainder of the bid for "Mobilization" will be made on the final estimate.

Demolition/Removal Items

This item shall consist of all the work, labor, materials and equipment necessary for the removal of items specified in the plan set for pavement, landscape, and earthwork. Removals shall be performed in accordance with the specifications. Conditions remaining after removal should allow for a fully function electrical and utility services to the remaining system. **Measurement and payment shall be measured and paid per the unit specified in the bid form.**

Temporary Erosion, Sedimentation, and Water Pollution Prevention and Control

This item shall consist of all the work, labor, materials and equipment associated with installing and removing erosion control measures. The specific items, estimated quantities, and location of the control measures, including silt fences, inlet protection, etc. shown in the plan set. The Contractor shall be responsible for determination of adequate and appropriate control measure items, quantities, and locations, and shall include this information in the submitted Storm Water Pollution Prevention Plan. Measurement for payment shall be on a lump sum basis. **This pay item shall encompass costs for the entire project.**

Grading/Earthwork

This item shall consist of all the work, labor, materials and equipment necessary for the grading and earthwork specified in the plan set. Earthwork shall be performed in accordance with the specifications. **This pay item shall encompass a lump sum cost for the entire project.**

Sod

This item shall consist of the work, labor, and materials required to install sod at the locations specified in the plan set. The installation of the sod shall be installed in accordance with the specifications. The Contractor shall be responsible for determining adequate quantities, and locations, and shall include this information in the Bid.

Measurement and payment shall be on the basis of the price bid per square yard of sod installed in its final position and shall be full compensation for all labor, material, and equipment deemed necessary to complete this pay item.

Irrigation System

This item shall include the installation of a fully automatic irrigation system. Installation shall include all lateral lines, mainline, controller, rain sensor, valves (remote control), heads, wiring connections, and other irrigation system appurtenances including the meter, backflow device, locking gate valve/isolation valve, master control valve, and flow sensor. All equipment is to be installed according to the guidelines and requirements set forth by TCEQ and the City of Burleson. The contractor shall obtain written approval by the Owner/City for the final location of the irrigation water meter and associated equipment and controller and rain sensor location. All irrigation equipment to be functioning 100% and approved by Owner/City before final inspection. The unit price shall include all labor, equipment and materials necessary to complete the work. **Measurement for payment shall be paid for on a lump sum basis.**

Fencing and Gates

This item shall include the installation of fencing per the details and specifications. The unit price shall include all labor, equipment and materials necessary to complete the work. **Measurement for payment shall be paid for on a per linear foot basis.**

- End of Supplementary Conditions -

General Decision Number: TX180036 01/05/2018 TX36

Superseded General Decision Number: TX20170036

State: Texas

Construction Type: Heavy

Counties: Johnson, Parker and Tarrant Counties in Texas.

Heavy Construction Projects (Including Water and Sewer Lines)

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.35 for calendar year 2018 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.35 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2018. The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/05/2018

* PLUM0146-002 05/01/2016

	Rates	Fringes
PLUMBER/PIPEFITTER.....	\$ 29.48	8.30

SUTX1990-041 06/01/1990

	Rates	Fringes
CARPENTER.....	\$ 10.40	\$3.64
Concrete Finisher.....	\$ 9.81	
ELECTRICIAN.....	\$ 13.26	
Form Setter.....	\$ 7.86	

Laborers:

Common.....	\$ 7.25
Utility.....	\$ 8.09

PAINTER.\$ 10.89

Pipelayer.\$ 8.43

Power equipment operators:

Backhoe.....\$ 11.89 3.30

Bulldozer.....\$ 10.76

Crane.\$ 13.16 3.30

Front End Loader.....\$ 10.54

Mechanic.....\$ 10.93

Scraper.....\$ 10.00

Reinforcing Steel Setter.....\$ 10.64

TRUCK DRIVER.....\$ 7.34

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

=====

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate

(weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

-WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter?

This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations.

Write to:

Branch of Construction Wage
Determinations Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue,
N.W. Washington, DC
20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7).

Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue,
N.W. Washington, DC
20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board).

Write

to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

===== END OF GENERAL DECISION

DIVISION 1 – GENERAL REQUIREMENTS

SECTION 01010

SUMMARY OF WORK

PART I – GENERAL**1.1 Work covered by Contract Documents for Bartlett Soccer Complex.**

- A. This project shall consist of all work, complete and in place including but not limited to: Site Preparation, Demolition, Grading, Utilities, Fencing, Soccer Field Requirements, Landscape, and Irrigation to construct complete and in place as shown in the plans and specifications.
- B. All work shall comply with the Texas Accessibility Standards (TAS) of the Architectural Barriers Act Article 9102, Texas Civil Statutes, effective April 1, 1994 and subsequent adopted updates. This standard is prepared and administered by the Texas Department of Licensing and Regulations, Policies and Standards Division, Architectural Barriers Section, PO Box 12157, Austin, Texas 78711, 920 Colorado, Fourth Floor, Austin, Texas 78701, (512) 463-3211.
- C. The contractor must submit a list of at least five (5) projects completed of similar scope within the past 10 years. Sports field, massive grading, cut and fill, sports field natural sod type projects are to be included in the project examples.
- D. Contractor's Duties
 - 1. Except as specifically noted otherwise, provide and pay for:
 - a. Labor, materials, and equipment.
 - b. Tools, construction, equipment, and machinery.
 - c. Other facilities and services necessary for proper execution and completion of work.
 - 2. Owner is exempt from sales tax on products permanently incorporated into the work. Follow instructions issued by State Comptroller's Office for purchase of such products free of tax.
 - 3. Secure as necessary for proper execution and conditions of work:
 - a. License/Business Registration; paid by Contractor.
 - b. Permits/Approvals required by governing entities; paid by Contractor.
 - 4. Comply with codes, ordinances, rules, regulations, orders, and other legal requirements of public authorities which bear on performance of work.
 - 5. Promptly submit written notice to Owner of observed variances of Contract Documents from legal requirements.
 - 6. Enforce strict discipline and good order among employees. Do not employ on work:
 - a. Unfit persons.
 - b. Persons not skilled in assigned task.
 - 7. Checking Dimensions at Site:
 - a. Verify measurements as necessary before ordering any materials or doing any work.
 - b. Report any discrepancies to Owner for instructions before proceeding.
 - 8. Approval of Working Conditions:
 - a. Notify the Owner of any unsatisfactory condition before beginning to perform work.
 - b. Beginning of work by Contractor shall constitute his acceptance of substrate and surface conditions.
 - 9. Under no condition shall a portion of work proceed prior to preparatory work having been completed, cured, dried, or otherwise made satisfactory to receive such related work.
 - 10. The Contractor shall establish and maintain his own grades, lines, levels, and bench marks. Verify all grades, lines, levels, and dimensions shown on drawings and report in writing any observed errors or inconsistencies to the Owner before beginning work.

Establish his own basic lines and grades in conformity with Owner's permanent bench marks and coordinate systems for the construction area.

11. It is the intent of this project that all items of work include the materials, standards, trades, procedures, etc., customarily associated with the items of work, whether or not such materials, standards, trades, procedures, etc., are expressly stated. In case of ambiguity, unclarity, or conflict in these Construction Documents, the matter shall be promptly submitted in writing for determination by the Owner. The Owner will render in writing a clarification reasonably inferable from these Documents and consistent with the intent of this proposed work.
12. Contractor shall employ only experienced and qualified workers and subcontractors.

1.2 Contracts

- A. Perform work under Lump Sum Contract

1.3 Conditions of the Contract

- A. The following Special Conditions also shall govern the work under each Section in the Technical Requirements.

1. Uninterrupted Operations. Work on this Project shall not interrupt or compromise the routine operations of the Owner unless specifically authorized by the Architect/Engineer.
2. Experienced Supervision. Employ a competent Supervisor for work on this Project, approved by the Owner, skilled in coordination of the trades involved and the type of scheduling required by a project of this nature. Replace approved Supervisor only with the permission of the Owner.
3. Interrelation of Documents. The interrelation of the Specifications, the Drawings, and the Schedules are generally as follows:
 - a. The Specifications determine the nature and setting of the several materials.
 - b. The Drawings establish the quantities, dimensions, and details.
 - c. The Schedules give locations.

Anything mentioned in the Specifications and not shown on the Drawings and/or the Schedules, or shown in the Drawings and not mentioned in the Specifications, shall be of like effect as if shown or mentioned in both. Should there be a conflict within or among the Drawings or the Specifications or any other Contract Document, perform or furnish the better quality or greater quantity of work or materials. Figures given on details govern small scale drawings. The "Section Includes" statement, placed in the front of each Section of the Specifications, is intended to designate the scope and location of the work included therein, either generally or specifically. It is not intended to limit the Scope of Work should plans, schedules, or notes indicate an increased scope. Inadvertent omission of an item from its proper Section in the Specifications and its inclusion in another Section of the Specifications shall not relieve the Contractor of responsibilities for the item specified.

4. Contract Administration. The Architect/Engineer has the authority to act on behalf of the Owner to the extent provided for in the Contract Documents, unless otherwise modified by written instrument which will be shown to the Contractor at his request. All instructions affecting Contract Sum, Contract Time, or Contract interpretations shall be confirmed expeditiously in writing, with copies furnished to the Owner's designated representative and the Contractor by the party issuing the instructions.
5. Conduct of the Contractor
 - a. Type of Dress:
 - 1.) Workmen must wear shirts at all times.
 - 2.) Wearing apparel that portrays obscene or vulgar language and/or art work is prohibited.
 - b. Alcoholic Beverages and other Drugs:
 - 1.) Alcoholic beverages and other drugs will not be permitted on the property of the Owner.

- 2.) Persons under the influence of alcoholic beverages and/or any other drug are prohibited from the Project.
- c. Obscenity:
 - 1.) The Owner reserves the right to require dismissal from the Project of any person using obscene gestures.
- d. Portable Radios and Other Sound-Producing Devices:
 - 1.) Hold the volume of portable radios or other sound-producing devices to such a level so that individuals not related to the construction are not disturbed.
 - 2.) Do not broadcast obscenity.

1.4 Contractor Use of Premises

- A. Confine operations at site to areas permitted by:
 - 1. Law.
 - 2. Ordinance.
 - 3. Permits.
 - 4. Contract Documents.
- B. Limit use of site and premises to allow:
 - 1. Uninterrupted Owner activity where required for Owner's business purposes.
 - 2. Work by Others and Work by Owner.
 - 3. Use of site and premises by public where required for Owner's business purposes.
- C. Construction Operations:
 - 1. Yard Operations and/or New Construction: Limited to areas noted on Drawings unless specifically approved otherwise by the Owner.
 - 2. Protection:
 - a. Take over and assume responsibility for the premises necessary for each portion of the Work. Provide and maintain all protections required by governing laws, regulations, and ordinances. Be responsible for any loss or damage caused by workmen to the property of the Owner or to the work or materials installed. Make good any loss, damage, or injury without cost to the Owner.
 - b. The protection of adjacent property shall include, but will not necessarily be limited to, the erection and maintenance of shoring, underpinning, and fences as necessary to protect and to support existing work to be left in place.
 - c. Protect against damage to all trees and all shrubs on the site which do not have to be removed for the Work. Remove or trim any tree or shrub only with the specific approval of the Owner.
 - d. Send proper notices, make necessary arrangements, and perform other services required for the care, protection, and maintenance of utilities, including fire hydrants, piping, wires, and all other such items on and around the building site.
 - e. At no additional cost to the Owner, hold the Owner harmless from, and make good, any damage occurring as a result of the Contractor's failure to provide required protection.
 - 3. Other:
 - a. No fires on the site.
 - b. No dumping on the Owner's property.
 - c. Do not unreasonably encumber site with materials or equipment.
 - d. Assume full responsibility for protection and safekeeping of products stored on premises.
 - e. Obtain and pay for use of additional storage or work areas needed for operations.

1.5 Concealed Piping and Conduit

- A. Should active piping or conduit be encountered below grade or concealed by existing construction and be found at variance with the conditions indicated by the Drawings and Specifications, relocate such piping and/or conduit as directed by the Owner.
- B. Contract Sum shall be adjusted on the following basis:
 - 1. If the concealed condition would not reasonably be anticipated by a competent workman, the Contractor shall be fairly compensated as determined by the Owner.
 - 2. If, in the judgement of the Owner, the concealed condition could reasonably be anticipated by a competent workman, it shall be understood that the conditions were provided for in the bid and no additional compensation shall be due the Contractor. The Contractor shall be responsible for properly remedying the condition in a manner acceptable to the Owner.
 - 3. Any additional compensation shall be net cost of labor and materials only.

PART II – PRODUCTS

Not used.

PART III - EXECUTION

3.1 Means and Methods

- A. Unless otherwise expressly provided in the Contract Documents, the means and methods of construction shall be such as the Contractor may choose, subject, however, to the Owner's right to reject means and methods proposed by the Contractor which:
 - 1. will constitute or create a hazard to the work or to persons or property; or
 - 2. will not produce finished work in accordance with the terms of the Contract.
- B. The Owner's acceptance of the Contractor's means and methods of construction or the Owner's failure to exercise his right to reject such means or methods shall not relieve the Contractor of his obligation to accomplish the result intended by the Contract; nor shall the exercise of such right to reject create a cause of action for damages.

3.2 Cleaning Up

- A. Contractor shall clean the work area at the end of each work day.

END OF SECTION 01010

SECTION 01020

CONTRACT CONSIDERATIONS

PART 1 – GENERAL

1.1 GENERAL REQUIREMENTS

- A. Articles and portions of articles of the General Conditions and Supplementary Conditions not amended, supplemented or superseded by these General Requirements (Division 1) shall remain in effect.

1.2 SECTION INCLUDES

- A. Allowances
- B. Schedule of Values
- C. Application for Payment
- D. Proposal Request (Changes)
- E. Architect/Engineer's Supplemental Instructions
- F. Request for Interpretation

1.3 ALLOWANCES

- A. Purchase product under each allowance as directed and approved by Landscape Architect/Engineer.
- B. Contractor shall submit any use of allowance items with monthly pay requests.
- C. Any remaining allowance upon final completion shall be returned to the City through a final Change Order.

1.4 SCHEDULE OF VALUES

- A. Schedule of Values shall be submitted on AIA Document G703 - Continuation Sheet of Application and Certification for Payment, or electronic media printout.
- B. Submit a Schedule of Values to the Architect/Engineer within two calendar days after the date of the Owner-Contractor Agreement. Upon request of the Owner or Architect/Engineer the Contractor shall furnish additional line item breakdown of the Schedule of Values.
- C. Use Table of Contents of Project Manual as basis of format for listing cost of work.
- D. Include separate line items for the following:
 - 1. Site Mobilization
 - 2. Bonds / Insurance
 - 3. Permits / Fees
 - 4. Supervision / PM
 - 3. Contractor's Overhead and Profit
 - 4. Record Drawings
 - 5. Change Orders

1.5 APPLICATION FOR PAYMENT

- A. At least ten days before each progress payment falls due, the Contractor shall submit to the Architect/Engineer a notarized, itemized Application For Payment based on the previously approved Schedule Of Values, of 90 percent of the value of labor and materials incorporated in the Work including the last day of the preceding month, less the aggregate total of all previous payments, provided the aggregate total of all monthly payments shall not exceed 90 percent of the contract price. Applications for payment shall be supported by data substantiating the Contractor's right to payment as the Owner or the Architect/Engineer may require.
- B. No payment will be made for the storing of materials on site as to City of Burleson requirements. Contractor may not request payment for materials which are stored off site.

1.6 CHANGE PROCEDURE

- A. Change Proposal Request (CPR): The Architect/Engineer may issue a Change Proposal Request during the course of the Work. A Proposal Request is a description of a change in the Work under Contract such as additional work or revisions to work already completed, work not yet started or work in progress. The Change Proposal Request is issued to obtain a mutually accepted lump sum for the Work described, add, deduct or no change.
- B. The Contractor shall promptly submit to the Architect/Engineer his completed Proposal, properly itemized and supported by sufficient substantiating data to permit evaluation.
- C. The Contractor shall not proceed with the Work described in a Proposal Request until the Proposal has been evaluated, found to be fair and equitable by the Architect/Engineer, presented to the Owner for approval and authorized in writing or issued in a Change Order. The Contractor upon issuance of a Proposal Request shall make every attempt to not install items of work that are affected by the Proposal and will notify the Architect/Engineer of any and all items that cannot be postponed.
- D. Unless agreed otherwise, two weeks shall be allowed for evaluation by the Architect/Engineer. If in the opinion of the Architect/Engineer a Proposal is not found to be fair and equitable, the Contractor will reevaluate the cost and no additional cost or time extension will be considered for the time required for the reevaluation.
- E. Two weeks will be required to issue authorization to proceed after the Proposal Request is found to be fair and equitable. The Contractor's Proposal must be valid for the four weeks stated above unless agreed otherwise.

1.7 ARCHITECT/ENGINEER'S SUPPLEMENTAL INSTRUCTIONS

- A. Architect/Engineer's Supplemental Instructions are issued for work that is not described in sufficient detail or is generally stated but not specifically described to the extent required for the exact construction of such items. This information shall be issued to the Contractor(s) in the form of Architect/Engineer's Supplemental Instructions (A.S.I.), AIA Document G710 and shall be considered a minor change in the Work.
- B. Should the Contractor consider Architect/Engineer's Supplemental Instructions an item to be a change in the Contract Documents, he may notify the Architect/Engineer in writing of the items in dispute and include the actual cost increase or decrease associated with each item.
- C. Claims by the Contractor for additional cost, in response to an Architect/Engineer's Supplemental Instruction, must be received by the Architect/Engineer within 20 days after the posted date on the

A.S.I. or claims will not be considered. Proceeding with work described in an A.S.I. shall constitute waiver of rights to claims.

1.8 REQUEST FOR INTERPRETATION

- A. Request for Interpretation (R.F.I.) shall be submitted to the Architect/Engineer in written form conforming to the following:
1. Each R.F.I. shall be numbered, as for referencing and entering into a log which shall be kept by the Contractor and the Architect/Engineer.
 2. R.F.I.'s shall have a designated space titled Category. The Contractor shall enter the proper Category No. in this space, which will identify the urgency of the R.F.I., as shown below:
 - a. Category 1 - an emergency and requires an answer in 24-48 hours or work will stop.
 - b. Category 2 - a normal request and requires a five (5) working day response.
 - c. Category 3 - is low priority and requires an answer within 2-4 weeks.
 3. The R.F.I. log shall be reviewed during each progress meeting and any problems discussed.

END OF SECTION 01020

SECTION 01039

COORDINATION AND MEETINGS

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. Articles and portions of articles of the General Conditions and Supplementary Conditions not amended, supplemented or superseded by these General Requirements (Division 1) shall remain in effect.

1.2 SECTION INCLUDES

- A. Coordination
- B. Cutting, Patching and Touch-up
- C. Pre-Construction Conference
- D. Progress Meetings

1.3 COORDINATION

- A. Coordinate scheduling, submittals, and Work of the various Sections of specifications to assure efficient and orderly sequence of installation of interdependent construction elements.
- B. Verify utility requirement characteristics of operating equipment are compatible with building utilities.
- C. Coordinate space requirements 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.
- D. In finished areas, conceal pipes, ducts, and wiring within the construction.

1.4 CUTTING, PATCHING AND TOUCH-UP

- A. Employ skilled and experienced installers to perform cutting and patching of new and existing Work; restore Work with new Products.
- B. Establish elevations, lines, and levels and certify that elevations and locations of the Work conform with Contract Documents.
- C. Execute fitting and adjustment of products to provide finished installation to comply with specified tolerances and finishes. Fit Work tight to adjacent elements. Maintain integrity of wall, ceiling, or floor construction; completely seal voids.
- D. Execute cutting and demolition by methods that will prevent damage to other work and will provide proper surfaces to receive installation of repairs and new work.
- E. Restore work that has been cut or removed; install new products to provide completed work in accordance with requirements of Contract Documents.

- F. Refinish entire surfaces to match adjacent finishes to the nearest intersections. Refinish assemblies entirely.
- G. Execute excavating and backfilling by methods that will prevent damage to other work and will prevent settlement.

1.5 PRE-CONSTRUCTION CONFERENCE

- A. Prior to the start of the Work of this Contract, the Contractor, the Architect/Engineer and the Owner's Representative will meet for the purpose of reviewing schedules and conditions of the site.
- B. The location and date of the Pre-Construction Meeting will be scheduled after the Award of Contract to all affected parties.
- C. Pre-Construction Conference Agenda:
 - 1. Introduction of Key Personnel.
 - 2. Dates will be selected for meetings.
 - 3. All required contract forms, bonds and insurance will be reviewed.
 - 4. Schedules and Submittal Process will be reviewed.
 - 5. Use of Site.
 - 6. Contractor questions.

1.6 PROGRESS MEETINGS

- A. Weekly Job Site Progress Meeting Agenda (Contractor/Sub Contractors):
 - 1. Monitor the progress of construction.
 - 2. Discuss any coordination issues.
 - 3. Discuss any shop drawing issues.
 - 4. Discuss questions from subcontractors.
 - 5. Confirm next week meeting date and time.
- B. Monthly Job Site Progress Meeting Agenda (Owner/Contractor/Architect):
 - 1. Review Project Schedule: An up-to-date project schedule shall be submitted at each monthly meeting. Review list of construction items to be observed before being covered or completed.
 - 2. Review Record Set of Drawings: Record set of drawings must be kept current with any changes to utilities, partitions, etc.
 - 3. Review Pay Request: Submit six (6) rough-draft copies of the pay request for review. Corrections must be made on the rough-draft copies and four (4) corrected, notarized, and signed copies shall be sent to the Architect for Certification. Three copies shall be sent to the Owner for processing.
 - 4. Discuss any coordination issues.
 - 5. Discuss any shop drawing issues.
 - 6. Discuss any weather days or anticipated delay days.
 - 7. Discuss questions from subcontractors.
 - 8. Confirm next month meeting date and time.
 - 9. Submit Daily Activity Reports.

END OF SECTION 01039

SECTION 01300

SUBMITTALS

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. Articles and portions of articles of the Contract Documents not amended, supplemented or superseded by these General Requirements (Division 1) shall remain in effect.

1.2 SECTION INCLUDES

- A. Submittal Procedures
- B. Schedules
- C. Reports, Warranties, Certificates and Manuals
- D. Schedule of Submittals
- E. Construction Schedule

1.3 SUBMITTAL PROCEDURES

- A. Identify long lead or specialty submittals (playground equipment, and site features, etc.) and submit within first 30 days of contract.
- B. Submit shop drawings and product data in the quantity as required by the various sections of the Specifications or if not specified, submit three copies for the use of the Architect/Engineer, plus the number of copies the contractor's needs may dictate. In no case shall fewer than seven copies be submitted. All submittals, regardless of the source of origin, shall be submitted via the General Contractor.
- C. For each product specified or noted on the Drawings, submit six copies of product data with installation directions as applicable to the construction requirements of this project, together with any required samples for approval. Shop drawings and product data shall be submitted within 30 days of Notice to Proceed.
- D. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work.
- E. Apply Contractor's stamp, signed or initialed certifying that review for verification of product required, field dimensions, adjacent construction Work and coordination of information, is in accordance with the requirements of the Work and Contract Documents.
- F. Provide space for Contractor and Architect/Engineer review stamps.
- G. Revise and resubmit submittals as required; identify all changes made since previous submittal.
- H. Submittals shall be executed in sufficient time to allow at least three weeks for each review by the Architect/Engineer.
- I. Each product submitted shall be submitted with it's own transmittal form, stating the product name, manufacturer and related specification section. Number each submittal consequently in order of submission (1, 2, 3, etc.), also reference the Project Manual specification number for the submittal

identity. (example: 07270- 1 for the first submittal for Firestopping and 07270-2 for the second item submitted under the same section). Revised submittals should have original number and a sequential alphabetic suffix. (example: 1A for a revised submittal).

1.4 SCHEDULES

- A. The following schedules must be prepared and submitted to the Architect/Engineer for approval within twenty (20) calendar days (unless noted otherwise) after date of Owner-Contractor Agreement. Failure to submit any of the following items to the Architect/Engineer within the time allotted shall be grounds for withholding Contractor's Certificate for Payment.
 - 1. List of Subcontractors and Suppliers, including category of work, contact name, address, and telephone number.
 - 2. Construction Schedule. Refer to Paragraph 1.7 below.
 - 3. Schedule of Values. Refer to Section 01020, Paragraph 1.4.
 - 4. Cash flow schedule of anticipated amount of monthly estimates.
 - 5. Schedule of Submittals.
 - 6. Requests for Substitutions: Submit within 30 days, in accordance with Section 01600, Paragraph 1.5.
 - 7. Schedule of Operation and Maintenance Data for Manuals. Refer to Section 01700, Paragraph 1.7.

1.5 REPORTS, WARRANTIES, CERTIFICATES AND MANUALS

- A. Warranties:
 - 1. On all materials for a period of one year or as per the maintenance bond and as required by various specification sections.
 - 2. For General Contractor and roofing subcontractor on roofing.
 - 3. Warranty on wood and veneered fire doors.
- B. Special warranties in conjunction with mechanical equipment.
- C. Test reports and certificates in conjunction with electrical equipment.
- D. Operation and Maintenance Manuals. Refer to Section 01700, Paragraph 1.7.

1.6 SCHEDULE OF SUBMITTALS

- A. Provide list of all items requiring shop drawings, product data or samples.
- B. Organize list by specification sections and provide exact break down of phased portions of work.
- C. Provide proposed date for each initial submittal. Allow sufficient time as may be required for resubmittals.

1.7 CONSTRUCTION SCHEDULE

- A. The Construction Schedule shall be prepared in the form of a bar graph, identifying the first work day of each week and provide dates for completion of phases in the various categories of the work.
- B. Revise and resubmit as required. Submit revised schedule with each Application for Payment.
- C. The purpose of the Construction Schedule shall be to allow the Owner and Architect/Engineer to evaluate the Contractor's performance and adherence to the schedule on a monthly basis along with the Contractor's Application for Payment.

- D. Liquidated Damages will be paid by the Contractor to the Owner at a rate of five hundred dollars (\$500.00) for each and every calendar day that actual Substantial Completion exceeds the time for Substantial Completion authorized under the terms of this Contract.

END OF SECTION 01300

SECTION 01340

SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Submit to the Architect/Engineer shop drawings, product data, and samples required by specification sections.

1.2 SHOP DRAWINGS

- A. Prepared by a qualified detailer.
- B. Identify details by reference to sheet and detail numbers shown on Contract Documents.
- C. Shop Drawings shall be submitted only to clarify, amplify, or revise information shown or called for in the contract documents.

1.3 PRODUCT DATA

- A. Manufacturer's standard schematic drawings and diagrams:
 - 1. Modify drawings to delete information which is not applicable to the work.
 - 2. Supplement standard information to provide additional information specifically applicable to the work.
- B. Manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations, and other standard descriptive data:
 - 1. Clearly mark each copy to identify pertinent materials, products or models.
 - 2. Show dimensions and clearances required.
 - 3. Show performance characteristics and capacities.
 - 4. Show wiring or piping diagrams and controls.

1.4 SAMPLES

- A. Office samples shall be of sufficient size and quantity to clearly illustrate:
 - 1. Functional characteristics of product or material, with integrally related parts and attachment devices.
 - 2. Full range of color samples.
- B. Field Samples and Mock-ups:
 - 1. Erect at project site at location acceptable to Architect/Engineer.
 - 2. Construct each sample or mock-up complete, including work of all trades required in finish work.

1.5 SUBMISSION REQUIREMENTS

- A. Submit shop drawing and product data as soon as practicable after award of contract but not later than 30 days before dates reviewed submittals will be needed.
- B. Submit all office samples as soon as practicable but not later than 30 days after award of contract in order to facilitate color selections and coordination of the various materials. Final color selections and release of shop drawings contingent upon color selection will not be made until all office samples have been submitted, coordinated, and approved.

C. Number of submittals required:

1. Shop Drawings: Submit six (6) prints of each shop drawing, unless otherwise indicated.
2. Product Data: Submit six (6) copies of product data.
3. Samples: Submit the number stated in each specification section, minimum of three samples for each item.

D. Each submittal print shall include a cover sheet with sequential submittal number and:

1. Date and revision dates.
2. Project title and number.
3. Names of Contractor, subcontractor, supplier, and manufacturer.
4. Identification of product or material and specification section number.
5. Relation to adjacent structure, materials or other critical features.
6. Field dimensions, clearly identified as such.
7. Applicable reference standards.
8. A blank space 4" x 8" for Architect/Engineer's stamp (on cover sheet).
9. Other pertinent data required by specifications.
10. Identification of variation from contract documents.
11. Contractor's stamp, initialed or signed, certifying to review of submittal, verification of field measurements, compliance with contract documents, and coordination with requirements of the work.

Note: Absence of the Contractor's stamp shall constitute grounds for rejection of the submittal until such time as the submittal has been processed in accordance with this requirement. DO NOT FOLD SUBMITTALS TO EXPOSE STAMPS ON BACK OF PAGES. STAMPS TO BE ON COVER PAGE(S).

1.6 RESUBMISSION REQUIREMENTS

- A. Resubmission: Make corrections and changes in submittals required by Architect/Engineer and resubmit until approved.
- B. Shop Drawings:
 1. Revise initial drawings and resubmit as specified for initial submittal.
 2. Indicate on drawings any changes which have been made, other than those requested by Architect/Engineer.
- C. Product Data and Samples: Submit new data and samples as specified for initial submittal.

1.7 DISTRIBUTION OF SUBMITTALS AFTER REVIEW

- A. Distribute reviewed copies of shop drawings and product data which carry Architect/Engineer's stamp as follows:
 1. Job Site File.
 2. Record Documents File.
 3. Other affected contractors.
 4. Subcontractors.
 5. Supplier or Fabricator.

Architect/Engineer will retain three (3) copies: one for his file, one for his consultants, and one for the owner.

END OF SECTION 01340

SECTION 01410

TESTING LABORATORY SERVICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Articles and portions of articles of the Contract Documents not amended, supplemented or superseded by these General Requirements (Division 1) shall remain in effect.

1.2 SECTION INCLUDES

- A. Cooperate with the City's approved testing agency and any others responsible for testing and inspecting work.
- B. Provide such other testing and inspecting as are specified to be furnished by the Contractor in this Section and/or elsewhere in the Contract Documents.
- C. Where no testing requirements are described, but the Owner decides, that testing is required, the Owner may require such testing to be performed under current pertinent standards for testing. Payment for such testing will be made using funds from the Testing Allowance as described in the Bid Form and Pay Item Descriptions.

1.3 PAYMENT FOR TESTING

- A. Initial Testing: The Contractor shall contract with selected testing agency for all initial services of the testing laboratory as required by the Contract Documents and testing as the Owner deems necessary.
- B. Retesting: When initial testing indicates non-compliance with the Contract Documents, subsequent retesting required by the non-compliance shall be performed by the same testing agency, and costs thereof will be paid directly by the Contractor.

1.4 LABORATORY DUTIES

- A. Cooperate with Architect/Engineer and Contractor; provide qualified personnel after due notice.
- B. Perform specified inspections, sampling and testing:
 - 1. Comply with specified standards.
 - 2. Ascertain compliance of materials and work procedures with requirements of Contract Documents.
- C. Promptly notify Architect/Engineer and Contractor of observed irregularities or deficiencies of work or products.
- D. Promptly submit written report of each test and inspection; one copy each to Owner, Contractor and Engineer, and two copies to Architect/Engineer and City of Odessa Building Inspector. Each report shall include:
 - 1. Date issued.
 - 2. Project title and number
 - 3. Testing laboratory name, address and telephone number.
 - 4. Name and signature of laboratory inspector.
 - 5. Date and time of sampling or inspection.
 - 6. Record of temperature and weather conditions.

7. Date of test.
8. Identification of product and specification section.
9. Location of sample or test in the Project.
10. Type of inspection or test.
11. Interpretation of test results, when requested by Architect/Engineer.

E. Perform additional tests as required by Architect/Engineer of the Owner.

1.5 LIMITATIONS OF AUTHORITY OF TESTING LABORATORY

A. Laboratory is not authorized to:

1. Release, revoke, alter or enlarge on requirements of Contract Documents.
2. Approve or accept any portion of the Work.
3. Perform any duties of the Contractor.
4. Stop the Work.

1.6 CONTRACTOR'S RESPONSIBILITIES

A. Cooperate with laboratory personnel, provide access to Work.

B. Furnish copies of Products tests reports as required.

C. Furnish incidental labor and facilities:

1. To provide access to Work to be tested.
2. To obtain and handle samples at the Project site.
3. To facilitate inspections and tests.
4. For storage and curing of test samples.

D. Notify Architect/Engineer and Laboratory 24 hours prior to expected time for operations requiring inspection and testing services.

E. Payment for all retesting required because of non-conforming work of materials.

1.7 SCHEDULE OF INSPECTIONS AND TESTS

A. Section 02200 – Earthwork (refer to Specifications)

1. Tests and analysis of fill material will be performed in accordance with ANSI/ASTM D698.
2. Frequency of Tests: Field density tests should be taken as each lift of fill material is placed. As a guide, one field density test per lift for each 5,000 square feet of compacted area is recommended. For small areas or critical areas the frequency of testing may need to be increased to one test per 2,500 square feet. A minimum of two tests per lift should be required.

END OF SECTION 01410

SECTION 01500

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. Articles and portions of articles of the General Conditions and Supplementary Conditions not amended, supplemented or superseded by these General Requirements (Division 1) shall remain in effect.

1.2 SECTION INCLUDES

- A. Security
- B. Protection of Completed Work
- C. Water Control
- D. Use of Site
- E. Temporary Controls
- F. Project Identification and Signs
- G. Field Offices and Sheds
- H. Removal of Utilities
- I. Fire Protection
- J. Protection of Trees and Vegetation
- K. Traffic Control

1.3 SECURITY

- A. A night watchman is not a requirement. However, protection of the property at all times is the responsibility of the Contractor, as well as replacement of any loss due to thieves or damage by vandals.

1.4 PROTECTION OF COMPLETED WORK -DAMAGED ITEMS

- A. The Contractor shall be fully responsible for the protection of all items, finishes, etc., from the time they are delivered to or installed in the Work, until finished work is turned over to the Owner. Whenever such items, finishes, etc., are damaged, they shall be completely replaced, including all required removal work, patching, repairing, refinishing, and reinstallation as required to turn item over to Owner in new condition.

1.5 WATER CONTROL

- A. Provide pumps, piping, fittings, hose, trenching, sumps, etc., as required to control and remove surface and subsurface water from excavation and the site. Dispose of water in accordance with E.P.A. storm water management for construction activities #482N.

1.6 USE OF SITE

- A. The Contractor will be responsible for protection of the Owner's property, including all adjacent structures, trees and shrubs.
- B. Temporary toilets may be located in the construction area.
- C. Prior to construction, inspect all areas of the site to be used including adjacent landscaping and irrigation, etc and prepare a photographic record of the conditions. As a part of the Work of this contract the site will be restored to its previous condition. All damages in the proximity of the construction area, not represented by the photographic survey shall be repaired to "like new condition."

1.7 TEMPORARY CONTROLS

- A. Temporary Services and Utilities:
 - 1. Owner shall pay for electrical utilities and water for the project during the construction period. Contractor to arrange and pay for all other services and utilities required and all deposits therefore, including but not limited to telephone, service, during the construction period.
 - 2. Provide and maintain in a neat and sanitary condition such toilet accommodations for use of employees as may be necessary to comply with requirements and regulations of the City and State Department of Health, or other "authorities" having jurisdiction. Permanent toilets within adjacent buildings shall not be used by employees. Maintain temporary toilet facilities on the site until final acceptance of Work, unless permission is given by the Architect/Engineer for earlier removal.
- B. Temporary Hoists: The General Contractor shall furnish, install and operate all temporary hoists as his needs may require; shall erect temporary stairs as may be required for his operations and shall erect and maintain suitable handrails and toeboards around all openings in floors and roofs and wherever else required for proper safety precautions. All of the foregoing requirements of the "Manual of Accident Prevention in Construction" published by the Associated General Contractors of America.

1.8 PROJECT IDENTIFICATION AND SIGNS

- A. No signs or advertising of any kind will be permitted without the approval of the Owner.
- B. Project signs or other signs or advertising of any kind will not be permitted.

1.9 FIELD OFFICES AND SHEDS

- A. Provide a suitable office with telephone and fax throughout construction. Keep an approved set of Drawings and Project Manual, including revisions, approved shop drawings, and samples on job at all times.

1.10 REMOVAL OF UTILITIES

- A. Should active piping or conduit be encountered below grade within the construction site and be found at variance with the known conditions indicated by the Drawings and Specifications, relocate piping or conduit as directed by the Architect/Engineer. Provide temporary support of active piping and conduit encountered in the excavations until permanent support or removed is accomplished. Cut off, and cap or plug abandoned lines at least 3 feet outside the building lines. In all cases, conform to the applicable requirements of the locality or governing agency.

1.11 FIRE PROTECTION

- A. All contractors and subcontractors shall observe and the General Contractor shall enforce throughout the work, during the whole period of construction all requirements of the City, State and Insurance Authorities, to minimize the fire hazards during the progress of the work. In addition, the General Contractor shall post signs and warnings and insure the following requirements are met:
1. Combustible refuse shall be removed from the building daily.
 2. Storage of materials inside the building shall be restricted to fireproof areas with no-smoking signs posted.
 3. No oils, gasoline or other volatile liquids shall be stored inside the building.
 4. No bitumen kettles shall be operated inside the building.
 5. Space heaters and other types of heaters shall be set on incombustible flooring only. Building refuse shall not be burned in salamanders. Heaters shall not be placed closer than 15 feet to any combustible hanging or eight feet to a combustible partition or ceiling.
 6. Tarpaulins shall be flame proofed and when in use, securely braced and tied.
 7. Provide metal canisters with covers for storage of paint contaminated and oil waste materials.
 8. During all welding operations, a safety man with a fire extinguisher shall be on hand at all times to control any fire that may result from welding operations.
 9. The General Contractor shall provide fire extinguishers within 75 feet of any point of the area under construction. In addition, the General Contractor shall also provide one fire extinguisher outside each paint storage room and every other storage room where combustible materials are stored and in each field office.
 10. Burning of trash and excess materials on the premises is prohibited. No fires, including roofer's kettles, will be permitted within 40 feet of the buildings, sheds, shrubs or other material subject to fire, heat or smoke damage. The Contractor shall be solely responsible for any loss resulting from any fires.

1.12 PROTECTION OF TREES AND VEGETATION

- A. The Contractor shall be fully responsible for the protection of all trees and vegetation to remain and/or not in the footprint of the designed facility. The Contractor's failure to comply with the following will cause for the Owner to shut the project down at the Contractor's expense:
1. Parking vehicles under trees will not be permitted. The Contractor will be fined \$100.00 for each violation, which will be deducted from the contract amount by Change Order.
 2. All branches that interfere with construction activity shall be temporarily tied back to prevent damage. Branch removal is permitted only as approved by the Architect/Engineer.
 3. Tree damage will be assessed from the International Shade Tree Conference formula, D (diameter of tree measured 12" above ground) $\times 0.7854 \times \$36.00$. Total damages will be deducted from the contract amount by Change Order.
 4. Trenching for utilities in wooded areas must be staked and approved by Owner prior to construction. The Owner reserves the right to adjust line locations to avoid damage to existing trees.
 5. Where plans call for disturbance of the root system of existing trees, roots must be pruned (by machine manufactured for that purpose) prior to any other construction activity. Immediately after excavation, exposed roots must be immediately covered with a finely shredded mulch and kept moist until backfilling is complete.

END OF SECTION 01500

SECTION 01580

PROJECT SIGNS

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Furnish, install and maintain project identification sign.
- B. Provide temporary on-site informational signs to identify key elements of construction facilities.
- C. Remove signs on completion of construction.
- D. Allow no other signs to be displayed without Owner's permission.

1.2 PROJECT IDENTIFICATION SIGN

- A. One painted sign of size, lettering, and construction shown on the plans. Locate on site as directed by Owner (Architect/Engineer will provide a jpeg for fabricators use).

1.3 INFORMATIONAL SIGNS

- A. Painted signs with painted lettering, or standard products.
 - 1. Size of signs and lettering: as required by regulatory agencies or as appropriate to usage.
 - 2. Colors: As required by regulatory agencies, otherwise of uniform colors throughout Project.
- B. Erect at appropriate locations to provide required information.

1.4 QUALITY ASSURANCE

- A. Sign painter: Professional experience in type of work required.
- B. Finishes and Painting: Adequate to resist weathering and fading for scheduled Construction period.

PART 2 - PRODUCTS

2.1 SIGN MATERIALS

- A. Structure and Framing: New, wood or metal, in sound condition, structurally adequate to work and suitable for specified finish.
- B. Sign Surfaces: Exterior softwood plywood with medium density overlay, standard large sizes to minimize joints.
 - 1. Thickness: 3/4" exterior grade ND face veneers.
- C. Paint: Exterior quality, submit for approval.
 - 1. Use Bulletin colors for graphics.

2. Colors for structure, framing, sign surfaces and graphics: as selected by Architect/Engineer.

PART 3 - EXECUTION

3.1 PROJECT IDENTIFICATION SIGN

- A. Paint exposed supports, framing and surface material; one coat of primer and two coats of exterior paint.
- B. Paint graphics in styles, sizes and colors as selected.

3.2 INFORMATIONAL SIGNS

- A. Paint exposed surfaces; one coat primer and one coat of exterior paint.
- B. Paint graphics in styles, sizes and colors as selected.
- C. Install at a height for optimum visibility, on ground-mounted poles or attached to temporary structural surfaces.

3.3 MAINTENANCE

- A. Maintain signs and supports in a neat, clean condition; repair damages to structure, framing or sign.
- B. Relocate informational signs as required by the progress of the Work.

3.4 REMOVAL

- A. Remove signs, framing, supports and foundations at completion of Project.

END OF SECTION 01580

SECTION 01600

MATERIALS AND EQUIPMENT

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. Articles and portions of articles of the General Conditions and Supplementary Conditions not amended, supplemented or superseded by these General Requirements (Division 1) shall remain in effect.

1.2 SECTION INCLUDES

- A. Products
- B. Transportation and Handling, Storage and Protection
- C. Substitutions
- D. Manufacturer's Directions
- E. Color Schedule

1.3 PRODUCTS

- A. Products include new material, machinery, components, equipment, fixtures, and systems forming the Work, but does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work. Products may also include existing materials or components specifically identified for reuse.

1.4 TRANSPORTATION AND HANDLING

- A. Transport, handle, store and protect Products in accordance with manufacturer's instructions.
- B. Materials shall be new, delivered and stored in authorized locations in unopened containers and in ample quantity to prevent delay. Ordering of materials shall be made well in advance so as not to hinder the progress of work. Grade marks, labels, etc. shall be kept readable.

1.5 SUBSTITUTIONS

- A. The materials, products and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution.
- B. The details on the Drawings and the requirements of the Specifications shall be based on the first listed materials, products or equipment in the Contract Documents. All other products will be considered substitutions. If the Contractor desires to use any of the other listed materials, products or equipment other than that listed first or if the Contractor substitutes a material, product or equipment, the Contractor alone shall be responsible for the correct function, operation and accommodation of the other materials, products or equipment into the spaces allotted on the Drawings.
- C. The "listing" of a manufacturer does not imply "acceptance" or "approval" of any standard product of that manufacturer.
- D. Limitations of Substitutions:

1. Substitutions will not be considered when indicated or implied on shop drawings or product data submittals by subcontractor or supplier, or when acceptance will require substantial revision of Contract Documents.
 2. Substitute product shall not be ordered or installed without written acceptance.
 3. Only one request for substitution for each product will be considered. If substitution is not accepted, Contractor shall provide specified product.
 4. Architect/Engineer will determine acceptability of substitutions and the Architect/Engineer's decision of approval or disapproval of a requested substitution shall be final.
- E. Whenever, in any of the Contract Documents, any material, product or equipment is defined through the use of any federal association or other standard specification, the Contractor shall present satisfactory evidence of compliance with the particular specification for the material, product or equipment he proposes to furnish.
- F. Request for Substitution Submittal Procedures:
1. No substitution will be considered unless three copies are submitted on General Contractor's Request for Substitution Form (see Section 01630-3 and 01630-4).
 2. Request for Substitution during the bidding period:
 - a. Substitutions shall be submitted to the Architect/Engineer at least seven days prior to the date for receipt of bids by the General Contractor.
 - b. If the Architect/Engineer approves a proposed substitution prior to receipt of bids, such approval will be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.
 3. Request for Substitution after award of contract:
 - a. Substitutions shall be submitted to the Architect/Engineer within at least 30 (thirty) calendar days after the award of contract. No substitutions will be considered after that time and the Contractor must provide the specified product.

1.6 MANUFACTURER'S DIRECTIONS

- A. All manufactured articles, material, appliance and equipment shall be delivered, stored, applied, installed, connected, erected, used, cleaned, conditioned and placed in operation, as directed by the respective manufacturers, insofar as these directions are applicable to this particular project and are not in conflict with superior requirements in the Specifications or requirements of applicable Building Codes.

END OF SECTION 01600

SECTION 01630

SUBSTITUTIONS AND PRODUCT OPTIONS

PART 1 - GENERAL

1.1 REQUIREMENTS INCLUDED

- A. Furnish and install products specified, under conditions for options and substitutions stated in this Section.

1.2 PRODUCTS LIST

- A. Within 30 days after award of Contract, submit to Architect/Engineer six copies of complete list of major Products which are proposed for installation.
- B. Tabulate Products by Specification Section number and title.
- C. For products specified only by reference standards, list for each such Product:
 - 1. Name and address of manufacturer.
 - 2. Trade name.
 - 3. Model or catalogue designation.
 - 4. Manufacturer's data:
 - a. Reference standards.
 - b. Performance test data.

1.3 CONTRACTOR'S OPTIONS

- A. For Products specified only by reference standard, select Product meeting that standard, by any manufacturer.
- B. For Products specified by naming several Products or manufacturers, select anyone of products and manufacturers named which complies with Specifications.
- C. For Products specified by naming only one Product and manufacturer, there is no option and no substitution will be allowed (unless substitution is approved prior to bid opening).

1.4 SUBSTITUTION PROCEDURE

- A. Prior to the Bid Date: Architect/Engineer will consider substitutions as specified in the Instructions to Bidders, General Conditions and Section 01600 of the Technical Specifications.
- B. After the Bid Date: Architect/Engineer will consider formal written requests from Contractor for substitution of products in place of those specified only when submitted in accordance with the requirements of this Section. One or more of the following conditions must be documented.
 - 1. The substitution must be required for compliance with final interpretation of code requirements or insurance regulations.
 - 2. The substitution must be due to the unavailability of the specified products, through no fault of the Contractor. Long delivery period will not qualify as unavailability.
 - 3. The substitution may be requested when subsequent information discloses the inability of the specified products to perform properly or to fit in the designated space.
 - 4. The substitution may be due to the manufacturer's or fabricator's refusal to certify or guarantee performance of the specified product as required.
 - 5. The substitution may be requested when it is clearly seen, in the judgement of the Architect/Engineer that a substitution would be substantially to the Owner's best interests in terms of cost, time or other considerations.

- C. Submit a separate request for each substitution on a copy of the request form attached to this section. Support each request with:
1. Complete data substantiating compliance of proposed substitution with requirements stated in Contract Documents:
 - a. Product identification, including manufacturer's name and address.
 - b. Manufacturer's literature;
 - c. Samples, as applicable.
 - d. Name and address of similar projects on which product has been used, and date of each installation.
 2. Itemized comparison of the proposed substitution with product specified; list significant variations.
 3. Data relating to changes in construction schedule.
 4. Any effect of substitution on separate contracts.
 5. List of changes required in other work or Products.
 6. Accurate cost data comparing proposed substitution with product specified.
 - a. Amount of any net change to Contract Sum.
 7. Designation of required license fees or royalties.
 8. Designation of availability of maintenance services, sources of replacement materials.
- D. Substitutions will not be considered for acceptance when:
1. They are indicated or implied on shop drawings or product data submittals without a formal request from Contractor.
 2. They are requested directly by a subcontractor or supplier.
 3. Acceptance will require substantial revision of Contract Documents.
- E. Substitute products shall not be ordered or installed without written acceptance of Architect/Engineer and Owner.
- F. Architect/Engineer and Owner will determine acceptability of proposed substitutions.

1.5 CONTRACTOR'S REPRESENTATION

- A. In making formal request for substitution Contractor represents that:
1. He has investigated proposed product and has determined that it is equal to or superior in all respects to that specified.
 2. He will provide same warranties or bonds for substitution as for product specified.
 3. He will coordinate installation of accepted substitution into the Work, and will make such changes as may be required for the Work to be complete in all respects.
 4. He waives claims for additional costs caused by substitution which may subsequently become apparent.
 5. Cost data is complete and includes related costs under his Contract, but not:
 - a. Costs under separate contracts.
 - b. Architect/Engineer's costs for redesign or revision of Contract Documents.
 6. He will reimburse the Owner separately for fees paid to the Architect/Engineer for redesign, revision of Contract Documents, and review of each substitution request.

1.6 ARCHITECT/ENGINEER'S DUTIES

- A. Review Contractor's requests for substitutions with reasonable promptness.
- B. Notify Contractor, in writing, of decision to accept or reject requested substitution.

END OF SECTION 01630 – See Attached General Contractor's Request for Substitution

GENERAL CONTRACTOR'S REQUEST FOR SUBSTITUTION
(Submit six copies.)

Request No. _____ Date _____

Project Name: _____

Project Name: _____

Contractor Name and Address: _____

Hereby requests approval of the following product or system as an "approved substitution."

Specification Section No. _____ Page(s) _____ Paragraph _____

Drawing No (s). _____ Detail or Section No (s). _____

USE SEPARATE FORM FOR EACH SUBMITTAL

Name and description of submittal for substitutions.

Manufacturer: _____

Address: _____ Telephone: _____

Vendor: _____

Address: _____ Telephone: _____

Are maintenance services and replacement parts available through vendor? _____

Differences between proposed substitution and specified item? _____

For finish materials and prefabricated equipment, list the colors available for the proposed substitution: _____

Manufacturer's guarantees of the proposed and specified items are:

☐ Same☐ Different. Explain differences on an attachment.

Reason for not giving priority to specified item: _____

Substitution affects other material or systems: ☐ No ☐ Yes (If yes, attach complete data.)

Enclosed data is (with specific marks related to substitution):

☐ Catalog ☐ Drawings ☐ Sample ☐ Tests ☐ Reports

☐ Other _____

List items or elements that are the same as the specified item.

Attach list of similar projects using the product attachment. Include Owner, and Owner's representative to contact.

State effects of substitution on construction schedule, and changes in other work or project.

What license fees or royalties are required?

The undersigned states that the function, appearance, quality and results are equivalent or superior to the specified items and that Substantial Completion will not be affected.

Submitted by:

Contractor's Signature

Firm

Address

Telephone

Date

Owner's Signature: _____

For the Design Professional

☐ Accepted ☐ Accepted as noted

☐ Not accepted ☐ Received late

By: _____

Date: _____

Remarks: _____

SECTION 01700

PROJECT CLOSEOUT

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. Articles and portions of articles of the General Conditions and Supplementary Conditions not amended, supplemented or superseded by these General Requirements (Division 1) shall remain in effect.
- B. All closeout documents (Record Drawings, Operation and Maintenance Manuals and Warranties) shall be provided to the Owner in hard copy format as well as in electronic format on CD.

1.2 SECTION INCLUDES

- A. Substantial Completion
- B. Cleaning
- C. Record Drawings
- D. Operation and Maintenance Manuals
- E. Warranties
- F. Spare Parts and Maintenance Materials
- G. Letters of Compliance

1.3 SUBSTANTIAL COMPLETION

- A. After the Work has been cleaned and finished to a state of Substantial Completion, the Contractor shall prepare a list of items to be completed or corrected. The Contractor shall give the Architect/Engineer 10 days written notice of the date the Work, or a portion of the Work, will be ready for each inspection.
- B. First Inspection: Upon receipt of the list of items to be completed or corrected, if the Architect/Engineer agrees that the level of completeness meets the standards established, the Architect/Engineer will inspect the project for compliance with the Contract Documents. The Architect/Engineer shall verify and amend the Contractor's list. The Architect/Engineer will designate specific items on the list which must be completed or corrected before the Certificate of Substantial Completion will be issued.
- C. If, in the Architect/Engineer's opinion, the Contractor is not making the proper effort to complete or correct listed items, the Architect/Engineer may report same to the Owner who will have the option of engaging other contractors to complete the work of the project. Such contractors shall be employed as stipulated in the General Conditions.
- D. Second Inspection: When items have been corrected to meet Substantial Completion, the Contractor shall notify the Architect/Engineer to perform a second Substantial Completion inspection. If, in the opinion of the Owner and Architect/Engineer, the work has been performed in compliance with the Contract Documents, and if documents defined in this Section, and in Paragraph 9.10.1 of the General Requirements have been prepared and received by the Owner, the Architect/Engineer will issue the Certificate of Substantial Completion with the remaining items to be completed or corrected for final acceptance on an attached list.

- E. Items to be Completed or Corrected: The list of items attached to the Certificate of Substantial Completion is a guideline of items to be corrected for final acceptance. Items may be added to the list after the date of Substantial Completion as a guide of items to review at final inspection and as a record of the warranty date for those items.

1.4 CLEANING

- A. Execute cleaning prior substantial completion reviews and final inspections.
- B. Clean interior and exterior surfaces exposed to view.
- C. Clean debris from entire site and drainage systems.
- D. Clean or replace filters of operating equipment.
- E. Remove waste and surplus materials, rubbish, and construction facilities from the site.
- F. The Contractor shall turn the work over in clean condition outside (including the premises). Clean up shall include removal of smudges, marks, stains, fingerprints, soil, dirt, paint, dust, lint, unnecessary labels, discoloration's and other foreign materials. Clean all finished surfaces, such as (but not limited to) walks, drives, curbs, paving, fences, grounds, etc. Slick surfaces shall be left with a clear shine. Remove all temporary facilities and job sign, including surface materials and temporary roads and walkways.

1.5 RECORD DOCUMENTS

- A. The contractor shall provide to the Architect/Engineer complete record documents at the completion of the project which includes the drawings and project manual. The record documents shall be submitted in electronic format.
- B. The contractor shall acquire and pay for a set of blue-line prints of the drawings on heavy weight paper and one Project Manual with a laminated cover at the beginning of the project to be kept in a safe, neat environment at the site. The blue-line prints and project manual will be labeled with neat bold letters "Record Drawings Prints" and "Record Project Manual". The edges of the prints shall be protected with clear tape.
- C. During the course of performing the work, the contractor shall neatly record all changes to the Contract Documents on the "Record Drawing Prints" and "Record Manual", including but not limited to:
 - 1. All Addendum's issued by the Architect/Engineer.
 - 2. All Change Orders approved by the Owner.
 - 3. All Architect/Engineer's Supplemental Instructions issued by the Architect/Engineer.
 - 4. All answers issued by the Architect/Engineer in response to "Requests for Interpretation" issued by contractor that change any drawing or specification.
 - 5. All changes by the contractor of piping routings, duct layouts, electrical equipment placement, circuiting, etc. that deviate from locations shown on the Contract Documents, shall be carefully recorded. The contractor shall show and label all valves with the corresponding tag number.
 - 6. All underground utility locations shall be reviewed with the Architect/Engineer and consequently recorded on the "Record Drawing Prints".
- D. Prior to application for payment each month, the Architect/Engineer will review the "Record Drawing Prints" and "Project Manual" to verify that any changes during that pay period have been properly recorded. The contractor shall keep a log on the cover sheet of the drawings and a log in the front of the Project Manual indicating which Addendum's, Change Orders, Supplemental

Instructions, R.F.I.'s, etc. have been posted, the date they were posted, and by whom they were posted. Failure to record the changes that have occurred in that pay period will be grounds to withhold payment until they are recorded.

- E. As part of Project Close-out, the Record Documents, shall be submitted to the Architect/Engineer for review and approval after substantial completion and prior to final payment.
- F. As part of Project Closeout, the "Record Documents", plotted on mylar, and the laminated "Record Project Manual" shall be submitted to the Architect/Engineer for review after substantial completion and prior to final payment. The Architect/Engineer will compare the "Record Documents" to his own record set. The Architect/Engineer will return the "Record Documents" to the contractor who will promptly correct any deficiencies or discrepancies to the satisfaction of the Architect/Engineer and replot the appropriate sheets. The contractor will then submit to the Architect/Engineer, one (1) sets of blue-line prints of the final record drawings, and one (1) marked up copy of the "Record Project Manual".
- G. The Contractor shall show a reasonable sum of money for "Record Documents" as a line item on his schedule of values.

1.6 OPERATION AND MAINTENANCE MANUALS

- A. Furnish the Owner, through the Architect/Engineer, two copies of operating instructions and maintenance recommendations for all work installed in the building, including that installed by General Contractor's own forces and all work done by subcontractors.
- B. Operating instructions and maintenance recommendations shall be furnished in a form approved by the Architect/Engineer and shall be neatly typewritten and complete, bound into Operations and Maintenance Manuals.
- C. These manuals shall be prepared and transmitted to the Architect/Engineer for approval so they can be given to the Owner no less than 10 days prior to Substantial Completion.
- D. The work covered by these manuals will not be inspected for Substantial Completion until Owner has received the manuals described above.

1.7 WARRANTIES

- A. Warranties and Certificates: Prior to the final payment, Contractor and subcontractors shall forward to the Architect/Engineer, copies of warranties and certificates as required by the Contract Documents.
- B. The Contractor and each subcontractor shall furnish written warranties, covering their respective work or equipment for a minimum period of two years from the date of acceptance, against defects of material or workmanship at no cost to the Owner. Some work may be specified to be covered under a longer period of warranty. All warranties shall be signed by the responsible Contractor and subcontractor.
- C. Wherever defects occur within the time limit of the warranty, if such unsatisfactory condition is due to the use of materials, or workmanship which are inferior, defective or not in accordance with the Contract, the Contractor, whenever notified, shall immediately:
 - 1. Place any such warranted work and/or materials in satisfactory condition.
 - 2. Make good any work or materials, or the equipment or contents of said structures or grounds, which are damaged in fulfilling any such warranty at no cost to the Owner, and to the satisfaction of the Architect/Engineer.

- D. Should the Contractor fail to proceed promptly with the terms of this warranty the Owner may have such work performed as he may deem necessary to fulfill the warranty, charging the cost thereof against the Contractor.

1.8 SPARE PARTS AND MAINTENANCE MATERIALS

- A. Provide products, spare parts, maintenance and extra materials in quantities specified in individual specification Sections.

END OF SECTION 01700

DIVISION 2 – SITEWORK

SECTION 02100

SITE PREPARATION

PART 1 - GENERAL

- 1.1 SCOPE: Work in this section includes furnishing all labor, materials, equipment, and services required for clearing and grubbing, minor demolition, removal and disposal of items as specified herein and on the plans.
- 1.2 RELATED WORK SPECIFIED ELSEWHERE:
 - A. Section 02200 - Earthwork.
 - B. Existing Conditions, Removal and Demolition Items, and Grading Plan: Refer to plan sheets.

PART 2 - PRODUCTS

- 2.1 No products are required to execute this work, except as the Contractor may deem necessary.

PART 3 - EXECUTION

- 3.1 CLEARING AND GRUBBING:
 - A. Clearing and grubbing shall consist of removing all natural and artificial objectionable materials from the project site or from limited areas of construction specified within the site.
 - B. In general, clearing and grubbing shall be performed in advance of grading and earthwork operations and shall be performed over the entire area of earthwork operations.
 - C. Buried material such as logs, stumps, roots of downed trees that are greater than one and one-half (1-1/2") inches in diameters, matted roots, rubbish, and foreign debris shall be grubbed and removed to a minimum depth of twenty-four (24") inches below proposed finished grades.
 - D. Ground covers of weeds, grass, and other herbaceous vegetation shall be removed prior to stripping and stockpiling topsoil from areas of earthwork operations. Such removal shall be accomplished by "blading" off the uppermost layers of sod or root-matted soil for removal.
- 3.2 PAVEMENT REMOVAL:
 - A. Bituminous and concrete pavements shall be removed to neatly sawed edges. Saw cuts shall be made to a minimum depth of one and one-half (1-1/2") inches. If a saw cut in concrete pavement falls within three (3') feet of an existing score joint, construction joint, saw joint, cold joint, expansion joint, or edge, the concrete shall be removed to that joint or edge. All saw cuts shall be parallel and/or perpendicular to the line of existing pavement. If an edge of a cut is damaged subsequent to saw cutting, the concrete shall again be sawed to a neat, straight line for the purpose of removing the damaged area.
- 3.4 UTILITIES REMOVAL: In general, those utilities on the site that are to be removed or abandoned and that belong to the Owner shall be removed or abandoned by the Contractor. The Owner is responsible for arranging the relocation or removal of other utilities owned by utility companies or other parties.
- 3.5 MISCELLANEOUS DEMOLITION: There may be certain items on the site such as old building foundations, fences and other undetermined structures and improvements that must be removed before construction can commence. Unless otherwise specified, such items become the property of the Contractor for subsequent disposal.

- 3.6 USE OF EXPLOSIVES: The use of explosives will not be permitted in site preparation operations unless specifically permitted by the Owner in writing.
- 3.7 BACKFILLING: All holes, cavities, and depressions in the ground caused by site preparation operations will be backfilled and tamped to normal compaction and will be graded to prevent ponding of water and to promote drainage. In areas that are to be immediately excavated, the Architect/Engineer may permit holes, etc., to remain open.
- 3.8 DISPOSAL OF WASTE MATERIALS:
- A. Unless otherwise stated, materials generated by clearing, grubbing, removal, and demolition shall be known as “waste” or “spoils” and shall be removed from the site and disposed of by the Contractor. Similar materials may be unearthed or generated by earthwork operations or by the drilling of piers. Unless otherwise specified any merchantable items become the property of the Contractor.
 - B. In certain cases, the Owner or Architect/Engineer may grant special permission for the Contractor to dispose of certain “wastes” or “spoils” by deep burial on the site. Such material would be buried in an approved area; would not be organic, biodegradable, or crushable; and would be buried in lifts or layers with soil thoroughly compacted around and over the material. A minimum of thirty (30”) inches of cover would be required over the burial site.

END OF SECTION 02100 –See attached diagrams

SECTION 02200

EARTHWORK

PART 1 - GENERAL

- 1.1 SCOPE: Work in this section includes furnishing all labor, materials, equipment, and services required to construct, shape, and finish earthwork to the required lines, grades, and cross sections as specified herein and on the plans.
- 1.2 RELATED WORK SPECIFIED ELSEWHERE:
 - A. Section 02100 - Site Preparation.
 - B. Grading Plan: Refer to plan sheets.
- 1.3 TEST REPORTS: The Owner will bear the cost of all testing requirements (unless re-testing is required) and the Testing Laboratory will submit test reports from a commercial testing laboratory as specified herein and in the Conditions of the Contract.
- 1.4 METHOD OF PAYMENT: Earthwork is a necessary and incidental part of the work. The total cost will be included in the Bid Proposal. Payment will not be made on a unit price basis nor by any other separate measured payment method.

PART 2 - PRODUCTS

- 2.1 UNCLASSIFIED EXCAVATION: Unclassified excavation shall consist of all excavation, unless separately designated, within the limits of the work. Unclassified excavation includes all material encountered regardless of its nature or the manner in which it is to be excavated.
- 2.2 UNCLASSIFIED FILL:
 - A. Unclassified fill shall consist of all fill within the limits of the work. All suitable native materials removed in unclassified excavation, or similar imported materials, shall be used insofar as practicable as unclassified fill. Properly deposited, conditioned, and compacted fill is hereinafter referred to as "earth embankment."
 - B. Rock: Minor quantities of rock not greater than four (4") inches in greatest dimension are permissible in fill materials used to construct earth embankment. Minor quantities of rock of greater dimensions may be placed in the deeper fills in accordance with the Texas Department of Transportation requirements for construction of rock embankments, provided such placement of rock is not immediately adjacent to structures or piers. Also, rock may be placed in the portions of embankments outside the limits of the completed graded width where the size of the rock prohibits their incorporation in the normal embankment layers.
- 2.3 TOPSOIL: Shall be as follows:
 - A. On-Site Topsoil: Topsoil shall consist of an average depth of six (6") inches of native surface soil left in place after the ground cover of herbaceous vegetation and other objectionable matter has been cleared by "blading," as specified in Section 02100, "Site Preparation." Topsoil may be greater or less than the upper six (6") inches in depth. However, it must be removable without contamination by the subsoil or substratum or other objectionable matter that would render it as "unsuitable material" as described herein.
 - B. Imported Topsoil: In the event there is not sufficient onsite topsoil, imported clean sandy loam topsoil will be imported so that the result is a full 6" deep of top soil in all planting areas. Submit a one (1) gallon sample and a pit analysis for approval.

2.4 IMPORTED FILL:

- A. Imported fill materials shall be used for the construction of earth embankment in the event that (1) the volume of unclassified excavation is less than the volume of fill required for earth embankment and/or (2) the condition of materials removed in unclassified excavation makes them unsuitable for use in the construction of earth embankment.
- B. The Contractor shall haul and place imported fill obtained from off-site sources as necessary to construct the embankment and various other details of the construction plans. All costs related to such imported fill will be included in the contract price, and no additional or separate payment for imported fill will be due the Contractor.
- C. A sample of the proposed imported fill must be provided by the Contractor and be approved by the Architect/Engineer. In general, imported material must be equal to or better than native material in quality and engineering characteristics. The Architect/Engineer may also require the Contractor to provide a material analysis test of the proposed fill.

2.5 SELECT MATERIALS:

- A. Select materials shall be imported from off-site sources, unless they are available from specifically designated areas on the site as marked on the plans.
- B. Select Fill: The recommendations as called for in the "Geotechnical Investigation" shall be used for select fill. If none are provided in the "Geotechnical Investigation", the select fill shall be as follows: select fill shall be used for the construction of subgrades under building foundations, slabs on grade, and other concrete construction as shown and detailed on the plans. All select fill shall be sandy material or other suitable granular material (more than fifty (50%) percent by weight retained on a No. 200 sieve) and shall have a plasticity index not less than four (4) nor more than fifteen (15). Properly deposited, conditioned, and compacted select fill is hereinafter referred to as "select embankment."
- C. Testing Requirements:
 - 1. The Contractor shall have the testing lab to provide a material analysis test of a pit sample of select fill prior to hauling it to the site. This test will include the percentage by weight retained on a No. 200 sieve, the plasticity index, a physical description of the material, and the Standard AASHTO Density and optimum moisture content as required in the execution of "DENSITY CONTROL" in this specification. Tests performed on samples of fill material used for other projects are unacceptable.
 - 2. The Contractor shall have the testing lab to provide a maximum of four additional material analysis tests as described above for specimens chosen until after an entire lift of select fill material is hauled and deposited on the prepared subgrade, and all steps have been executed except for conditioning and compaction as required in the execution of "EARTH EMBANKMENT" and "SELECT EMBANKMENT" of this specification. The Owner or Architect/Engineer may call for a series of tests from the same lift or from any given lift of deposited material.

2.6 UNSUITABLE MATERIALS:

- A. Topsoil, select material, imported fill, or unclassified fill will be declared as "unsuitable" by the Owner if, in his opinion, any of the following conditions or matter and particles are present to a degree that is judged detrimental to the proposed use of the material.
 - 1. Moisture.
 - 2. Decayed or undecayed vegetation.
 - 3. Hardpan clay, heavy clay, or clay balls.

4. Rubbish.
 5. Construction rubble.
 6. Sand or gravel.
 7. Rocks, cobbles, or boulders.
 8. Cementious matter.
 9. Foreign matter of any kind.
- B. Unsuitable materials will be disposed of as “waste” as specified in Section 02100.
- C. Wet Material: If fill material is unsatisfactory for use as embankment solely because of high moisture content, the Architect/Engineer may grant the Contractor permission to process the material to reduce the moisture content to a usable optimum condition.

PART 3 - EXECUTION

- 3.1 SITE PREPARATION: In general, “site preparation,” as specified in Section 02100, shall be performed in advance of grading and earthwork operations and shall be completed over the entire area of earthwork operations.
- 3.2 TOPSOIL:
- A. The removal and storage of topsoil shall occur after site preparation is complete and before excavation and embankment construction begin. Likewise, topsoil will be replaced after excavation and embankment construction are complete.
 - B. Removal: Topsoil shall be stripped to an average depth of six (6”) inches from areas where excavation and embankment construction are planned. Topsoil may be obtained from greater depths if it is uncontaminated by the substratum, and it is of good quality in the opinion of the Architect/Engineer.
 - C. Storage: Topsoil shall be stored in stockpiles conveniently located to areas that will later receive the topsoil. Stockpiles shall be out of the way of earthwork operations in locations approved by the Owner or Architect/Engineer. Stored topsoil shall be kept separate from other excavated materials and shall be protected from contamination by objectionable materials that would render it unsuitable.
 - D. Timing: Topsoil will not be replaced (deposited) until construction activities are complete that would create undesirable conditions in the topsoil, such as overcompaction or contamination. Trenching for items such as electrical conduit and irrigation pressure lines must be complete before topsoil replacement may begin.
 - E. Replacement: Topsoil will be deposited in a single layer or lift. It will be placed, processed, compacted, and graded to leave a finished layer of topsoil not less than five (5”) inches in depth. Unless otherwise indicated, topsoil will be replaced over all areas of earthwork (including slopes), except where pavement is planned.
 - F. Grading: Topsoil will be final graded to the elevations shown on the plans. Unless otherwise indicated, the final plane of compacted topsoil will be between 0.10 foot and one (1”) inch below adjacent paved surfaces. Fine grading will be accomplished with a weighted spike harrow, weighted drag, tractor box blade, light maintainer, or other acceptable machinery. Grading operations and equipment will be such that topsoil does not become overcompacted. Bulldozer blades and front-end loader buckets are not acceptable devices for topsoil grading operations.
 - G. Plant Bed Areas: Excavate to a depth of 12” to receive proposed soil mix.
 - H. Acceptability: Finished areas of topsoil are satisfactory if they are true to grade, true in plane, even in gradient (slope), uniform in surface texture, and of normal compaction. Areas of loose granular

pockets or of overcompacted soils are not acceptable and will be reworked. Finished areas will promote surface drainage and will be ready for turfgrass planting.

3.3 UNCLASSIFIED EXCAVATION:

- A. All excavated areas shall be maintained in a condition to assure proper drainage at all times, and ditches and sumps shall be constructed and maintained to avoid damage to the areas under construction.
- B. Surplus Material:
 - 1. Surplus excavation is that quantity of material that may be left over after the grading plan is executed, and all earthwork operations, including excavation, embankment construction, topsoil replacement, and final grading, are completed. Unless otherwise specified, the Contractor shall dispose of surplus material as “waste” as specified in Section 02100.
 - 2. In certain cases, if the on-site excavation and embankment quantities are not balanced and there is a surplus of excavated material, the Architect/Engineer may permit the Contractor to “waste” the surplus by constructing additional embankment in an approved location. No additional payment for such work would be due that Contractor.
- C. Excavation in Rock: The use of explosives will not be permitted unless specifically permitted in writing by the Owner. Unless otherwise indicated on the plans, excavation in solid rock shall extend six (6”) inches below required subgrade elevation for the entire width of the area under construction and shall be backfilled with suitable materials as indicated on the plans.

3.4 EARTH EMBANKMENT:

- A. Earth embankment is defined as embankment composed of suitable materials removed in unclassified excavation and/or imported fill. The construction of embankment includes preparing the area on which fill is to be placed and the depositing, conditioning, and compaction of fill material.
- B. General: Except as otherwise required by the plans, all embankment shall be constructed in layers approximately parallel to the finished grade of the graded area, and each layer shall be so constructed as to provide a uniform slope as shown on the grading plan. Embankments shall be constructed to correspond to the general shape of the typical sections shown on the plans, and each section of the embankment shall correspond to the detailed section or slopes established by the drawings. After completion of the graded area, embankment shall be continuously maintained to its finished section and grade until the project is accepted.
- C. Preparation: Prior to placing any embankment, all preparatory operations will have been completed on the excavation sources and areas over which the embankment is to be placed. Stump holes or other small excavations in the limits of the embankments shall be backfilled with suitable material and thoroughly tamped by approved methods before commencing embankment construction. The surface of the ground, including plowed, loosened ground, or surfaces roughened by small washes or otherwise, shall be restored to approximately its original slope by blading or other methods, and, where indicated on the plans or required by the Architect/Engineer, the ground surface, thus prepared, shall be compacted by sprinkling and rolling.
- D. Scarification: The surface of all areas and slopes over which fill is to be placed, other than rock, shall be scarified to a depth of four (4”) to six (6”) inches to provide a bond between the existing surface and the proposed embankment. Scarification shall be accomplished by plowing, discing, or other approved means. The material that has been loosened shall be recompacted with the new embankment.

- E. Depositing: Fill material shall be placed in horizontal layers or lifts, evenly spread, not to exceed eight (8") inches in loose depth before conditioning and compaction. Unless otherwise permitted, each layer of fill material shall cover the length and width of the area to be filled and shall be conditioned and compacted before the next higher layer of fill is placed. Adequate drainage shall be maintained at all times.
- F. Watering: At the time of compaction, the moisture content of fill material shall be such that the specified compaction will be obtained, and the fill will be firm, hard, and unyielding. Fill material, which contains excessive moisture shall not be compacted until it is dry enough to obtain the specified compaction.
- G. Compacting: Each layer of earth fill shall be compacted by approved tamping or sheepfoot rollers, pneumatic tire rollers, or other mechanical means acceptable to the Architect/Engineer. Hand-directed compaction equipment shall be used in areas inaccessible to vehicular compactors.
- H. Grading: Embankments shall be constructed in proper sequence and at proper densities for their respective functions. All embankment serves in one capacity or another as subgrade (e.g., under topsoil, under concrete and asphalt pavement, under structures, etc.). Accordingly, the upper layer of embankment shall be graded to within plus or minus 0.10 foot of proper subgrade elevation prior to depositing topsoil, and prior to the construction of pavements, slabs, etc.

3.5 SELECT EMBANKMENT: Select embankment is defined as embankment constructed of select fill material. In general, it is constructed the same as earth embankment, except as described below.

- A. Subgrade: In cases where select fill is to be placed on a subgrade surface that is proposed to be within 0.50 foot in elevation of the existing surface grade, the top six (6") inches of soil shall be stripped and removed as unsuitable waste. A minimum of six (6") inches of fill comprising the subgrade for the select embankment shall be prepared and compacted as "earth embankment under select embankment" (see Density Control paragraph).
- B. Mixing: If the select fill is non-uniform in material composition, the Contractor may elect to mix with discing or pulverizing machinery to ensure that it meets the specified density and material analysis testing requirements. During mixing, care shall be taken not to disturb the subgrade nor to incorporate the subgrade material into the select material. Mixing would occur between the depositing and watering steps described in the embankment construction process. Also, see "Testing Requirements" under "SELECT MATERIALS" of the PRODUCTS section of this specification.
- C. It is the sole responsibility of the Contractor to provide a select material of such quality that it can be "set-up" and "finished" to provide a stable support for the hot mix asphaltic concrete pavement. In addition to the density requirements, the subgrade must have sufficient strength at time of paving to support the proposed hot mix paving operation including paving machine, haul trucks, and rollers. If significant deterioration of the finished subgrade occurs during paving operations, paving shall be suspended until the required remedial action is taken by the Contractor. Approval of submitted samples of select material by the Architect/Engineer does not relieve the Contractor of this responsibility. All irregularities, depressions, or weak spots which develop in the subgrade shall be corrected prior to paving by scarifying the areas affected, adding suitable material as required, reshaping and recompacting by sprinkling and rolling. Should the select material subgrade, due to any reason or cause, lose the required stability, density, or finish before surfacing is complete, it shall be recompacted and refinished at the sole expense of the Contractor.

3.6 DENSITY CONTROL:

- A. Backfill Placement and Compaction: The backfill material should be placed in maximum of eight (8)-inch lifts and compacted to a density ranging between 92 and 98 percent of maximum

Standard Proctor (ASTM D 698) dry density at a moisture content ranging from one (1) percentage point below optimum to four (4) percentage points above optimum (-1 to +4).

- B. Non-Expansive, Select Fill: The select fill should be placed in loose lifts not exceeding eight (8) inches in uncompacted thickness, and be uniformly compacted to a minimum of ninety-five (95) percent of the maximum dry density determined by Standard Proctor (ASTM D 698). The moisture content of the fill at the time of compaction should be from minus two (2) to plus five (5) percentage points of optimum (-2 to +5).
- C. Pavement Subgrade: The subgrade should be compacted to a minimum of 95 percent of Standard Proctor (ASTM D 698) at a moisture content ranging from optimum to four (4) percentage points above optimum (0 to +4).

For additional information, refer to the Subsurface Investigation, located in Part I of the Project Manual.

- 3.7 MOISTURE MAINTENANCE: The specified moisture content shall be maintained in all embankments that are to function as subgrade for structures, areas of pavement, or for select embankment. After completion of the embankment, the Contractor shall prevent excessive loss of moisture in the embankment by sprinkling as required. Loss of moisture in excess of two (2%) percent below optimum in the top twelve (12") inches of the fill will require that the top twelve (12") inches of the embankment be scarified, wetted, and recompact prior to placement of the structure, select fill or pavement. If desired, the Contractor may place an asphalt membrane of emulsified or cutback asphalt over the completed embankment and thus eliminate the sprinkling requirement.
- 3.8 TESTING: Spot field tests of embankment densities shall be required of the Contractor by the Owner at the place and time of their choosing. Any area not meeting density control requirements shall be immediately excavated, reconstructed, and retested, at the expense of the Contractor, until satisfactory results are obtained. See Section 01410.

END OF SECTION 02200

SECTION 02220

EXCAVATION, TRENCHING, AND BACKFILLING

PART 1 - GENERAL

- 1.1 SCOPE: The work to be performed under this section of the specifications shall consist of furnishing all labor, equipment and materials, and performing all operations in connection with the excavation, trenching, and backfilling for the installation of water, sanitary sewer, drain lines, and perforated pipe underdrains as shown on the plans and as specified herein.
- 1.2 RELATED WORK SPECIFIED ELSEWHERE:
- 1.3 SUBMITTALS: Submit to the Engineer in conformance with the requirements of the Conditions of the Contract.

PART 2 - PRODUCTS

- 2.1 MATERIALS: No materials are required in this section.

PART 3 - EXECUTION

- 3.1 EXCAVATION:
 - A. General: Excavation shall include the removal of any trees, stumps, brush, debris or other obstacles that may obstruct the line of work, and the excavation and removal of all earth, rock, or other materials to the extent necessary to install the pipe, appurtenances, and structures in conformance with the line and grades shown in the plans or as specified.
 - B. Maximum and Minimum Width of Trenches: The sides of all trenches shall be cut as nearly vertical as possible from the bottom of the trench to a point twelve (12") inches above the top of the pipe when it is laid to grade. The minimum width of trench in which the pipe may be installed shall be as shown in the plans, measured at an elevation in the trench which is twelve (12") inches above the top of the pipe when it is laid to grade.
 - 1. Whenever the prescribed maximum trench width is exceeded, the Contractor shall use the next higher class of embedment or encasement than specified, based upon the load factors shown on the plans, and the additional cost incurred will be borne by the Contractor.
 - 2. Nothing herein shall be construed as prohibiting the Contractor from moving the upper portion of earth to a depth twelve (12") inches above the top of the pipe, in sections of the line where the cut is deep, by means of scrapers, bulldozers, or other dirt moving equipment, as a preliminary to trenching for the pipe if he elects to do so and has permission therefor from the property owner whose land will be affected. Such permission must be obtained from the property owner prior to the start of any such earth moving operations.
 - C. Sheet piling and Shoring: In caving ground, or in wet, saturated, or flowing materials, the sides of all trenches and excavation shall be adequately sheeted and braced so as to maintain the excavation free from slides or cave-ins and safe for workmen. It shall be the sole responsibility of the Contractor to conform to the requirements of Occupational Safety and Health Act of 1970.
 - 1. Sheet piling and shoring shall not be left in place unless its removal is impractical, as determined by the Architect/Engineer.

- D. Dewatering Excavation: The Contractor shall, commencing sufficiently in advance of excavation, during the excavation period, and as long thereafter as the condition of the work may require, provide and maintain in good operating condition such equipment as may be required to prevent all water from entering any trench excavation. This shall include, but is not limited to: surface water which would drain into the excavation; seepage water which would enter the trench as a result of the excavation and a high ground water level; and the water which could penetrate the trench bottom due to the anticipated piezometric head coupled with the removal of overburden should the Contractor not lower the water table in advance of the excavation. Backfilling operations shall be completed before dewatering operations are suspended. Water removed from the excavation shall be disposed of in such a manner as to prevent damage to adjacent property or to other work under construction. Damage of whatever nature caused by dewatering the work or failure to dewater the work satisfactorily shall be promptly repaired and/or remedied by the Contractor at his own expense.
1. Provision shall be made for the satisfactory disposal of water pumped from excavations so as to prevent damage to public or private property. In all cases, accumulated water in the trench shall be removed before placing embedment, laying pipe, placing any concrete or backfilling.
- E. Subgrade in Earth: Where a firm and stable foundation for the pipe can be obtained in the natural soil and where special embedment is not shown on the plans or specified herein, the bottom of the trench shall be carefully and accurately trimmed to fit the lower portion of the pipe barrel. Bell holes shall be excavated for each joint. The bell holes shall be accurately located and shall be of sufficient width and depth to allow ample room for making the joint and to relieve the pipe bell of all load.
1. Should the excavation be carried below grade, except as herein specifically provided, the Contractor shall, at his own expense, refill it to the proper elevation with gravel or crushed stone, which shall be compacted by tamping until it is firm and unyielding.
- F. Soft Subgrade: If soft or spongy material is encountered in the excavation at subgrade level, after proper dewatering has been performed, it shall be removed, to such a depth that, by replacing the unsuitable material with tamped crushed stone or gravel, a firm and stable foundation can be secured.
- G. Disposal of Excavated Materials: Excavated material shall be piled adjacent to the work to be used for backfilling as required. Where required, desirable topsoil shall be piled separately in a careful manner and replaced in its original position.
1. Excavated material which is unsuitable for backfilling, and excess material, shall be disposed of in a manner approved by the Owner.
- H. Subgrade in Rock: If the bottom of the excavation for the pipeline is found to be in rock or other hard material that cannot be excavated to a true subgrade and shaped to provide uniform bearing for the pipe barrel, the rock or other material shall be removed to a depth not less than three (3") inches below subgrade and the bottom of the trench brought to true subgrade elevation by filling with gravel or suitable rock cuttings and shavings from the excavation and compacting by means of tamping until a firm and uniformly unyielding foundation is obtained.
- I. Damage to Existing Utilities: Where existing utilities are damaged, they shall be replaced immediately with material equal to or better than the existing material. Such work shall be at the entire expense of the Contractor. The Contractor shall immediately notify the Owner of the damaged utility facility.

3.2 BACKFILLING:

- A. Backfilling shall include the refilling and consolidating of the fill in trenches and excavations up to the surrounding ground surface or road grade at crossings. Backfilling shall be done with good earth, sand, or gravel and shall be free from large rocks or hard lumpy material. No material of a perishable, spongy or otherwise unsuitable nature shall be used in backfilling.
- B. After the pipe and embedment have been placed, the method of backfilling pipe trenches shall be as follows: Select material shall first be carefully placed on both sides of the pipe simultaneously in layers of not more than four (4") inches in loose thickness, and these layers shall be firmly compacted by hand or mechanical tamping. The layers of backfill shall be sprinkled lightly with water if additional moisture is required for proper compaction. This process of filling and tamping in layers shall be continued until the backfill is brought up to the level of the pipe spring line. A sufficient amount of selected material shall then be carefully placed over the top of the pipe so that, when consolidated, the level of the select material will be not less than twelve (12") inches above the top of the pipe. Before backfilling the remainder of the trench, the select material shall be consolidated by jetting and flooding or mechanical tamping, at the option of the Contractor, to such an extent as to secure uniform consolidation.
- C. Excavated material which is unsuitable for backfilling and excess material shall be disposed of in a manner approved by the Architect/Engineer.

END OF SECTION 02220

SECTION 02830

VINYL COATED CHAIN LINK FENCING

PART 1 - GENERAL

- 1.1 Drawings, Standard General Conditions of Contract, Supplementary Conditions and Division-1 Specification sections, apply to work of this section.
- 1.2 **WORK INCLUDED:**
- All labor and materials necessary to install all chain link fence and gates as shown on the plans and specified herein.
- 1.3 **SUBMITTALS:**
- A. Furnish shop drawings on all fencing and gates. Submit samples on each component part, including caps, latches, hinges and other required incidentals.
- B. Fabric Test: Submit a manufacturer's certified test results that PVC and zinc wire coatings conform to CLFMI standards.
- 1.4 **REFERENCE:**
- A. Chain Link Fence Manufacturer's Institute (CLFMI) Product Manual, latest edition.
- B. ASTM Standards
1. A-90 Test for Weight of Coating on Zinc-Coated (Galvanized) Iron or Steel Articles
 2. A-370 Mechanical testing of Steel Products
 3. A-569 Specification for Steel, Carbon Hot-Rolled Sheet and Strip, Commercial Quality
 4. B-6 Specification for Zinc Metal (Slab Zinc)
 5. B-117 Specification for Salt Spray Testing of Coatings
 6. D-1499 Recommended Practice for Operating Light-and-Water-Exposure Apparatus (Carbon-Arc type) for Exposure of Plastics
 7. D-1535 Specifying Color by the Munsell System
 8. D-1729 Visual Evaluation of Color Differences of Opaque Materials
 9. D-1735 Specification for Humidity Testing of Coatings
 10. E-8 Tension testing of Metallic Materials
 11. E-376 Measuring Coating Thickness by Magnetic-Field or Eddy-Current Test Methods
 12. F-552 Standard Definitions of Terms Relating to Chain Link Fencing
 13. F-668 Polyvinyl Chloride (PVC)-Coated Steel Chain Link Fence Fabric
 14. F-669 Standard Specification for Strength Requirements of Metal Posts and Rails for Industrial Chain Link Fence

15. G-23 Recommended Practice for Operating Light-and-Water-Exposure Apparatus (Carbon-Arc type) for Exposure of Nonmetallic Materials

16. G-26 Recommended Practice for Operating Light-and-Water-Exposure Apparatus (Xenon-Arc type) for Exposure of Nonmetallic Materials.

C. Federal Standards

1. Fed. Std. No. 123 Marking for Domestic Shipments, Civilian

1.5 QUALITY CONTROL:

The fence installer shall have a minimum of five (5) years experience with vinyl coated chain link fencing as the primary business enterprise and revenue source. Fencing installer shall have completed no less than 20 installations within Dallas, Tarrant and contiguous counties. Fence installer shall have his primary place of business within 100 miles of the project site and shall provide documentation of such.

1.6 PRODUCT HANDLING:

Protect fence fabric and pipe from damage, including scratches, dents and other defects, during storage, handling and installation. Touch up minor scratches and defects in accordance with the manufacturer's instructions. Severely damaged fence materials, as determined solely by the Owner, will be removed and replaced.

PART 2 - PRODUCTS

2.1 GENERAL

- A. All fencing shall be chain link of the overall heights shown on the drawings when erected.
- B. All Fence Products shall conform to the specifications of the CLFMI Product Manual, latest edition.

2.2 FABRIC

- A. CLFMI Class 2B, consisting of Polyvinyl Chloride (PVC) extruded fused coating over zinc coated steel wire. Galvanized steel core wire shall have been coated with zinc by either the hot-dip or electrolytic process. Selvage shall be knuckled on top and bottom edges.

2.3 FITTINGS

All fence post caps, fence fittings, and incidentals shall be galvanized, and PVC or polyester powder coated to match the fence fabric.

2.4 CONCRETE POST FOOTINGS AND EDGING

All concrete used shall be 3,000 psi at 28 days using 5 sacks of cement per cubic yard of mix with a maximum of 7 gallons of water per sack. Concrete work shall conform to Section 03310, Cast-In-Place Concrete.

2.5 TOLERANCE

Standard mil tolerance on all framework members and chain link fabric will apply.

PART 3 - EXECUTION

3.1 INSTALLATION

All fences shall be installed by skilled and experienced fence erectors and on lines and grades as shown on the drawings. All posts shall be set plumb, and as indicated on the drawings. Fence posts shall be set in their concrete footing and allowed to set prior to placement. Top rail shall run with finish grade with no discernable humps, valleys, or bends.

3.2 COORDINATION

The Contractor shall coordinate his work with the concrete subcontractor as to the location of all posts and the timing of post placement. All post footings shall be a minimum of 4" below the finished concrete surface or finish grade, as applicable.

3.3 WELDING

No welding of fence framework is required or permitted.

END OF SECTION 02830

SECTION 02930

TURFGRASS PLANTING

PART 1 - GENERAL

- 1.1 SCOPE: This work includes all labor, materials, and equipment for soil preparation, fertilization, planting, and other requirements regarding turfgrass planting areas shown on the plans.
- 1.2 RELATED WORK SPECIFIED ELSEWHERE:
 - A. Section 02200 - Earthwork
 - B. Section 328400 – Site Irrigation
- 1.3 CODES AND STANDARDS: None in this section.
- 1.4 SUBMITTALS:
 - A. Delivery Receipts and Invoices: All delivery receipts and copies of invoices for materials used for this work shall be subject to checking by the Owner or his representative and shall be subsequently delivered to the office of the Owner.
 - B. Samples and Producers' Specifications: Various samples, certificates, and specifications of seed, fertilizer, sand, compost, other soil amendments, and other materials shall be submitted for approval as required by subsequent sections of this specification.

PART 2 - PRODUCTS

- 2.1 SPORTS FIELD TURFGRASS:
 - A. Sod: Turfgrass sod shall be "Cynodon dactylon x C. transvaalensis germplasm" (Common Sports Field Bermudagrass). Sod shall consist of stolons, leaf blades, rhizomes, and roots with a healthy, virile system of dense, thickly matted roots throughout the soil of the sod for a thickness not less than three-quarters (3/4") inch. Sod shall be alive, healthy, vigorous, free of insects, disease, stones, and undesirable foreign materials and grasses. The grass shall have been mowed prior to sod cutting so that the height of the grass shall not exceed two (2") inches. Sod shall have been produced on growing beds of clay or clay-loam topsoil. Sod shall not be harvested or planted when its moisture condition is so excessively wet or dry that its survival will be affected. All sod is to be harvested, delivered, and planted within a thirty-six (36) hour period of time. Sod shall be protected from exposure to wind, sun, and freezing. If sod is stacked, it shall be kept moist and shall be stacked roots-to-roots and grass-to-grass.
 - 1. Dimensions: All sod shall have been machine cut to uniform soil thickness of one (1") inch plus or minus one-quarter (1/4") inch. All sod shall be of the same thickness. Rectangular sections of sod may vary in length, but all shall be of equal width and of a size that permits the sod to be lifted, handled, and rolled without breaking. Broken pads and torn, uneven ends will be unacceptable.
 - 2. Types of qualified sports rated turfgrass:
 - a. TifTuf 419: Tifway 419 Bermudagrass Turf Grass
 - b. Bermuda 419
 - c. Latitude 36 Bermuda
 - d. Or approved equal

2.2 FERTILIZER:

- A. General: Fertilizer shall be a commercial product, uniform in composition, free flowing, and suitable for application with approved equipment, Fertilizer shall be delivered to the site in fully labeled original containers. Fertilizer which has been exposed to high humidity and moisture has become caked or otherwise damaged making it unsuitable for use will not be acceptable.
- B. Initial Planting Application: Fertilizer for the initial planting application shall be of an organic base containing by weight the following (or other approved) percentages of nutrients: 15-15-15 (N-P-K), also containing 10-15% sulphate and traces of iron and zinc as required and approved by the Owner.
 - 1. Specification Submittal: Submit a sample label or specification of the fertilizer proposed to be used for the Owner's approval.
- C. Post Planting Application: Fertilizer for the post planting application will be a chemical base fertilizer containing by weight the following percentages of nutrients: 21-0-0 (N-P-K) ammonium sulphate or the nitrogen equivalent of 33-0-0 ammonium nitrate.
 - 1. Specification Submittal: Submit a sample label or specification of the fertilizer proposed to be used for the Owner's approval.

2.3 HYDRO-MULCH MATERIALS: (Not required.)**2.4 SOIL AMENDMENTS: (Not required.)****PART 3 - EXECUTION****3.1 GENERAL: All turfing operations are to be executed across the slope, parallel to finished grade contours.****3.2 SOIL PREPARATION:**

- A. Contractor shall kill all vegetation prior to soil preparation.
- B. Tillage: Tillage shall be accomplished to loosen the soil, destroy existing vegetation, and prepare an acceptable seed/sprig/sod bed. All areas shall be tilled with a heavy-duty disc or a chisel-type breaking plow, chisels set not more than ten (10") inches apart. Initial tillage shall be done in a crossing pattern for double coverage, followed by a disc harrow. Depth of tillage shall be five (5") inches. A heavy-duty rototiller may be used for areas to be planted with sod.
- C. Cleaning: Soil shall be further prepared by the removal of debris, building materials, rubbish, weeds, and stones larger than two (2") inches in diameter.
- D. Fine Grading: After tillage and cleaning, all areas to be planted shall be leveled, fine graded, and drag with a weighted spike harrow or float drag. The required result shall be the elimination of ruts, depressions, humps, and objectionable soil clods. This shall be the final soil preparation step to be completed before the commencement of fertilizing and planting.
- E. Rock Removal: During the soil preparation process, a "Rock Pick" or other approved piece of machinery shall be used to gather surface stones as small as three-quarter (3/4") inch in diameter. The Contractor shall be responsible for the disposal of collected materials as waste per "Clean Up" Paragraph 3.9.

3.3 FERTILIZING:

- A. Initial Planting Application: The specified fertilizer shall applied at the rate of (18) pounds per one thousand (1,000) square feet (800 pounds per acre).

1. Timing: The initial planting application of fertilizer for seeded/sprigged areas shall be applied after the soil preparation, but not more than two (2) days prior to turfgrass planting. (Fertilizer shall be applied over sodded areas after planting, but not more than two (2) days later.)
- B. Post Planting Application: Thirty (30) days after planting, turfgrass areas shall receive an application of 21-0-0 or 33-0-0 fertilizer at the rate of nine (9) pounds per one thousand (1,000) square feet (400 pounds per acre).
 1. Timing: The Owner or his representative will determine if it is too late in the growing season for the post planting application. In the event that it is, the application shall be made in the spring of the next year, or the cost of the application may become a credit due to the Owner.
 2. Post Planting Maintenance: See Paragraph 3.6. Areas without a uniform stand (complete coverage) that must be maintained later than thirty (30) days after the initial planting shall receive subsequent applications of fertilizer, as described above, every thirty (30) days until a uniform stand is achieved.

3.4 PLANTING:

- A. Seeding: Following soil preparation and initial fertilizing, apply Bermudagrass seed at the rate of two (2)/three (3) pounds per one thousand (1,000) square feet (90/130 pounds per acre)/ryegrass seed at the rate of eight (8) pounds per one thousand (1,000) square feet (350 pounds per acre). Seed shall be uniformly placed with a Brillion seeder-cultipacker, or the seed shall be broadcast uniformly, followed by rolling with a weighted lawn roller.
 1. Timing: Bermudagrass shall not be seeded in planting periods other than the following unless special permission is granted by the Owner: April 15 to June 15, and August 15 to September 15.
- B. Solid Sodding: Prior to laying the sod, the planting bed shall be raked smooth to true grade and moistened to a depth of four (4") inches, but not to the extent causing puddling. The sod shall be laid smoothly, tightly butted edge to edge, and with staggered joints. The sod shall be pressed firmly into contact with the sod bed by rolling or by hand tamping with an approved tamper so as to eliminate all air pockets, provide a true and even surface, and insure knitting without displacement of the sod or deformation of the surfaces of sodded areas. Following compaction, fine screened soil of good quality shall be used to fill all cracks between sods. Excess soil shall be worked into the grass with suitable equipment and shall be well watered. The quantity of fill soil shall be such that it will cause no smothering of the grass.

- 3.5 PROTECTION: No heavy equipment shall be moved over the planted lawn area unless the soil is again prepared, graded, leveled, and replanted. It will be the responsibility of this Contractor to protect all paving surfaces, curbs, utilities, plant materials, and any other existing improvements from damage. Any damages shall be repaired or replaced at no cost to the Owner. This Contractor will also locate and stake all irrigation heads, valve risers, etc., prior to beginning any soil preparation work.

- 3.6 ESTABLISHMENT AND ACCEPTANCE: Regardless of unseasonable climatic conditions or other adverse conditions affecting planting operations and the growth of the turfgrass, it shall be the sole responsibility of the Contractor to establish a uniform stand of turfgrass as herein specified. When adverse conditions such as drought, cold weather, high winds, excessive precipitation, or other factors prevail to such an extent that satisfactory results are unlikely, the Owner may, at his own discretion, stop any phase of the work until conditions change to favor the establishment of turfgrass.

- 3.7 POST-PLANTING MAINTENANCE: Maintenance shall begin immediately after each portion of grass area is planted. All planted areas will be protected and maintained by watering, weed control, and replanting as necessary for at least thirty (30) days after, initial planting and for as much longer as necessary to establish a UNIFORM STAND WITH COMPLETE COVERAGE OF THE SPECIFIED GRASS. It is anticipated that a minimum of one (1) mowing will occur before the grass areas are accepted by the Owner. Only those areas which are not completely covered with the specified grass at the end of thirty (30) days will continue to be replanted and maintained by the Contractor until complete coverage and acceptance are achieved. The automatic irrigation system will be available for the Contractor's use. Any other water equipment deemed necessary by the Contractor will be provided by the Contractor.
- A. Watering: Use the automatic irrigation system to apply at least one-half (1/2") inch of water over the entire planted area every three days. Contractor shall water thoroughly and infrequently once grass is established to encourage deep root growth.
 - B. Mowing: Once grass is established the planted area shall be mowed at least once a week during the growing season. Grass shall be mowed to a height of one (1") inch. Mowing during dormant season will be done as necessary.
 - C. Weed Control: No sooner than 45 days after grass has germinated any weed growth shall be arrested by applying MSMA broadcasted over the entire planted area. Additional applications of MSMA will be required to eliminate weed growth that continues to grow after the initial application. MSMA will only be used during the growing season. All weed growth during the dormant season will be controlled with spot applications of "Round-Up." "Round- Up" will not be used until the grass is totally dormant.
- 3.8 GRADING: All grading and placing of topsoil on any given area will be done by others prior to the beginning of this Contractor's work in that area. It will be this Contractor's responsibility to maintain the existing grades and leave them in a true and even condition after planting turfgrass. Finish condition of turf grass will be such that sod sits flush with paving (topsoil 1" below paving) and such that drainage grades and swales function and to not trap draining on the paving.
- 3.9 EROSION CONTROL: Throughout the project and the maintenance period for turfgrass, it is the Contractor's responsibility to maintain the topsoil in place at specified grades. Topsoil and turfgrass losses due to erosion will be replaced by the Contractor until establishment and acceptance is achieved.
- 3.10 CLEAN UP: This Contractor shall remove any excess material or debris brought onto the site or unearthed as a result of his turfgrass operations.
- 3.11 GUARANTEE: This Contractor shall guarantee all materials used for this work to be the type, quality, and quantity specified.

END OF SECTION 02930

DIVISION 32 – IRRIGATION

SECTION 328400

SITE IRRIGATION SYSTEM

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes

1. Underground, automatically controlled lawn and shrub bed irrigation system including electrical connections, water main connections, and accessories.

1.2 REFERENCES

A. ASTM International (ASTM)

1. ASTM D2239 - Polyethylene (PE) Plastic Pipe (SIDR-PR) Based on Controlled Inside Diameter.
2. ASTM D2241 - Poly (Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR-Series).
3. ASTM D2564 - Solvent Cement for poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings.
4. ASTM D2609 - Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe.
5. ASTM D2855 - Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings.

B. National Fire Protection Agency (NFPA)

1. NFPA 70 - National Electrical Code (NEC).

C. American Society of Safety Engineers

1. ASSE 1013 - Performance Requirements for Reduced Pressure Principle Backflow Preventers and Reduced Pressure Fire Protection Principle Backflow Preventers.
2. ASSE 1015 - Performance Requirements for Double Check Backflow Prevention Assemblies and Double Check Fire Protection Backflow Prevention Assemblies.

1.3 SUBMITTALS

- A. Submittal process: Submit required submittals within 30 days after contract award. Submittals shall be available at all times to the Construction Manager.

B. Quality Assurance Submittals:

1. Irrigation Contractor Qualifications: Provide minimum of 3 references and list of similar projects with owner's names, addresses, and telephone numbers.

C. Test Reports

D. Closeout Submittals:

1. As-Built Drawings: Furnish two sets, noting exact locations of elements and changes to Construction Drawings.
2. Operation Manual: Furnish two copies, bound in 1 inch diameter three ring binders, indexed and tabbed for easy reference, and labeled on spine and cover. Manual shall include following:
 - a. Approved submittals as specified herein.
 - b. Installation instructions including mounting details for control valves.
 - c. Operating Instructions:
 - 1) Winterization procedures.
 - 2) Recommended operation sequence, frequency, and length of operation cycle, as per relationship to estimated absorption rate, evaporation rate, and anticipated flow.
 - d. Maintenance Instructions:
 - 1) Manufacturers' product data, installation, and maintenance instructions.

- 2) Copies of completed warranty information. Contractor to complete and mail necessary warranty registration information to manufacturer keeping copies for Owner.
3. Controller Chart: Prepare color coded chart reduced in size, mounted on the inside of the controller cabinet, containing same plan information as as-built drawings, and laminated in plastic on both sides, with following specific information:
 - a. Note routing of main line, control wires, and controller location.
 - b. Identify valves as to size, station number shown on controller, and type of irrigation head (e.g. micro spray head, rotary head) for each valve.
 - c. Delineate each station's limits of coverage by color-coding, with each station having different color showing its zone with zone number designation.
 - d. Size, type, and location of water source.
4. Meetings and Inspections Log.
5. Certification of Conformance: Provide certificate of satisfactory performance of irrigation system installation signed by the Contractor and Landscape Architect or irrigation designer for attachment to CEC Conformance Letter included at the end of Section 01456.

1.4 QUALITY ASSURANCE

- A. Contractor Qualifications: Minimum of 3 consecutive years' experience in area of project and having installed other jobs of similar size and scope including drip irrigation.
- B. Pre-Work Meeting and Conference Call: Convene a pre-work meeting and conference call at the Project site prior to commencing subgrade preparation for site paving to review conditions of operations, procedures and coordination with related work. Require attendance of parties directly affecting work of this Section including but not limited to Contractor, irrigation contractor, site work contractor, Landscape Architect, or irrigation designer.
 1. Discuss conditions of Project site.
 2. Review approach and schedule for, but not limited to, the following items:
 - a. Water source.
 - b. Mainline routing and installation.
 - c. Zone installation and site preparation.
 - d. Material availability.
 - e. Controller location and electric connection.
 - f. Sleeve installation, installation of curb and paving markings for sleeve locations and coordination with site work contractor.
 - g. Status of irrigation schedule
 - h. Potential conflicts between irrigation and other site utilities
 - i. Required Inspections.
- C. Meeting and Inspection Log: Maintain log of required meetings and inspections. Record the date; time; weather conditions; and a brief summary of the discussions, decisions, and agreements reached. Landscape Architect or Irrigation Designer will review and sign log at the conclusion of the meeting. Furnish copy of log to each party attending.

1.5 MEETING AND EVENT NOTIFICATIONS

- A. Provide the following notifications to the City within the time period listed below. CEC will notify City, landscape architect or irrigation designer, and other necessary sub consultants:
 1. Pre-Work Conference Call: Minimum 14 calendar days prior to meeting date.
 2. Static Pressure Test: 14 calendar days prior to inspection date.
 3. Mainline Inspection and Hydrostatic Test: 7 calendar days prior to beginning irrigation work.
 4. Substantial Completion Inspection: 7 calendar days prior to irrigation substantial completion.
 5. Final Inspection: 7 calendar days prior to irrigation final inspection date.
 6. Warranty Inspection: 14 calendar days prior to inspection date.
- B. Provide notifications by email or other written means to show proof of delivery.

1.6 PROJECT CONDITIONS

- A. Visit site and become familiar with nature and location of work, existing conditions, and conditions that will exist during installation.

1.7 WARRANTY

- A. Guarantee Site Irrigation System for a period of 12 months following the Substantial Completion Date in accordance with the Extended Maintenance/Warranty Chart as follows:
 - 1. Defects in material, equipment, and workmanship.
 - 2. Repair of damage to premises resulting from leaks or other defects in material, equipment, and workmanship to satisfaction of Owner.

1.8 EXTENDED MAINTENANCE SERVICE

- A. Extended Maintenance for Site Irrigation System is specified in Section 329350 Site Maintenance.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable manufacturers shall include:
 - 1. Rain Bird Corporation Commercial Turf Division, (800) 724-6247
 - 2. Hunter Industries, Inc., (800) 733-2823
 - 3. The Toro Company - Irrigation Division, (888) 384-9939.
 - 4. Netafim USA, (888) 638-2346.
 - 5. Ametek - Armor, (800) 348-7558.
 - 6. Data Industrial, (800) 338-0312.
 - 7. Creative Sensor Technology, (508) 763-8100.
 - 8. Superior Controls Company, Inc, (661)-257-3533.

2.2 PIPE

- A. Polyvinyl Chloride (PVC): Pipe over 1 inch diameter shall conform to ASTM D224, SDR 21, and Class 200.
- B. Polyvinyl Chloride (PVC): Pipe 1 inch diameter and under shall conform to ASTM D2241, SDR 13.5, and Class 315.
- C. Flexible Polyethylene (PE): Pipe shall conform to ASTM D2239, SDR 11.5, PE23, rated at 100 PSI, National Sanitation Foundation (NSF) approved. Subject to approval of Owner, PE shall be used for laterals in areas where ground is subject to freezing for extended periods of time each year.
- D. Joints:
 - 1. Pipe sizes 2 1/2 inch or smaller shall have bell and socket joints.
 - 2. Pipe sizes larger than 2 1/2 inch shall have snap connections with rubber gasket joints. Thrust blocking shall be required in accordance with Section 02510.
- E. Pipe used for reclaimed water shall be appropriate color (purple) and marked as designated for such use.
- F. Fittings:
 - 1. Polyvinyl Chloride (PVC) Fittings: Fittings shall conform to ASTM D2241, Schedule 40, and Molded.
 - 2. Flexible Polyethylene (PE) Lateral Line Fittings: Fittings shall conform to ASTM D2609, Type 1 PVC insert fittings designed for used with this type of pipe. Pipe and fittings shall be joined with stainless steel pinch clamps or worm gear clamps, including stainless steel screw.

- G. Risers above finished grade shall be black in color or receive 2 coats of black exterior semi-gloss enamel paint if a color other than black.

2.3 ACCESSORIES

- A. Sleeves: Sleeves for pipes passing beneath paving shall conform to ASTM D2241, Schedule 40. Minimum diameter of 2 inch or 2 sizes larger than pipe scheduled to pass through them.
- B. PVC Solvent Cement: Cement shall conform to ASTM D2564.
- C. Swing Joint Connections: Connections between heads and laterals shall be thick wall, flexible, polyethylene pipe, with fittings that have male barbs on one end and either male or female screw ends opposite. Glue fittings and female barb adapters are not allowed.

2.4 RECLAIMED WATER PRODUCTS AND MATERIALS

- A. Irrigation products used with reclaimed water shall be the appropriate color (purple) and marked as designated for such use.

2.5 CUTOFF OR ISOLATION VALVES

- A. 3 inches or Smaller: Provide full port brass ball valves with 600 WOG rating as manufactured by Red-White Valve Corporation, Carson, CA or approved equal.
- B. Larger than 3 inches: Provide cast iron and bronze mechanical joint valves, fusion bonded epoxy coated exterior and interior, Resilient Wedge Valve as manufactured by Clow Valve Co., Oskaloosa, IA.
- C. Provide a valve key and cast iron cylindrical valve box with top with each valve.

2.6 QUICK COUPLER VALVES

- A. Provide one of following if shown on the plans:
 - 1. Rain Bird model 44NP Valve with model 44K Key.
 - 2. Hunter model HQ-44LRC with model HK-44 Key.
 - 3. Toro model 100-SLVLC 470 Series Valve and 100-SLK Coupler Key.
- B. Provide each valve with key having 3/4 inch male top pipe threads for hose connection.

2.7 ELECTRIC CONTROL VALVES

- A. Provide one of the following:
 - 1. Rain Bird PEB Series electric remote control valves and X CZ Drip Control Zone Kit.
 - 2. Hunter ICV Series electric remote control valves and ICZ Drip Zone Control Kit.
 - 3. Netafim Control Valve Kit.
 - 4. Toro P220 Series plastic valves and DZK Drip Zone Valve Kit.
- B. Provide 3M DBY watertight connectors.

2.8 SPRINKLER HEADS

- A. Full or Part Circle Pop-Up Fixed Spray Sprinkler:
 - 1. Acceptable Products:
 - a. Rain Bird 1800 Series Sprinklers with Rotary Nozzles including PRS and SAM features.
 - b. Hunter PRS40 with MP Rotators and check valve (CV) feature.
 - c. Toro 570Z PRX Series with MPR Precision Series Spray Nozzles.

- B. Full or Part Circle Pop-up Gear Driven Rotor Sprinkler:
 - 1. Acceptable Products:
 - a. Rain Bird Rotor, 5000 Series plus MPR rotor nozzle with Seal-A-Matic (SAM) check valve.
 - b. Toro Super T5P-COM, with check valve or Toro TR-XTP Series with factory installed check valve, trajectory adjustment, and X Flow Device.
 - c. Hunter PGP and PGJ series pop-up rotors, with check valve.
- C. Pressure Compensating Micro-Spray Nozzles:
 - 1. Acceptable Products:
 - a. Rain Bird Micro Spray.
 - b. Hunter Micro Spray.
 - c. Toro Stream Spray and Stream Bubbler Nozzles with PC.

2.9 LOW VOLUME AND DRIPLINE IRRIGATION

- A. Rain Bird XFS (subsurface installation) drip tubing and components with 0.6 GPH emitter.
- B. Hunter Professional Landscape Dripline with 0.4, 0.6, or 1.0 GPH built-in emitters.
- C. Netafim Techline with 0.4, 0.6, or 0.9 GPH dripper.
- D. Toro Drip-In PC drip tubing with 0.5 or 1.0 GPH emitter. Use only in groundcover and shrub beds with mulch.

2.10 VALVE BOX

- A. Valve boxes shall be manufactured by Ametek, Plymouth Products Division, Sheboygan WI., RainBird Corporation or equal by acceptable manufacturer. No irrigation valve box shall be placed in pavement areas unless otherwise shown on the Drawings.
 - 1. When used with single valve, provide Economy Turf Box or Rain Bird model VB-RND with green colored snap fit cover labeled "Valve Box".
 - 2. When used with 2 or more valves, provide Jumbo Box or Rain Bird model VB-STD with 20 inch x 14 inch cover opening with cover labeled "Control Valve".

2.11 MANUAL DRAIN VALVES

- A. Manual drain valves shall be provided by acceptable manufacturers specified above.

2.12 CONTROL WIRE

- A. Number 14-size minimum copper wire, U. L. approved for underground direct burial.
 - 1. Colored wire shall have same color-coding as shown on controller.
 - 2. Provide single wire from controller to each valve.
 - 3. Provide common neutral from controller to each valve.
 - 4. Provide a minimum of two extra sets of wire, 2 control and 1 neutral, to each end of the main for future use.
 - a. Loop Systems: Provide two spare control wires in each direction to halfway point of loop.

2.13 BACKFLOW PREVENTOR

- A. Comply with requirements and codes of local governing authority regarding backflow prevention.
- B. Provide the necessary materials, insulation/draining capabilities, and insulated fiberglass enclosure, dark green in color.
- C. Backflow preventers shall be type suitable for use in high hazard cross connection to potable water system as manufactured by one of the following manufacturer's: Watts Regulator Company, Febco, or Wilkins.
 - 1. Reduced pressure backflow preventers shall be ASSE # 1013 and labeled accordingly.

2. Double check valve assembly backflow preventers shall be ASSE # 1015 and labeled accordingly.
3. In absence of local codes or requirements, provide double check assembly backflow preventer installed in strict accordance with manufacturer's written instructions.

2.14 METER

- A. Meter and meter box shall conform to requirements of local utility company.

2.15 RAINFALL / FREEZE SENSOR

- A. Rainfall / Freeze Sensor:
 1. Rainbird Wireless Rain/Freeze Sensor
 1. Hunter Wireless Rain/ Freeze Sensor
 2. Irritrol Wireless Rain/Freeze Sensor, Model RFS 1000.

2.16 FLOW SENSOR

- A. Rain Bird Flow Sensor
- B. Hunter Flow Sensor
- C. Data Industrial – Series 735PV or 228PV.
- D. Creative Sensor Technology – Series FSI.

2.17 MASTER VALVE

- A. Rainbird Master Control Valve
- B. Hunter Master Control Valve
- C. Toro Master Control Valve

2.18 AUTOMATIC CONTROLLER

- A. Controller shall have an integral weatherproof, lockable stainless steel or metal pedestal cabinet with internal transformer.
 1. Rainbird Controller
 2. Hunter Controller
 3. Toro Controller

PART 3 - EXECUTION

3.1 PREPARATION

- A. Pressure/Flow Test: Perform calculations according to the Irrigation Association's 3-Step Method. Provide written calculations to the Owner's CEC including the following site information:
 1. Static or residual pressure at the POC.
 2. Calculation of pressure for "worst case" sprinkler head.
 3. Calculation of GPM per zone.
- B. Prior to installation, receive approval from General Contractor to proceed with construction.
- C. Contractor shall field verify all aboveground and underground utilities prior to start of work.

3.2 EXCAVATION

A. Trenching and Backfilling:

1. Trenches shall be made wide enough to allow a minimum of 6" between parallel pipe lines. Trenches for pipe lines shall be made of sufficient depths to provide the minimum coverage from finish grade as follows:
 - a. 24" minimum below bottom pavement
 - b. Minimum cover over irrigation lines to heads/dripline except vehicle traffic areas are as follows:
 - 1) 12" cover over laterals
 - 2) 18" cover over mainline
2. Minimum trench width shall be 3 1/2 inches.
3. Maintain all warning signs, showing, barricades, flares and red lanterns as required by the safety orders of the division of industrial safety and local ordinances.
4. Over excavate trenches deeper than required in soils containing rock or other hard material that might damage pipe and backfill to proper depth with selected fine earth or sand.
5. Backfill and hand tamp over excavation prior to installing piping.
6. Keep trenches free of obstructions and debris that would damage pipe.
7. Irrigation piping shall not be installed in same trench as heating duct, electric ducts, storm and sanitary sewer lines, water and gas mains.

B. Do not cut sidewalks, paved areas, or curb and gutter when trenching for piping unless otherwise noted on the Drawings.

1. Provide sleeves as specified in Part 2 above under paving prior to installation of paving.
2. Auger, bore, or tunnel under existing paving without disturbing pavement. Damaged pavement shall be removed and replaced.

3.3 WATER METER

- A. Provide water meter box for irrigation system if required or shown on the Drawings.

3.4 PIPING INSTALLATION

A. Minimum cover from top of piping to finished grade shall be provided as follows:

1. Lawn and planting areas:
 - a. Mains and Control Valves: 18 inches.
 - b. Laterals: 12 inches.
2. Drives or parking areas: 24 inches.

B. Clearances: Maintain 3 inch minimum horizontal clearance between parallel lines in same trench or vertical clearance between lines crossing at angles.

C. Special Requirements - PVC and PE pipe:

1. Snake pipe in trench at least 1 foot per 100 feet of pipe to allow for thermal expansion.
2. Pipe laterals shall be laid to drain to low point drains located at lowest elevations of each zone.

D. Rest full length of pipe section on bed of trench, excavating recesses to accommodate joints. Do not lay pipe on unstable material or blocking, or when in opinion of Owner conditions are unsuitable.

E. Threaded Plastic Pipe Jointing:

1. Do not use solvent cement on threaded joints.
2. Wrap joints with Teflon tape or use virgin Teflon lubricant.

F. Bell and Socket Plastic Pipe Jointing: Cement joints in accordance with ASTM D2855.

3.5 QUICK COUPLER AND AUTOMATIC LOW POINT DRAIN VALVES

- A. Provide quick coupler valves as shown on the drawings to accommodate winterization.

- B. Provide automatic low point drain valves on all zones. Provide two valves at lowest point of each zone with each drain installed above a 12 inch by 12 inch by 12 inch deep area of coarse washed gravel.

3.6 SLEEVING

- A. Provide sleeves for both piping and control wiring where either passes under paved surfaces.
 - 1. Depths of sleeves shall be same as that required for piping at each location or condition.
 - 2. Extend sleeves 12 inches beyond paving at each end.
 - 3. Install permanent benchmark at top of curbs for reference to sleeve locations.

3.7 VALVES

- A. Do not locate beneath paved surfaces.
- B. Install plumb to within 1/16 inch.
- C. Locate within valve box with 6 inch deep layer of coarse gravel beneath bottom of valve.
- D. Top of quick coupler valves shall be 6 inches to top of valve box. Top of gravel layer shall be 3 inches below top of valve.
- E. Master Valve (if required on the Drawings):
 - 1. Locate immediately behind backflow preventer.
 - 2. Valve shall be energized by master valve circuit on automatic controller.

3.8 SPRINKLERS

- A. Install plumb to within 1/16 inch with top collar, not nozzle, flush with finish grade.
- B. Provide swing joint with each sprinkler except where entire head is raised above grade and/or where rigid riser piping is required.
- C. Heads adjacent to paving and curb: Locate between 6 and 12 inches from edge of paving or back of curb to prevent car overhang to conflict with a fully extended sprinkler.

3.9 ELECTRICAL CONNECTIONS AND CONTROL WIRE

- A. Conform to the National Electrical Code (NEC) and local electrical codes.
- B. Provide electrical connection to system as designated on the Drawings and as specified herein.
- C. Wire Placement:
 - 1. Do not run control and power supply wiring in same conduit.
 - 2. Provide continuous runs of wire between controller and valves. Splices shall be made with one of following:
 - a. Watertight below ground electrical junction boxes.
 - b. Water-tight connectors, such as utilized for valves, and located within valve box for ease of locating.
 - c. The location of electrical splices shall be shown on the As-Built drawings.
 - 3. Bury control wire beside pipe in same trench. Bundle and tape together at not more than 10 ft intervals.
- D. Expansion Loops: Construct by wrapping wire around 1/2 inch diameter pipe to create coil. A 3 foot section of wire shall be used to create 12 inch coil with 6 foot section being used to create 24 inch coil.
 - 1. Provide 12 inch coils at each wire splice, not including valves, and at each change of wire direction.
 - 2. Provide 24 inch coils at each control valve and where each valve enters conduit for automatic controller.

3.10 BACKFILLING

- A. Sand or fine-grained soils shall be used for initial backfill to sufficient depth to prevent damage to pipe from rocks or other debris during compaction of subsequent backfill.
- B. Fill trench to within 3 inches of finish grade with excavated soil and compact in accordance with Section 02300.
- C. Fill top 3 inches with existing topsoil in planting or turf areas and wheel roll until compaction of backfill is same as surrounding soil.
- D. Grade backfilled trench uniform with surrounding grades and in a manner approved by the owner.

3.11 BACKFLOW PREVENTOR

- A. Comply with local codes for installation of backflow preventer. In absence of local codes, install in accordance with manufacturer's written instructions.

3.12 RAINFALL / FREEZE SENSOR

- A. Location and installation shall be as shown on the Drawings and per manufacturer's written recommendations.

3.13 FLOW SENSOR

- A. Location and installation shall be as shown on the Drawings and per manufacturer's written recommendations.

3.14 MASTER VALVE

- A. Location and installation shall be as shown on the Drawings and per manufacturer's written recommendations.
 - 1. Master valve normal operating position shall be open and shall be electronically actuated.

3.15 AUTOMATIC CONTROLLER

- A. Location and installation shall be as shown on the Drawings and approved by Owner prior to installation.
- B. Install rigid conduits for both power supply and control wiring.
 - 1. Control wire conduit shall extend to 18 inches below grade.
 - 2. Pull spare wires for future valves and extend to area outside paved surfaces.
- C. Install electrical grounding for controller in accordance with manufacturer's written instructions.

3.16 FIELD QUALITY CONTROL

- A. Irrigation Inspections: Conduct the following inspections during the course of the work in the presence of the Landscape Architect or irrigation designer to verify conformance to specification requirements. Notify CEC for observation of inspection by the Landscape Architect or irrigation designer. Correct noted deficiencies during each inspection prior to proceeding with subsequent work. After each inspection complete Irrigation Inspection Checklist included at the end of this Section signed by all signifiers listed thereon.
 - 1. Mainline Inspection: Inspect the installed main line, electronic control valves, wiring prior to backfilling main line.
 - 2. Substantial Completion Inspection: Inspect all completed irrigation work. Landscape Architect or irrigation designer will develop a punch list of deficient or incomplete items and deliver to Contractor within 3 calendar days of inspection date.
 - 3. Final Inspection: Within 30 days of project substantial completion date and subsequent to correction of punch list deficiencies, convene a final inspection of all irrigation work.
 - 4. Warranty Inspections: Convene a warranty inspection 30 calendar days prior to expiration of warranty period specified in Part 3 of Section 02900.

- B. Inspection and Adjustments: Following installation and prior to Substantial Completion Inspection, make final adjustments to site irrigation including but not limited to the following:
1. Flush system completely, with nozzles and screens removed and drip lines ends open to extract debris.
 2. Verify sprinkler operation and alignment for direction of throw. Correct as necessary.
 3. Check pop-up rotor/rotator nozzling for proper arc of spray with no overthrow onto pavement. Adjust nozzles as necessary for proper throw and matched precipitation rate.
 4. Ensure uniform distribution exists.
 5. Ensure proper irrigation head operational after landscaping and/or sod installation.
- C. Main Line Inspection and Hydrostatic Tests:
1. Owner's Landscape Architect or Irrigation Designer will observe testing.
 2. Center load piping with small amount of backfill to prevent arching or slipping under pressure.
 3. Install risers and caps on mainline and sub-main lines. Apply continuous and static water pressure of 75 psi for a minimum of 3 hours when welded plastic joints have cured at least 3 hours.
 4. Allowable Leakage:
 - a. Utilize the following formula to calculate the allowable leakage for O-ring gasket pipe.
$$L = \frac{SD(P)^{0.5}}{133,200}$$
In which: L=Allowable leakage in gallons per hour
S=Length of pipe tested in feet
D=Pipe diameter in inches
P=Average test pressure in PSI gauge
 - b. No allowable leakage shall be acceptable with solvent based mainline system.
 5. Repair leaks and retest.

3.17 CLOSEOUT ACTIVITIES.

- A. Demonstration: Following final adjustment, operate entire irrigation installation to demonstrate complete and successful operation of equipment.

END OF SECTION