

CONTRACT DOCUMENTS

For the Construction of:

2023 Manhole Grouting Project

Bid Opening: January 12, 2023

PROJECT #: WW2022-010

CITY OF SANDY
PUBLIC WORKS DEPARTMENT
39250 Pioneer Blvd
SANDY, OR 97055
(503) 668-5533

INTRODUCTION

The Contract Documents are prepared in parts as listed below. For the purpose of this contract, the Bid Booklet is defined as Parts I, II, III, IV, and V. Plans may be attached or bound separately. The specifications that are applicable to the work on the project are the Oregon Standard Specifications for Construction, 2021 edition (by reference only – not included in this document). Are bound separately and available by contacting the Project Manager. Part V may be attached or bound separately. All Parts bound separately are incorporated into the Contract Documents with the same force and effect as though set forth in full.

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Should addend to the Contract Documents become necessary, they will be issued via email prior to the date of receiving bids and shall be deemed a part of Part I.

NOTICE TO CONTRACTORS

2023 Manhole Grouting Project

Sealed bids for the **2023 Manhole Grouting Project** will be received at the front desk in the main lobby of Sandy City Hall, 39250 Pioneer Blvd,, Sandy,Oregon 97055, addressed to AJ THORNE, until **THURSDAY**, **January 12**, **AT 4:00 PM** local time. Late bids will be retained unopened. The bids will be publicly opened immediately thereafter VIRTUALLY VIA ZOOM. The Engineer's Estimate for this project is \$420,000.

The character of the work is CHEMICAL INJECTION GROUTING OF MANHOLES TO SEAL I&I LEAKS. The major quantities of work involved in this project are:

QUANTITY	MEASUREMENT	ITEM
343	EA	Chemical grouting of manholes
22	EA	Chemical grouting of manholes - High Flow Offroad
34	EA	Manhole Base repair

The Project Manager for this project is AJ THORNE, ENGINEER II, Public Works Department 503-618-2190, AJThorne@CityofSandy.com.

The project completion date is June 30, 2023.

Contract terms, conditions and specifications may be reviewed at the office of the Public Works Department at Sandy City Hall. Copies may be obtained from the Public Works Department electronically by email. Please contact Rebecca Markham Rmarkham@CityofSandy.com. The apparent low bidder will be required to have a copy of the applicable edition of the Oregon Standard Specifications for Construction, 2021 edition.

This project is for public work and is subject to ORS 279C.800 to 279C.870, the Oregon Prevailing Wage Law. To see full contract terms, please email <u>aithorne@cityofsandy.com</u> or visit the City's website and search for contract terms. This project is funded by ARPA grant funding. Please see Part IV of this document for additional requirements for this project.

All bids must be submitted on the forms furnished by the City of Sandy, mailed or delivered in a sealed envelope plainly marked "SEALED BID for 2023 Manhole Grouting Project" and bearing the name and address of the bidder. The bid must be accompanied by a certified check, cashier's check or bid bond in an amount not less than ten percent (10%) of the total bid.

The City of Sandy requires all Contractors to comply with equal opportunity policies. The City's programs, services, employment opportunities, volunteer positions and contracts are open to all persons without regard to race, religion, color, national origin, sex, age, marital status, disability, or political affiliation.

DATE ADVERTISED: December 19, 2022

PART I - BID OFFER DOCUMENTS

Part I Contains:

- (A) Offer
- (B) Schedule of Prices
- (C)First-Tier Subcontractor Disclosure Form
- (D) Bidders Good Faith Efforts Certification
- (E) Addenda

Bid offer must include Bid Security (certified check, cashier's check or bid bond in an amount not less than ten percent (10%) of the total bid).

(A) OFFER

2023 Manhole Grouting Project

TO FURNISH ALL PERMITS, MATERIALS, LABOR, TOOLS, EQUIPMENT AND SERVICES REQUIRED FOR THE CONSTRUCTION OF THIS PROJECT FOR THE CITY OF Sandy, MULTNOMAH COUNTY, OREGON, AS STATED IN THE COMPLETED SCHEDULE OF PRICES, ALL IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, PLANS, SPECIFICATIONS, AND DRAWINGS WHICH ARE ON FILE AT THE CITY OF SANDY, PUBLIC WORKS DEPARTMENT, 39250 PIONEER BLVD, SANDY, OREGON 97055.

NAME OF BIDDER			
CONTACT			
ADDRESS			
CITY	STA	ATE	ZIP
TELEPHONE NO.			
FAX NO.			
EMAIL ADDRESS			

To the Honorable Mayor and City Council 39250 Pioneer Blvd Sandy, Oregon 97055

This Offer and Schedule of Prices is submitted as an offer by the Bidder to enter into a contract with the City of Sandy for furnishings all permits, materials, labor, tools, equipment and services of all kinds required for the construction of this Project for the City of Sandy, Oregon, as shown in the contract documents on file at the Public Works Department, 39250 Pioneer Blvd, Sandy, Oregon, and which are incorporated into this Offer as though they were attached. This Offer is subject to the following declarations as to the acts, intentions and understandings of the Bidder.

- All of the contract documents, plans, specifications, drawings, and applicable laws have been examined by the Bidder and their terms and conditions are hereby accepted. Bidder understands that the apparent low bidder for this project will be required to have a copy of the Oregon Standard Specifications for Construction, 2021
- 2. It is understood that the contract documents may be supplemented by additional drawings and specifications in explanation and elaboration thereof and, if they are not in conflict with those referred to in paragraph 1 above, they shall have the same force and effects as though they were attached and be accepted as part of the contract documents when issued.
- 3. The quantities in the SCHEDULE OF PRICES are approximate only and payment will be made for the actual quantities incorporated in the completed work at the unit prices

stated.

- 4. Bidder agrees to furnish labor, materials, equipment and services of all kinds to construct this Project as required by the contract documents for the unit or lump sum prices in the SCHEDULE OF PRICES. Items in the SCHEDULE OF PRICES have been completed in full by showing a unit or lump sum price or prices for each and every item thereof.
- 5. Bidder submits the unit prices as those at which Bidder will perform the work involved. The extensions of the column headed "ITEM TOTAL" are made for the sole purpose of facilitating bid comparisons and if there are any discrepancies between the unit prices and the total amount shown, the unit prices shall govern.
- 6. The prices stated include all materials and work required to complete the contract in accordance with the plans and specifications. If any material, item or service required by the plans and specifications has not been mentioned specifically in the SCHEDULE OF PRICES, the same shall be furnished and placed with the understanding that the full cost has been merged with the several prices stated in the SCHEDULE OF PRICES.
- 7. If there is an increase in the total payment for an item covered by a lump sum price, it shall be computed on the basis of extra work for which an increase in payment will have been earned. If there is a decrease in a lump sum payment for any such items, it shall be made only as the result of negotiation between the Bidder and the City of Sandy.
- 8. Bidder shall complete this Project by the date stated in the Contract.
- Bidder shall comply with the laws of the State of Oregon which are pertinent to public improvement contracts even though such laws may not be quoted or referred to in the contract documents. Pursuant to ORS 305.385(6), Bidder certifies that it is not in violation of Oregon tax laws.
- 10. Bidder shall furnish separate performance bond and payment bond as required by the contract documents.
- 11. Bidder is covered by liability and other insurance as required by the contract documents and, related to workers' compensation, is a carrier-insured employer or a self-insured employer under ORS 656.407 or has elected coverage under ORS 656.128.
- 12. Bidder agrees to comply with the provisions of ORS 279C.840 relating to prevailing wages.
- 13. Bidder is registered with the Oregon Construction Contractors Board and the bidder's registration number is stated below. The Bidder agrees to comply with ORS 279C.836 relating to filing a Public Works Bond with the Construction Contractors Board. Bidder certifies that all subcontractors performing work on this public improvement contract will be registered with the Construction Contractors Board or licensed by the State Landscape Contractors Board in accordance with ORS 701.035 to 701.055 before the subcontractors commence work under this contract.
- 14. The Bidder certifies that the Bidder has not discriminated and will not discriminate against a subcontractor in the awarding of a subcontract because the subcontractor is a

- minority, woman or emerging small business enterprise or a business enterprise that is owned or controlled by or that employs a disabled veteran.
- 15. Bidder has not directly or indirectly induced or solicited any person to submit a false or sham bid or refrain from bidding. Bidder certifies that this bid has been arrived at independently and submitted without collusion designed to limit competition.
- 16. The City of Sandy may waive minor informalities, reject any bid not in compliance with all prescribed public bidding procedures and requirements, and may reject for good cause any or all bids upon a finding that it is in the public interest to do so.
- 17. Pursuant to ORS 279A.120, for the purpose of awarding the contract, the City of Sandy shall add a percent increase on the bid of a non-resident bidder equal to the percent, if any, of the preference given to that bidder in the state in which the bidder resides. "Resident bidder" of Oregon means a bidder that has paid unemployment taxes or income taxes in this state during the 12 calendar months immediately preceding submission of the bid, has a business address in this state and has stated in the Offer that the bidder is a "resident bidder" of the State of Oregon.
- 18. Pursuant to ORS 279C.505(2), the bidder certifies that the bidder has an employee drug testing program in place, and will maintain such program for the entire period of this contract. Failure to maintain such program shall constitute a material breach of contract.

BIDDER INFORMATION AND SIGNATURE
NAME OF BIDDER
BIDDER ACKNOWLEDGES THAT ADDENDUM NUMBER THROUGH HAS BEEN RECEIVED AND CONSIDERED AS PART OF THE SUBMITTAL OF THIS OFFER AND SCHEDULE OF PRICES.
BIDDER IS A RESIDENT OF THE STATE OF
CONSTRUCTION CONTRACTORS BOARD LICENSE NO.
SIGNATURE OF BIDDER'S AUTHORIZED REPRESENTATIVE
OFFICIAL TITLE OF BIDDER'S AUTHORIZED REPRESENTATIVE
DATE BID IS SIGNED

(B) SCHEDULE OF PRICES

2023 Manhole Grouting Project

		Schedule of P	rices For:	December, XX	
	2023 Manhole Grouting Project		outing Project	t 2022	
Description	Units	Quantity	Unit Price	Total	
Mobilization	LS	1			
Chemical grouting of manholes	EA	343			
Chemical grouting of manholes - High					
Flow Offroad	EA	22			
Manhole Base repair	EA	34			
Traffic control and flagging	LS	1			
			Total:		
The following base bid of				dolla	
(\$) is proposed f	or this r	roiect as des	scribed in the C	ontract Documents.	

(C) FIRST-TIER SUBCONTRACTOR DISCLOSURE FORM

2023 Manhole Grouting Project

Person designated to receive for	rm: AJ THORNE	Phone #: 503-4	189-2162	
Bid Closing Date: January 12, 20	023 Bid Clo	osing Time: 4:00) \square AM	⊠ PM
If the bid is more than \$100,00 Invitation to Bid on the advertise advertised bid closing time.				
List below the Name, Dollar Va furnishing labor or labor and mat subcontract and the category of there are no subcontractors that	terials and that is requi work that the subcontr	red to be disclos	sed, the do	llar value of the
SUBCONTRACTOR NAME	DOLLAR VALI	JE C	ATEGORY	OF WORK
ATTAC	 CH ADDITIONAL SHEE	ETS IF NEEDED).	
The above listed first-tier subcor Dollar Value equal to or greater	` , .	g labor or labor	and materi	als with a
	ontract Price, but at lea ss than \$15,000 do not			
b.) \$350,000 regardle	ess of the percentage	of the total Cont	ract Price.	
Failure to submit this form by nonresponsive bid will not be co TO SUBMIT THIS DISCLOSURI	nsidered for award. IT	IS THE RESPO	NSIBILIT	Y OF BIDDERS
Pu	THORNE, Assistant P Iblic Works Departmen 250 Pioneer Blvd, San	t	ector	
	NE, Assistant Public W Ocityofsandy.com	orks Director		
Form Submitted by (Bidder's Na	me):			
Contractor's Name:				
Contractor's Signature:				

(D) ADDENDA

If addenda are issued, they shall be bound to this document under this section.				

PART II - DOCUMENTS TO BE SUBMITTED UPON EXECUTION OF THE CONTRACT

The following documents must be filled out by the Contractor who is awarded the contract. The signed contract documents must include the following:

- (A) Capital Improvement Project Agreement
- (B) Contract Retention Preference Form

In addition, the Contractor must submit:

- Performance Bond
- Payment Bond
- Required Insurance Certificates
- · Certification of Worker's Compensation Coverage

The City of Sandy does not provide forms for the Performance Bond, Payment Bond or insurance certificates. Please contact your insurance or bonding agent to arrange for these documents. The bond forms and insurance certificates are subject to approval by the City Attorney's Office.



(A) CAPITAL IMPROVEMENT PROJECT AGREEMENT

PROJECT NO WW2022-010

THIS AGREEMENT is made and entered into on the last date set forth below by and between the City of Sandy, 39250 Pioneer Blvd, Sandy, Oregon 97055, hereinafter called the "OWNER" and

(Official name, form of organization, and address of Contractor; if partnership, name of partner.)

hereinafter called "CONTRACTOR." Pursuant to a published Notice to Contractors, CONTRACTOR filed with OWNER an Offer and Schedule of Prices containing an offer to perform the work described below and OWNER has determined that the CONTRACTOR is the lowest responsible bidder. IT IS AGREED: First: CONTRACTOR shall comply with the requirements of the Contract Documents for: (Official title of the project) Second: In consideration of CONTRACTOR'S compliance with this AGREEMENT, OWNER shall pay to CONTRACTOR, at the times and in the manner provided by this AGREEMENT, the total sum of (The basic Contract price, both in words and figures.) which sum is subject to increase or decrease as the quantities named in the Offer and Schedule of Prices are changed as provided in this AGREEMENT. **Third:** The work shall be completed by: 100 Days (The number of days, the limiting date, or other provisions that are consistent with the Offer and Schedule of Prices) Fourth: The Contract Documents that are made a part of this AGREEMENT by actual attachment or by this reference are: The Notice to Contractors, being the invitation to submit a bid or Offer and Schedule of Prices, 1. The Bid Booklet for the project named above by title, including the Project Special Provisions,

Additional Requirements, and Special Specifications, together with those that may be issued as

Oregon Standard Specifications for Construction, 2021 edition (by reference only - not included in

The Bid or Offer and Schedule of Prices of the CONTRACTOR that was submitted on

PROJECT NO: WW2022-010
PROJECT: 2023 Manhole Grouting Project

supplements thereof,

this document)

3.

4.

Capital Improvement Project Contract PAGE: 10

CONTRACTOR DATA, CERTIFICATION, AND SIGNATURE

Business Nar	ne (please print):			
Contact Name	e:	Phone:		Fax:
Address:				
Sandy Busine	ess License #:			-
Federal Tax I	D #:	State Tax	ID #:	
Construction	Contractors Board #:			
Please Select	t One: ☐ Citizen	☐ Non-Resident Alien	 □ Lawful Perma	nent Resident
Business Des	signation (check one):	☐ Individual ☐	Sole Proprietorship	☐ Partnership
		☐ Corporation ☐ G	overnment/Nonprofit	□LLC
to the Internal I 1099 for additi could subject y I, the undersig agree to perfor under penalty	Revenue Service (IRS) used instructions regard four to 31 percent backupered, understand that do rm the work described in the form the work described in the tentractor as defined and the tentractor:	cuments referred to aboun accordance with the teleness am not/is not in violed in ORS 670.600.	yer I.D. number provi s.) Information not not ye are an integral parms and conditions of ation of any Oregon	ded above. (See IRS natching IRS records rt of this contract and f this contract; certify
	Signature/T ONTRACTOR: This co e City Manager or desig	ntract does not bind the	Date City of Sandy unless	and until it has been
	CIT	Y OF SANDY SIGNAT	URES	
Approved:	City Manager or Des	ignee	Date	
Approved:	Project Manager		Date	
Reviewed:	City Attorney or Desi	anee	Date	



(B) CONTRACT RETENTION PREFERENCE FORM

FO	R: CON	ITRACTOR
		PROJECT
Contra	ctors ha	FRACTOR: Ive the following options regarding public contract retention monies. Each Contractor must the following methods of handling retention:
[]	1.	The City will hold all retention in the City's bank account and will disburse the money directly to the Contractor upon final acceptance of the project. No fee is charged for
[]	2.	this option. The City will establish and maintain an interest-bearing account in a bank, savings bank, trust company or savings association in the City's name, bearing the current interest rate. The City will deposit retention upon each progress payment, and all interest earned will be in favor of the Contractor. No monies will be released from this
[]	3.	account until final acceptance of the project. The fee for this option is \$300. The Contractor will deposit securities that are negotiable by the City with the City's bank, to be held in lieu of any retention. The face value of these negotiable properties will equal or exceed the anticipated total amount of retention if option 1 or 2 were chosen. This deposit must be made before any progress payments will be made on the contract. All securities deposited will be returned to the Contractor upon final
[]	4.	acceptance of the project. The fee for this option is \$50. For projects over \$500,000, City shall place amounts deducted as retainage into an interest-bearing escrow account. Interest on the retainage amount accrues from the date the payment request is approved until the date the retainage is paid to the
[]	5.	contractor to which it is due. No fee is charged for this option. The Contractor chooses to deposit a surety bond in an amount that will equal or exceed the anticipated total amount of retention if option 1 or 2 were chosen. The bond is subject to approval by the City and Contractor must comply with ORS 279C.560(7) at all times. The bond must be submitted before any progress payments will be made on the contract. The bond will be released upon final acceptance of the project. No fee is charged for this option.
the box	xes abov	all remain in effect for the life of the project. Please indicate your choice by marking one of we and have an authorized representative sign below. Any fee is due 30 days from the date signed or before any progress payments will be made on the contract, whichever is first.
		rs additional costs as a result of the exercise of any of these options for retainage, ecover such costs by reduction of the final payment.
No pro	ogress p	payments shall be made until this form is returned to the Project Manager.
Signe	d	
Date _	· · · · · · · · · · · · · · · · · · ·	Print Name

PART III - PROJECT SPECIAL PROVISIONS

The following are additions or revisions to the Public Works Standards, Construction Standard Specifications Section.

SP-1 SECTION 106.05 CONTRACT TIME

Add section 106.05(C):

C. All construction is to be completed 120 Calendar days after notice to proceed, but no later than June 30, 2023

SP-2 SECTION 106.08 CONTRACT INCENTIVE AND LIQUIDATED DAMAGES Add section 106.08(E):

E. Pursuant to PWS Subsection 106.08(B), the genuine pre-estimation of the damages expected because of a delay in the completion of this project is \$100 per calendar day. These liquidated damages apply to any deadline specified in 106.05(C) above.

SP-3 SECTION 00700 GENERAL CONDITIONS

SECTION 00700

(00 72 00)

GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

USE NOTES

The following text highlights the latest changes to Section 00700 General Conditions. Division 0 and 1 Guide Specifications incorporate the updated changes and cross references to Section 00700.

Article 1: Definitions

1.2: "Contract Documents" do not include the bid. Transfer the numbers from the bid to the Agreement Form 00500.

Article 4: Bonds and Insurance

- 4.1: **Performance and Payment Bonds.** The length of time for each bond to remain in effect has changed and should be reviewed by counsel for the Client. The Surety for each bond must be on the U.S. Treasury's Circular 570, which is accessible on the Internet. The Client should verify each surety is acceptable.
- 4.3: **Insurance Requirements.** These requirements are new, detailed and extensive. They are important protection for the Client. Specific ISO (Insurance Services Office) Endorsement forms are required. Newer versions are not acceptable as they often limit the extent of coverage.

4.4: **Certificates of Insurance.** Certificates of Insurance and endorsements to the Contractor's policies are required to be provided to the Owner and Engineer before the work begins and along with the Application for Final Payment.

Article 5 - Contractor

Contractor's Construction Schedule

- 5.16: Detailed CPM schedules are required.
- 5.17: Float has been allocated in the Agreement. The Contractor waives all claims for compensation due to delays, interference or acceleration. The Contractor is entitled only to an extension of time of the contract. Counsel for the Owner should review this provision because many states limit its enforceability.
- 5.32: **Indemnification**. This changed provision provides more protection to the Owner and it's consultants than the prior provision.
- **5.36:** Escrowed Bid Documents. The Owner should consider whether to require bid documents to be escrowed. If not, 5.36-5.39 may be deleted by using the Supplementary Conditions.

Article 7 Administration of the Contract

7.8: **Requests for Information (RFI) and Responses:** This is a new form, GC-1 that the contractor must use to request information and we should use to respond. We no longer use "clarifications" as a response to a RFI because in most instances there is not an ambiguity in the documents, just an inability of the Contractor to find the answer.

Article 8 - Submittals

- 8.3: Proposed Equivalent Form, GC-3 must be used by the Contractor as it contains a number of certifications and specific information that we must rely upon in considering the request.
- 8.8: **Intent of Contractor's Review:** Submittals must be on the Submittal Form, GC-2, as it contains a number of certifications.

Article 9 – Changes in the Work

9.4: **Change Orders.** This provision has been modified to include a waiver of known and **unknown claims** by the **OWNER** and Contractor, unless expressly reserved. The reservation should be on the Change Order. This should help to limit the Contractor's further requests for time or money after the Change Order has been executed.

Article 10 – Claims and Disputes

10.6: **Mediation.** Should direct negotiations not resolve a dispute, controversy or claim, then Mediation is the next step before a lawsuit or arbitration.

Article 13 - Payment and Completion

- 13.1: **Schedule of Values.** This submittal form is left to the discretion of the Engineer, but should be detailed enough to evaluate Applications for Payment which should use the same schedules and values (but not the same form).
- 13.2: **Application for Payment.** The Form, GC-4 and the timing has changed. The Form should be used as it contains certifications by the Contractor and a Recommendation (not a certification) by the Engineer. GC-4 is a Microsoft Excel Template.

- 13.4: **Engineer's Recommendation for Payment.** We do not certify Applications, we make recommendations to Owners. Owners may withhold additional amounts based upon legal, insurance or other considerations. The timing has changed for issuance of our recommendations.
- 13.9: **Contractor's List of Deficiencies:** Previously known as a Punch List, the Contractor now prepares it and we review and modify it as necessary. The sequence of its preparation, our Semi-Final Inspection, and Final Inspection has been modified and is important. These provisions place upon the Contractor the responsibility to determine substantial completion before we go to the site, otherwise the Contractor will pay for our unnecessary site visits.

SECTION 00700

GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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SECTION 00700 GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1 - DEFINITIONS

- 1.1 The term "Contract" refers to a single identified portion of the construction which may be the whole or a part of the Project. The Project is the total construction and consists of one or more Contracts performed by the same or separate contractors or by the Owner. A single set of drawings, specifications and contract conditions may include more than one Contract; when combined with the Agreement for an individual Contract they become the Contract Documents for that Contract. The construction performed under a set of Contract Documents is the Work required by an individual Contract.
- 1.2 The "Contract Documents" consist of the Agreement, General and Supplementary Conditions, Drawings, Specifications, Addenda issued prior to executing the Agreement and modifications issued after executing the Agreement.
- 1.3 The term "Contract Price" refers to the total monies payable to the Contractor for completion of the Work in accordance with the Contract Documents.
- 1.4 The term "Design Engineer" refers to the firm that prepared the Contract Documents IF APPLICABLE and includes all of their officers, directors, shareholders, employees and consultants.
- 1.5 The term "Drawings" refers to the graphic and pictorial portion of the Contract Documents, showing the design, location, dimensions, details, scope and character of the Work. Drawings may include plans, elevations, sections, schedules, details and diagrams.

The terms Plans, Plan, Drawing and similar terms shall have the same meaning as the term "Drawings."

- 1.6 The term "Engineer" refers to the person or entity designated by the Owner to provide administration of the Contract.
- 1.7 The term "Notice to Proceed" refers to a written notice by the Owner to the Contractor authorizing it to proceed with the Work and establishing the date of commencement from which the Contract Time is measured.
- 1.8 The term "Owner" is the person or entity referred to in the Agreement and includes all of its officers, employees, and consultants.
- 1.9 The term "Work" means the entire construction required by the Contract Documents completed or in progress and includes all labor, materials, equipment and services necessary to fulfill the Contractor's obligations. The Work does not include the Contractor's tools, equipment, scaffolding, shoring, barricades, guardrails or any other temporary construction or safety devices employed by the Contractor to complete the Work.
- 1.10 Definitions of other terms are included at the beginning of each Article or in Division 1 Section 01010.

ARTICLE 2 - CONTRACT DOCUMENTS

Contract Relationships

- 2.1 The Contract Documents constitute the entire Agreement between the Owner and the Contractor for the Work and supersede prior agreements written or oral.
- 2.2 The Contract Documents shall not be construed to create a duty of any kind (1) on behalf of the Design Engineer or the Engineer and toward the Contractor, any subcontractor, worker, or any other party, or

- (2) on behalf of the Owner and toward any subcontractor, worker, or any other party.
- 2.3 Provisions in referenced standards, specifications, manuals, publications, installation instructions, operation and maintenance instructions or codes shall not change the duties or responsibilities between any of the parties involved in this work from those described in these General Conditions.

Correlation, Intent

- 2.4 It is the intent of the Contract Documents to include everything necessary for the proper execution of the Work as a complete functioning facility that serves the intended purpose. The Contractor shall provide all labor, material, equipment and services required by the Contract Documents or that may reasonably be inferred from the Contract Documents as being required to produce the intended result.
- 2.5 The Contract Documents are complementary: What is required by one shall be as binding as if required by all.
 Organization of the Specifications into sections and the arrangement of the Drawings on separate sheets for Mechanical, Electrical, etc. shall not control the Contractor in dividing the Work among subcontractors or among trades.

Order of Precedence

- 2.6 In case of conflict between different parts of the Contract Documents, the order of precedence shall be as follows:
- .1 Supplementary Conditions take precedence over the General Conditions and the Specifications including Division 1;
- .2 General Conditions take precedence over the Specifications including Division 1;
- .3 Provisions in Division 1 General Requirements apply to all sections of the Specifications.
- .4 Specifications take precedence over the Drawings;
- .5 Stated dimensions take precedence over scaled dimensions;
- .6 Larger scale drawings take precedence over smaller scale drawings;

- .7 Detailed drawings take precedence over general or typical drawings;
- .8 Specific notes on the Drawings take precedence over schedules; and
- .9 Notes, descriptions or schedules take precedence over graphic representations on drawings.
- .10 Higher quality takes precedence over lower quality.
- .11 Greater number, amount or size takes precedence over lesser number, amount or size.
- 2.7 The Contractor will be furnished three (3) one-half (½) size Drawings sets, 3 copies of the Project Manual, 1 PDF copy of each and the Contractor may obtain additional copies at their cost of reproduction.

Use of Contract Documents

- 2.8 The Drawings, Specifications and other documents prepared by the Design Engineer, are instruments of service to which the Design Engineer retains legal title, including copyright rights. These instruments of service shall not be used on other projects, for subsequent changes to this project, and shall not be changed or modified without the written permission of the Design Engineer.
- 2.8.1 Nothing herein shall relieve the Contractor of its obligation to notify the Owner of any inconsistencies in the Contract Documents. Should it appear that the Work to be done or any of the matters relative thereto are not sufficiently detailed or explained in the Contract Documents or in the event of a conflict, inconsistency or discrepancy in the Contract Documents, the Contractor shall immediately submit an RFI to the Owner in writing for such further written explanations as may be necessary. Any adjustment(s) to the Work made by Contractor without first obtaining written clarification from the Engineer shall be at Contractor's risk and expense and shall be subject to removal if required by Owner.

2.8.2 Contractor Deviations. No deviation by the Contractor from the Contract Documents relating to any portion of the materials, labor services or equipment required for the Work shall be construed to set a precedent with respect to subsequent interpretation of the Contract Documents or performance of the Work unless such a deviation is documented in a Change Order to the Contract.

ARTICLE 3 - LAND, EXISTING CONDITIONS, LAYOUTS

Land

3.1 The Owner shall furnish access to the land on which the Work is to be performed including rights-of-way and easements for access. The Contractor shall confine its operations to the land furnished or to that portion of the land indicated on the Drawings. The Contractor shall provide all other land that it may require.

Existing Conditions

3.2 Execution of the Agreement by the Contractor is a representation that the Contractor has visited the site and has become familiar with existing and local conditions which may affect the Work and has included all costs associated therewith in its Bid.

Subsurface Soil Conditions

3.3 If information on subsurface soil conditions was obtained for design purposes, the Contractor may rely on the boring logs as a representation of soils that existed at the location of the boring at the time the borings were made but may not rely on the interpretations or opinions contained in the report nor on the completeness or adequacy of the information for the Contractor's bidding or construction purposes.

Existing Utilities and Underground Facilities

3.4 Information shown with respect to existing concealed or underground utilities

and underground facilities is based on data provided by the utility or facility owners or by others. The Contractor may rely on the information shown in the Contract Documents for purposes of establishing the Scope of Work included in the Contract Price but the Owner and the Design Engineer are not responsible for the adequacy or completeness of such information for the Contractor's bidding or construction purposes.

Existing Structures

3.5 Information on existing structures and facilities including concealed utilities was obtained from such records as were available from facility owners and not from exhaustive field investigations. The Contractor may rely on technical data for existing structures and facilities including concealed utilities when such data are shown in the Contract Documents but not on the completeness or adequacy of such data for the Contractor's bidding or construction purposes.

Contractor Responsible for Damage

- 3.6 The Contractor shall be responsible for:
- .1 verifying the existence and location of all utilities and underground facilities, including the use of potholing, hand excavations and hand demolition;
- .2 coordinating work with utility and facility owners;
- .3 protection of concealed and underground utilities and underground facilities from damage;
- .4 the repair or replacement of utilities or underground facilities damaged by the Contractor's failure to exercise reasonable care: and
- .5 damage to others due to loss of utility service resulting from the Contractor's operations.

Differing Conditions

3.7 If the Contractor encounters:(1) subsurface or otherwise concealed physical conditions which differ materially

from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inherent in work of the character covered by these Contract Documents, (3) material that the Contractor believes may be hazardous waste as defined by law, the Contractor shall immediately report them to the Engineer. Failure to notify the Engineer of a differing condition prior to performing additional work shall prejudice the Owner and shall be a waiver by Contractor of any and all claims arising from the differing conditions. If the Engineer determines that conditions encountered are materially different from those indicated in the Contract Documents or ordinarily encountered in work of the character required and that the differing conditions cause a change in the Contractor's cost or time, it will recommend an equitable adjustment in Contract Price and/or Time. The Contractor's failure to notify the Owner of differing conditions that cause a reduction in the Contractor's cost or time shall not affect the Owner's right to make a Claim for adjustment in Contract Price and/or Time. If either the Contractor or the Owner disagrees with the Engineer's recommendation, they may make a Claim under Article 10.

Contractor Responsible for Safety Precautions

The Contractor shall take all 3.8 precautions required to protect workers and others from known and unknown or concealed hazards including verifying the location of concealed and underground utilities and underground facilities with utility and facility owners, potholing, hand excavation and hand demolition and shall not rely on the adequacy, accuracy or completeness of information provided in the Contract Documents or elsewhere by the Owner, the Engineer or the Design Engineer. The Contractor shall be solely responsible for and take all responsibility for safety in, on, or about the site.

Reference Points, Layout

- 3.9 The Owner shall provide reference points to establish property corners, a baseline and an elevation. The Contractor shall protect reference points provided by the Owner and shall reset any that are damaged. The Contractor shall hire a surveyor licensed in the state where the project is being built to reset and document baseline reference points, elevation bench marks and property corners that are damaged.
- 3.10 The Contractor shall layout the Work from the reference points provided and shall be responsible for accurate location, alignment, elevation and level of the completed Work.

ARTICLE 4 - BONDS AND INSURANCE

Performance and Payment Bonds

4.1 The Contractor shall furnish Performance and Payment Bonds, each in an amount equal to the Contract Price as security for the faithful performance and payment of the Contractor's obligations under the Contract Documents. The Payment Bond shall remain in effect for at least two (2) years after final acceptance. The Performance Bond shall remain in force the greater of: (a) four (4) years after final completion and final acceptance of all work, or (b) until the expiration of all Warranties and Guarantees as required by the Contract Documents. All Bonds shall be in the forms prescribed by law and by the Contract Documents and be executed by Sureties named in the current list of "Certified Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds or Certified Reinsurer Companies Holding Certificates Of Authority As Acceptable Reinsuring Companies" published in Circular 570 (most recent amendment) by the Audit Staff Bureau of Accounts, U.S. Treasury Department (www.fms.treas.gov/c570/index.html) and is

- admitted to issue bonds in the states in which the Project is located and all Work is performed. If the Surety is declared bankrupt or becomes insolvent or its right to do business is terminated by the state where the Work is located or if it ceases to meet the foregoing listing requirement, the Contractor shall provide another Bond meeting the stated requirements. All Bonds signed by an agent must be accompanied by a certified copy of the agent's authority to act.
- 4.2 Sureties shall specifically waive all rights of notice of and consent to change, extension of time, alteration or addition to the terms of the Contract. The Contractor shall be responsible for notifying Sureties of all events that may affect them.

Insurance Requirements

- 4.3 The Contractor shall, at its sole cost, obtain and maintain, in force and effect for the duration of the Contract, including the Guarantee and Warranty periods, insurance of the following types with limits not less than those set forth below, in a company or companies with a Best's rating of no less than A:VII and admitted to issue insurance in the jurisdiction(s) in which all work is to be performed, where the site is located and where any waste is transported or deposited. The Contractor shall require compliance with these Insurance Requirements by its lower tier subcontractors:
- .1 Workers' Compensation Insurance, including occupational illness or disease coverage, in accordance with the laws of the nation, state, territory or province having jurisdiction over the Contractor's employees and Employer's Liability Insurance with limits the greater of the statutory requirements, or \$1,000,000 per accident and, for bodily injury by disease, \$1,000,000 per employee. Coverage shall include all work covered under the U.S. Longshoreman's and Harbor Workers' Compensation Act and Jones Act. The Contractor shall not utilize occupational accident or health insurance policies, or the equivalent, in lieu of mandatory Workers' Compensation insurance, or otherwise

- attempt to opt out of the statutory Workers' Compensation system. This insurance shall contain a waiver of subrogation against the Owner, the Engineer, and the Design Engineer and each of their officers, employees, agents and consultants.
- .2 Commercial General Liability Insurance (Occurrence Form) ISO Form CG 00 01 12 04 with a full defense and indemnity, and unless modified in the Supplementary Conditions, shall include:
- (a) a minimum combined single limit of liability of \$3,000,000 or the limits required by law, whichever is greater for each occurrence for bodily injury and property damage;
- (b) a minimum limit of liability of \$3,000,000 each person for personal and advertising injury liability;
- (c) a minimum limit of liability of \$3,000,000 each occurrence for products/completed operations liability.

 The products/completed operations liability shall be maintained in full force and effect for not less than 10 years following completion of any of the Contractor's work;
- (d) a general aggregate limit of not less than \$3,000,000, which shall be provided on

- a per project basis by means of ISO

 Endorsement CG 25 03 11 85 or approved equivalent;
- (e) an endorsement that names the

 Owner, the Engineer, and the Design

 Engineer and each of their officers,

 employees, agents and consultants as

 additional insureds. Such endorsement shall

 be made upon an ISO Endorsement CG 20 10

 11 85 or approved equivalent (CG 20 10 04 13

 is not equivalent or acceptable), Additional

 Insured Owners, Lessees or Contractor

 (Form B) and shall state "insurance is primary

 and all other insurance shall be

 noncontributory" and shall waive all rights of

 subrogation against the additional insureds;
- (f) XCU coverage for claims arising from explosion, collapse and underground damage;
- (g) Pollution Impairment Liability coverage of not less than \$1,000,000;

- (h) Contractual liability coverage for all oral and written contracts including the indemnity provisions contained herein;
- (i) Deductibles shall not exceed \$5,000 per occurrence and shall be the sole responsibility of the Contractor;
- (j) Cross Liability, Separation ofInsureds endorsement, or coverage forSeverability of Interest shall be included;
- (k) Claims made policies are not acceptable;
- (l) Coverage for Work performed on or within 50 feet of a railroad, by deletion of any limitation or exclusion of coverage on or within 50 feet of a railroad or by a Railroad Protective Liability policy which complies with Article 4.3.2 (a), (d), (e), and (h)-(k).
- .3 Automobile Liability Insurance covering use of all owned, non-owned and hired automobiles with a minimum combined single limit of liability for bodily injury and property damage of \$3,000,000 per occurrence, and shall include:

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- (a) An endorsement that names the

 Owner, the Engineer, and the Design

 Engineer and each of their officers,

 employees, agents and consultants as

 additional insureds, states such "insurance is

 primary and all other insurance shall be

 noncontributory", and waives all rights of

 subrogation against the additional insureds;
- (b) Cross Liability, Separation of Insureds endorsement, or coverage for Severability of Interest;
- .4 Property Insurance shall be on an allrisk policy form and shall include:
- (a) A minimum limit of liability in the amount of the initial Contract Price as well as subsequent modifications thereto for the entire Work at the site on a replacement cost basis without voluntary deductibles;
- (b) The interests of the Owner, the

 Contractor, the Engineer, and the Design

 Engineer and each of their officers,

 employees, agents, consultants, and all tiers

 of subcontractors, all of whom shall be listed

 as insureds or additional insureds and the

- policy shall, by endorsement, waive all rights of subrogation against the insureds and additional insureds and the endorsement shall state: "Subrogation: This insurance shall not be invalidated should the named Insured waive in writing prior to a loss, any right of recovery against any person for loss occurring to the property described.";
- (c) Coverage for the Completed Value.

 If the Owner is damaged by the failure of the Contractor to maintain such insurance, the Contractor shall bear all reasonable costs properly attributable thereto;
- (d) Coverage against the perils of fire and extended coverage and all physical loss or damage including, without limitation or duplication of coverage:
- (i) lightning, windstorm, hail, smoke, explosion, riot, riot attending a strike, civil commotion, aircraft and vehicles;

- (ii) theft, vandalism, malicious mischief, and water damage;
- (iii) collapse, flood including tidal waves or overflow from bodies of water, landslide, water pressure or earth movement and earthquake;
- (iv) removal of debris resulting from an insured loss and demolition occasioned by enforcement of any applicable legal requirements;
- (v) falsework, temporary buildings and safety devices used by the Contractor to perform the Work;
- (vi) portions of the Work stored on and off the site and in transit when such portions of the Work are included in an Application for Payment (including Inland Marine coverage and Installation and Equipment Floater coverage as applicable);
- (vii) and shall cover compensation for the services of the Design Engineer and the

- Engineer required as a result of the insured loss.
- (viii) flood and tidal wave insurance coverage shall be for the maximum percentage of the Contract Price permitted by law.
- (e) Remaining in full force and effect until the Final Payment has been made to the Contractor. The property insurance policy shall be endorsed to allow for partial use or occupancy by the Owner without permitting a cancellation or lapse of insurance coverage;
- (f) Deductibles shall not exceed \$5,000 per occurrence with a deductible aggregate of \$5,000. The Contractor shall pay for deductible losses at no cost to any other insured or additional insured.
- .5 Boiler and Machinery Insurance shall be provided as required by the Supplementary Conditions or by law.

Certificates of Insurance

4.4 Prior to beginning any Work, the Contractor shall file with the Owner, Design Engineer and Engineer, Certificates of Insurance in a form satisfactory to Owner

and Engineer (ACCORD form) along with a copy of all endorsements as required in Article 4.3. The certificates shall name each additional insured required by these General Conditions, shall state "insurance is primary and all other insurance shall be noncontributory", shall waive all rights of subrogation against the additional insureds; and shall also contain a provision that the Owner, Design Engineer and Engineer shall be notified in writing 30 days before the policies may be canceled or allowed to expire or any reduction in coverage. An additional certificate shall be submitted with the final Application for Payment showing required continuation of coverage beyond the Final Payment.

Property Insurance: Adjustment of Loss

4.5 A loss insured under the Contractor's property insurance shall be adjusted with the Contractor and made payable to the Contractor as fiduciary for the insured, as their interests may appear subject to the requirements of any applicable mortgage clause. The Contractor shall deposit the insurance proceeds in a separate account, and shall distribute payment to the parties in proportion to their cost for repairing or replacing the damaged Work. The Contractor shall provide a complete audited accounting of the distribution of insurance proceeds to all parties of interest.

ARTICLE 5 - CONTRACTOR

5.1 As a material inducement to enter into this Agreement, Contractor represents it and its subcontractors are skilled in the type of work required by the Contract Documents and is licensed in accordance with applicable law. The Contractor shall perform at least ten percent of the dollar value of the Work using personnel on its own payroll.

Supervision

5.2 The Contractor shall supervise and direct the Work using its best skill and attention. The Contractor shall employ a

competent superintendent to represent the Contractor at the site at all times work is being performed. The Superintendent shall not be replaced without reasonable cause and notice to the Engineer.

Communications given to the Superintendent shall be as binding as if given to the Contractor.

Contractor Responsible for Means and Methods

5.3 The Contractor shall be solely and completely responsible for and have control over construction means, methods, techniques, sequences, procedures and safety and for coordinating all portions of the Work under the Contract Documents. The Owner, the Engineer, and the Design Engineer and each of their officers, employees, agents and consultants shall not be responsible for any construction means, methods, techniques, sequences, nor for safety in, on or about the site, nor for coordinating any part of the Work.

Labor, Material and Equipment

- 5.4 The Contractor shall provide and pay for labor, material, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, communications, and other facilities and services necessary for the proper execution and completion of the Work.
- 5.5 The Contractor warrants to the Owner, the Engineer, and the Design Engineer and each of their officers, employees, agents and consultants that materials and equipment furnished under the Contract will be of good quality, that the Work will be free from defects, that all material, equipment, hardware, software and firmware products provided to the Project will strictly conform with the requirements of the Contract Documents. If required by the Engineer, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. Work not conforming to these requirements, including Proposed Equivalents not

Favorably Reviewed, may be considered defective. The Contractor's warranty excludes remedy for damage caused by the Owner's abuse, modification, improper maintenance, improper operation, or normal wear.

- 5.6 The Contractor shall enforce strict discipline and good order among persons performing the Work. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.
- 5.7 The Contractor shall be responsible to the Owner, the Engineer, and the Design Engineer and each of their officers, employees, agents and consultants for the acts and omissions of the Contractor's employees, subcontractors and their agents and employees, and other persons performing portions of the Work under a contract with the Contractor.

Subcontractors and Suppliers

- 5.8 Unless listing subcontractors at the time of bidding is required by the bidding documents, the Contractor shall furnish a list of all subcontractors whose work amounts to one-half percent or more of the Contract Price prior to beginning construction. The Contractor shall not contract with any subcontractor to whom the Owner or the Engineer has made reasonable and timely objection.
- 5.9 Contracts between or among the Contractor, suppliers and subcontractors shall (1) require each supplier and subcontractor to be bound to the Owner, Engineer and Contractor by the terms of these Contract Documents, and to assume toward the Contractor, the Owner, the Engineer, and the Design Engineer and each of their officers, employees, agents and consultants all the obligations and responsibilities including but not limited to insurance and indemnity requirements which the Contractor, by these Contract Documents, assumes toward the Owner, the Design Engineer and the Engineer, and (2) at the Owner's option, provide for the

assignment of subcontracts to the Owner at Owner's request.

Taxes, Permits, Fees and Notices

- The Contractor shall pay sales, consumer, use, and other similar taxes which are legally enacted when bids are received. The Contractor shall secure and pay for the building permit (less the Plan Review fee) and other permits and governmental fees, licenses and government required inspections necessary for proper execution and completion of the Work including utility connection fees. The Owner will submit the Drawings. Specifications and other required data to the Building Official prior to bidding and will pay for the Plan Review fee. The Owner will pay capital cost assessments such as plant investment fees required by utility owners.
- 5.11 The Contractor shall give all notices and shall comply with all laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on furnishing and performing the Work.

Patents

5.12 The Contractor shall include in its bid and shall pay royalties and license fees required for the use of all patents. The Contractor shall defend suits or claims for infringement of patent rights and shall hold the Owner, the Engineer, and the Design Engineer and each of their officers, employees, agents and consultants harmless from loss on the account thereof.

Documents at the Site, Record Drawings

5.13 The Contractor shall keep a complete set of Contract Documents including all modifications and all favorably reviewed submittals at the site. The Contractor shall prepare Record Drawings by neatly adding the following information in ink at least once a week to a set of Contract Drawings: (1) references to Contract modifications including Responses to Request For Information, minor changes and Change Orders; (2) as-built work that

differs from work shown on the Contract Drawings; and (3) the dimensioned, asinstalled location of major underground and concealed utilities, conduits, piping, tanks, facilities and similar items. Record Drawings shall be made on a clean copy of the Contract Drawings furnished under General Conditions paragraph 2.7 and not used for any other purposes. The Contractor shall make Record Drawings available to the Engineer to verify progress. The Contractor shall submit and obtain favorable review of the Record Drawings prior to Final Acceptance.

Review of Contract Documents and Field Conditions

5.14 Before starting work, the Contractor shall carefully study and compare the Contract Documents with each other and with existing site conditions and field measurements. The Contractor shall immediately report any discovered deficiencies including code violations to the Engineer, in writing. The Contractor is not responsible for finding all deficiencies but will be held responsible for construction required to correct deficiencies or code violations that the Contractor had knowledge of or should reasonably have had knowledge of and did not report to the Engineer in writing.

Contractor's Construction Schedule

- 5.15 Within 10 days after the date in the Notice to Proceed and prior to the commencement of any onsite work, Contractor shall submit:
- .1 a temporary construction schedule covering the first 60 days of the Contract Time. The submittal shall be graphic and in electronic form. The electronic information submitted shall include files using the specified scheduling software format, if specified, and an easily readable file such as Adobe Acrobat PDF;
- .2 a proposed Critical Path construction schedule, which shows each constituent operation, quantity, rate and period required to accomplish the Work;

- .3 the proposed method of procedure, which enumerates the methods and equipment to be employed during each phase of the Work; and
- .4 a plan, which indicates the storage and working areas desired to accomplish the construction and is acceptable by the Engineer and the Owner.
- 5.16 Within 30 days after the date in the Notice to Proceed, the Contractor shall prepare and submit for the Owner's and the Engineer's information a construction schedule for the Work. Unless a specific type of schedule is specified in Division One, the form of schedule may be selected by the Contractor if acceptable by Engineer, and the schedule shall show the beginning and ending date for each major construction task by each trade and the interdependencies between tasks, and shall identify the critical sequence of tasks (or "Critical Path") that determines the shortest time required to complete the Work. The construction schedule shall: (i) not exceed the Contract Time and Milestone dates established in the Contract Documents; (ii) be updated at monthly intervals or as requested by the Engineer; (iii) be related to the entire Project; and (iv) provide for expeditious and practicable execution of the Work. The schedule shall reflect input from the Contractor's subcontractors and suppliers, shall include an allowance for normal unfavorable weather and enough float time to accomplish all clarifications, requests for information, all submittals and changes required in the Contract Documents, and shall not exceed time limits specified in the Contract Documents. If the Contractor's schedule shows a shorter construction period than provided in the Contract Documents, the Contractor's schedule shall be a Critical Path Method (CPM) type schedule, shall be prepared in sufficient detail to demonstrate the feasibility of early completion and shall be submitted within 30 days after beginning construction. This CPM schedule shall show all required submittals and dates for ordering, shipping

and receiving critical materials and equipment. Contractor's submittals shall be submitted with sufficient time to permit 30 days for a response and not impact Contractor's schedule. The submittals shall be graphic and in electronic format. The electronic information submitted shall include files using the specified scheduling software format, if specified, and an easily readable file such as Adobe Acrobat PDF.

5.16.1 Format. Unless otherwise provided in the Specifications, the construction schedule shall be in a detailed precedence Critical Path Method ("CPM") or Primavera-type format satisfactory to the Engineer, which shall also: (i) provide a graphic representation of all activities and events that will occur during performance of the Work; (ii) identify each phase, design, construction and maintenance: and (iii) set forth dates that are critical in ensuring the timely and orderly completion of the Work in accordance with the requirements of the Contract Documents (hereinafter referred to as Milestone dates). At a minimum the Construction Schedule shall depict the schedule or Work on a discipline by discipline and trade by trade basis and tasks within each discipline and trade. The Construction Schedule shall include (i) proposed activity sequences and durations showing the amount of Float for each activity; (ii) Milestone dates for receipt and acceptance of pertinent information, including Owner-supplied information and approvals by public authorities having jurisdiction over the Project; (iii) dates for preparation and processing of Submittals; (iv) dates for delivery of materials or equipment requiring long-lead time procurement; (v) Owner's occupancy /use requirements showing portions of the Project having occupancy priority; (vi) the dates of Substantial and Final Completion: and (vii) other information reasonably required by Owner.

5.16.2 Updates. With each Application for Payment submitted by Contractor (other than the final Application for Payment), the Contractor shall submit to the Engineer an

updated construction schedule revised to indicate the portion of the Work executed, all progress slippages, corrective actions taken, or slippage carry-over, for all anticipated delays of difficulties, and all other information required to accurately present the actual status of the progress of the Work as of the date of the Application for Payment. If the Contractor does not submit an updated construction schedule with an Application for Payment, Owner shall withhold payment, in whole or in part. In the event any update to the Project Schedule indicates any delays to the Contract Time that are the fault of Contractor or others for whom Contractor is responsible, the Contractor shall propose an affirmative plan to correct the delay, including overtime and/or additional labor, if necessary. In no event shall any construction schedule update constitute an adjustment in the Contract Time, any deadline, or the Contract Price unless any such adjustment is agreed to by the Owner and authorized pursuant to Change Order.

5.16.3 Daily Logs. Contractor shall maintain a daily log containing a record of weather, Contractor's own forces working on Site; Subcontractors working on the Site; number and labor classification of workers or each Subcontractor on Site; materials delivered; major equipment on Site, Work started, completed and accomplished that day; approximate count of all personnel at the Project Site; inspections tests and visitors; accidents, any Work stoppages, delays, shortages or losses; problems encountered and other similar relevant data as the Owner may reasonably require. The daily log shall be signed by Contractor's Superintendent, submitted by 4:30p.m. on the next Working Day to Engineer and shall be made available to others as directed by Owner.

5.16.4 Performance. The Contractor shall perform the Work in accordance with the most recent construction schedule and schedule of Submittals accepted by the Owner. The Contractor shall monitor the

- progress of the Work or conformance with the requirements of the Construction schedule and shall promptly advise the Engineer and Owner of any delays or potential delays.
- 5.16.5 Extraordinary Measures. In the event the Owner determines that the performance of the Work has not progressed or reached the level of completion required by the Contract Documents, the Owner shall have the right to order the Contractor to take corrective measures necessary to expedite the progress of construction, including without limitation: (i) working additional shifts or overtime, (ii) supplying additional manpower, equipment, and facilities and (iii) submitting a recovery schedule for re-sequencing performance of the Work or other similar measures. Such corrective measures shall continue until the progress of the Work complies with the stage of completion as required by the Contract Documents. The Contractor shall not be entitled to an adjustment in the Contract Price in connection with the corrective measures required by the Owner under or pursuant to this section. The Owner may exercise these rights pursuant to this section as frequently as the Owner deems necessary to ensure that the Contractor's performance of the Work will comply with the Contract Time or interim completion dates set forth in the Contract Documents. If Contractor or its Subcontractors fail to implement or commence corrective measures within ten (10) calendar days of Owner's written demand, Owner may, without prejudice to other remedies take corrective action at the expense of the Contractor and shall reduce the Contract Price.
- 5.17 It is agreed that the Contract Price includes the Contractor's office and field overhead, profit and related charges for the full Contract Time. The Contractor may, at its option, complete the Work in a shorter period than the Contract Time but the Contractor may not make a claim for extended overhead or other charges for: (1) delays that extended completion beyond the date planned by the Contractor but not beyond the Contract Time,

- and (2) delays contemplated by the Contractor and the Owner. All float in the schedule shall first be for the benefit of the Owner, the Engineer, the Design Engineer and then for the benefit of the Contractor. To the fullest extent permitted by law, the Contractor on behalf of itself and its subcontractors, waive any and all claims for damages attributable to delays, interference, or acceleration caused by the Owner, the Engineer, the Design Engineer and each of their officers, employees, agents and consultants and the Contractor and its subcontractors shall be entitled to an extension of the Contract Time as their exclusive remedy.
- 5.18 The construction schedule shall provide for expeditious and practicable execution of the Work and shall be revised and submitted monthly unless excused by the Engineer in writing. The Contractor shall conform to the most recent schedule.
- 5.19 The Contractor shall prepare and keep current, for the Engineer's information, a schedule of submittals which is coordinated with the Contractor's construction schedule and allows 30 days for the Engineer's review of each submittals and 30 days for review of each resubmittal.

Safety of Persons and Protection of Property

- 5.20 The Contractor shall be solely and exclusively responsible for construction safety means and methods and for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of this Contract.
- 5.21 The Contractor shall take all necessary precautions for safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or

the Contractor's subcontractors or subsubcontractors; and

- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, utilities and underground facilities not designated for removal, relocation or replacement in the course of construction.
- 5.22 The Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.
- 5.23 The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, necessary fences and other safeguards for safety and protection of persons and property on and off the site and shall: (1) post danger signs and other warnings against hazards,
- (2) promulgate safety regulations, and (3) notify owners and users of adjacent sites and utilities when the Contractor's operations may affect them.
- 5.24 When use or storage of explosives or other hazardous materials or equipment or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry out such activities under supervision of properly qualified personnel.
- 5.25 The Contractor shall promptly remedy damage and loss to property that the Contractor is required to protect caused in whole or in part by the Contractor, a subcontractor, a sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable. The Contractor shall not be responsible for damage or loss resulting solely from the acts or omissions of the Owner or the Engineer or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable. The foregoing obligations of the Contractor are in addition to the Contractor's

- obligations under the Indemnification clause in this Article 5.
- 5.26 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's Superintendent unless otherwise designated by the Contractor in writing to the Owner and Engineer.
- 5.27 The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs required in connection with the Work and shall send copies of all accident, injury or work-related illness reports and of all notices of unsafe conditions to the Engineer.
- 5.28 The Contractor shall not load or permit heavy weights to be placed on any part of the construction or site so as to endanger its safety.

Hazardous Materials

5.29 If the Contractor encounters material on the site which it reasonably believes may contain asbestos, polychlorinated biphenyl (PCB) or other hazardous material, the Contractor shall stop work in the affected area and shall notify the Owner in writing. The Owner shall have the suspected material tested and if found to contain asbestos. PCB or other hazardous material, the Owner shall have the material removed or rendered harmless. Work in the affected area may be resumed when the Owner gives written notice that the material containing asbestos. PCB or other hazardous material has been removed or made harmless. If halting work in the affected area impacts the Contractor's critical path for construction, the delay will be regarded as an Excusable Delay and the Contract Time will be extended.

Owner's Indemnification for Hazardous Materials

5.30 To the fullest extent permitted by law, the Owner shall indemnify and hold

harmless the Contractor, Engineer, Design Engineer, and each of their consultants, agents, employees, officers, and shareholders from and against all claims, damages, losses and expenses, including, but not limited to, attorney's fees, arising out of or resulting from work in areas affected by asbestos, polychlorinated biphenyl (PCB) or other hazardous material, the presence and location of which has not been identified by the Owner in writing.

Emergencies

5.31 In an emergency affecting safety of persons or property, the Contractor shall act as required to prevent threatened damage, injury or loss without instruction or authorization from the Owner or Engineer. Additional compensation or extension of time claimed by the Contractor on account of such an emergency shall be determined as provided under Article 10.

Indemnification

- 5.32 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, the Engineer and the Design Engineer and each of their agents, consultants, officers, employees, and shareholders from and against all claims, damages, losses and expenses, including but not limited to attorney's fees, caused in whole or in part, or arising out of, connected with, or resulting from the performance of the Work, regardless of whether or not such liability. claim, damage, loss or expense was caused in part by any negligent act or omissions, whether active or passive, by a party indemnified hereunder. The Contractor stipulates that this provision has been negotiated in accordance with applicable law to be fully enforceable.
- 5.33 The obligation of the Contractor under this indemnity and hold harmless agreement shall not apply to liability for damages arising from the sole negligence or willful misconduct of the Owner, the Engineer, or the Design Engineer or their agents, consultants, employees, officers, shareholders or

- independent contractors (other than the Contractor).
- 5.34 The Contractor's liability to the Owner, Engineer and Design Engineer under this Indemnification Clause shall not be limited by any legal limitation on the amount or type of damages, compensation or benefits payable under workers' compensation acts, disability benefit acts or other employee benefit acts.
- 5.35 The Contractor's liability insurance shall provide coverage for the Contractor's obligations under this Indemnification Clause in accordance with paragraph 4.3.

Escrowed Bid Documents

- 5.36 Contractor shall submit, within twenty-four (24) hours after award of the Contract, one copy of all documentary information generated in preparation of Bid prices for the Work and shall include all Subcontractor and Material Supplier estimates. This material is hereinafter referred to as "Escrowed Bid Documents" and shall be submitted in sealed containers and clearly marked "Escrowed Bid Documents." The Escrowed Bid Documents of the successful Contractor will be held in escrow for the duration of the Contract.
- 5.36.1 The Escrowed Bid Documents are, and shall always remain, the property of the Contractor, subject to joint review by the Owner, Engineer Contractor and their agents, as provided for herein.
- 5.36.2 The Owner stipulates and expressly acknowledges that all or parts of the Escrowed Bid Documents, as defined herein, constitute trade secrets. This acknowledgement is based on the Owner's express understanding that the information contained in the Escrowed Bid Documents may not be known outside Contractor's business, may be known only to a limited extent and only by a limited number of employees of the Contractor, is safeguarded while in the Contractor's possession, is extremely valuable to

- Contractors and could be extremely valuable to Contractor's competitors by virtue of it reflecting Contractor's techniques of construction. Owner further acknowledges that Contractor expended substantial sums of money in developing the information included in the Escrowed Bid Documents and further acknowledges that it would be difficult for a competitor to replicate the information contained therein. Owner further acknowledges that the Escrowed Bid Documents and the information contained therein are being provided to Owner only because it is an express prerequisite to award of the Contract. Owner further acknowledges that the Escrowed Bid Documents include a compilation of information used in Contractor's business, intended to give Contractor an opportunity to obtain an advantage over competitors who do not know of or use the contents of the documentation. Owner further agrees to safeguard the Escrowed Bid Documents against disclosure to the fullest extent permitted by law. In the event a third party requests disclosure of all or parts of the Escrowed Bid Documents, the Owner shall immediately notify the Contractor and cooperate with Contractor's efforts to prohibit disclosure.
- 5.36.3 The Contractor agrees, acknowledges, represents and warrants that as a condition of award of the Contract, that the Escrowed Bid Documents constitute all the information used in the preparation of the Bid and that no other bid preparation information shall be considered in resolving disputes or claims. The Contractor also agrees that nothing in the Escrowed Bid Documents shall change or modify the terms or conditions of the Contract Documents.
- 5.36.4 Purpose. The purpose of the "Escrowed Bid Documents" procedure can best be explained by defining what this program is intended to accomplish and what this program is not intended to accomplish.
- 5.36.5 To Be Accomplished.

- .1 Create a spirit of cooperation in an atmosphere of honesty and candor between the Owner and the Contractor.
- .2 Establish a base line of the Contractor's accepted proposal.
- .3 Provide an objective data bank to facilitate the determination and negotiation of changes/additions/deletions.
- .4 Minimize Owner/Contractor disputes and streamline the resolution of these disputes.
- .5 Creates risk sharing between the Owner and Contractor thereby eliminating contingency costs to the Owner for conditions which may never occur.
- 5.36.6 Not To Be Accomplished.
- .1 Not to be used by the Owner to evaluate the Contractor's anticipated construction methods and procedures.
- .2 Not to be used to any extent to furnish information from the Contractor's bid to any organization, company or individuals other than the Owner's and Engineer's staff and claims consultants associated with the Project.
- .3 Not to be reproduced by the Owner except by mutual agreement.
- .4 Not to create additional expense to the Contractor during bid preparation.

Content of Escrowed Bid Documents.

- 5.37 Contractor may submit Escrowed Bid Documents in its usual estimating format; a standard format is not required. It is not the intention of this requirement to cause the Contractor extra work during the preparation of the bid but to ensure that the Escrowed Bid Documents will be adequate to, enable complete understanding and proper interpretation for their intended use
- 5.37.1 It is required that the Escrowed Bid Documents clearly itemize the estimated costs of performing the Work as required to present a detailed cost estimate and allow a detailed cost review. Crews, equipment,

takeoff quantities, and rates of production shall be detailed. Estimated costs shall be broken down into the Contractor's usual estimate categories such as direct labor, repair labor, equipment ownership and operation, expendable materials, permanent materials, and Subcontract costs as appropriate. Plant and equipment and indirect costs shall be detailed in the Proposer's usual format.

- 5.37.2 All costs shall be identified. For items amounting to less than \$10,000, estimated unit costs are acceptable without a detailed cost estimate, provided that labor, equipment, materials, and Subcontracts, as applicable, are included and provided that indirect costs, contingencies, and markup, as applicable, are allocated.
- 5.37.3 The Escrowed Bid Documents shall include all quantity takeoffs, calculations of rates of production and progress, copies of quotes from Subcontractors and Material Suppliers, and memoranda, narratives, add/deduct sheets and all other information used by the Contractor to arrive at the prices contained in the Bid.
- 5.37.4 The Escrowed Bid Documents shall be accompanied by the certification signed by a corporate officer authorized by the Contractor stating that the material in the Escrowed Bid Documents constitute all the documentary information used in preparation of the bid and that the Contractor has personally examined the contents of the Escrowed Bid Document container and has found that the documents in the container are complete.

Initial Examination

- 5.38 Escrowed Bid Documents of the Contractor will be examined, organized, and inventoried immediately upon receipt by a representative of the Owner and a representative of the Engineer.
- 5.38.1 This examination is to ensure that the Escrowed Bid Documents are legible and complete. It will not include review of and will not constitute approval of proposed

- construction methods, estimating assumptions, or interpretations of Contract Documents. Examination will not alter any condition or term of the Contract.
- 5.38.2 Should the examination and inventory by the Owner or Engineer indicate that data is incomplete or missing, the representatives will describe such incomplete or missing data to the Contractor who shall supply it within twenty-four (24) hours
- 5.38.3 If all the itemized cost breakdowns and allocations required previously mentioned herein have not been made, due to last minute bid revisions, the detailed breakdown of estimated costs shall be reconciled and revised by agreement between the Contractor and Owner before making the award.

Subsequent Examinations

- 5.39 The Escrowed Bid Documents may be examined at any time deemed necessary by both the Owner and the Engineer in order to determine the Contractor's bid concept and assumptions and to assist in the negotiation of price adjustments and Change Orders and the settlement of disputes and claims.
- 5.39.1 Examination of Escrowed Bid Documents is subject to the following conditions:
- (a) The Escrowed Bid Documents are proprietary and confidential as to trade secrets contained therein.
- (b) The Owner and the Contractor shall each designate in writing to the other party and within ten (10) calendar days after execution of the Contract, representatives who are authorized to examine the Escrowed Bid Documents. No other person shall have access to the Escrowed Bid Documents. The designated representatives may be amended from time to time by either party.
- (c) Access to the Escrowed Bid Documents may take place only in the

presence of duly designated representatives of both the Owner and Contractor.

(d The Owner will take reasonable steps to protect the Escrowed Bid Documents from disclosure not permitted by this agreement.

Conditions for Return to Contractor

5.40 Upon completion of the Contract issuance of Final Payment by the Owner, verification that all litigation has been completed, and verification that future litigation does not exist, the Escrowed Bid Documents will be sealed and promptly returned to the Contractor by the party in charge of the Escrowed Bid Documents. Reproducing of any portion of the Escrowed Bid Documents will not be permitted at any time without written permission from the Contractor.

ARTICLE 6 - OWNER

Owner's Right to Perform Work and Award Separate Contracts

- 6.1 The Owner reserves the right to perform construction within, related to or adjacent to the Work as a separate activity using its own workers or by contracts with separate contractors under contract conditions similar to those in Article 4 with respect to insurance and subrogation. The Owner shall provide coordination of these separate activities with the Work of the Contractor
- 6.2 The Contractor shall cooperate with the Owner's separate contractors and workers and shall afford them access to their work areas and space to store materials, tools and equipment. The Contractor shall adjust its construction schedule to reflect agreed upon interfaces with the Owner's separate activities.

Mutual Responsibility

6.3 If part of the Contractor's work depends on or must interface with work performed by the Owner as a separate activity, the Contractor shall (1) cooperate

- with the Owner's coordination of the work efforts, (2) inspect work provided by the Owner's separate activities for compatibility with work provided or intended to be provided by the separate contractor, and (3) report to the Owner and the Engineer, prior to proceeding with work that may be affected, any deficiencies in work planned or executed by the Owner that would render it incompatible with work planned or completed by the separate contractor.
- 6.4 If the Contractor is caused delay or additional cost because of the Owner's separate activities, it may make a Claim as provided under Article 10.

Owner's Right to Stop the Work

6.5 If the Contractor fails to correct defective work or continues to perform defective work, the Owner may issue a signed order directing the Contractor to stop the Work or a portion of the Work until the defective work has been corrected. This right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity.

Owner's Right to Carry Out The Work or Correct Defective Work During Construction

If the Contractor fails to remove and 6.6 replace or correct Defective Work, or if the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails to cure the defect, fault or neglect within 7 days after receipt of written notice from the Owner, the Owner may issue a second notice warning the Contractor that if it does not correct the defect, fault or neglect within the second 7day period the Owner will, without prejudice to other remedies the Owner may have, correct such deficiencies. In which case, the Owner will deduct the cost of correcting such deficiencies, including compensation for any additional engineering services required, from payments due the Contractor. If payments then or thereafter

due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. The Owner's right to correct Defective Work during the Guarantee Period is covered in Article 12.

ARTICLE 7 - ADMINISTRATION OF THE CONTRACT

- At the Owner's option, either the Owner or the Engineer designated by the Owner will provide administration of the Contract and will be the Owner's representative (1) during construction, (2) until final payment is due and (3) with the Owner's concurrence, from time to time during the Guarantee Period. If an engineer other than the Design Engineer is appointed to be the Engineer to administer the Contract during construction, the duties and responsibilities of the Engineer and the Design Engineer during construction will be defined in the Supplementary Conditions, in Division One of the Specifications or in a modification to the Contract.
- 7.2 The Engineer may visit the site at intervals appropriate to the stage of construction to become generally familiar with the progress and quality of the completed Work and to determine in general if the Work is being performed in accordance with the Contract Documents. However, the Engineer will not be required to make exhaustive or continuous on-site inspections to check quality or quantity of the Work. The Contractor shall not rely upon the Engineer's site visits nor raise as a defense to any claims of defective work, that the Engineer visited the site or observed the site.
- 7.3 The Engineer shall not have control over or charge of and shall not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, since these are solely the Contractor's responsibility as provided in Article 5. The Engineer shall not be responsible for the Contractor's failure to

- carry out the Work in accordance with the Contract Documents.
- 7.4 The Engineer shall not have the authority to authorize extra work or to change the Contract Time or Price. The Engineer shall not have the authority to stop the Work. The Engineer's duties, responsibilities and limitations of authority are set forth in the Agreement between the Owner and the Engineer and shall not be modified by any action or inaction of any parties and can only be changed by a fully executed Amendment to the Agreement between the Owner and the Engineer.
- 7.5 The Engineer will have authority to reject Defective Work. The Engineer will have authority to require additional inspection or testing of the Work whether or not such Work is fabricated, installed or completed. Neither this authority of the Engineer nor a decision not to exercise such authority shall give rise to a duty or responsibility of the Engineer to the Contractor, subcontractors, material and equipment suppliers, their agents or employees, or other persons performing portions of the Work.
- 7.6 The Owner may arrange for the Engineer to provide a full-time on-site Resident Engineer with additional staff as appropriate. The duties, responsibilities and limitations of authority of the Resident Engineer and his staff shall be the same as defined for the Engineer in the Agreement between the Owner and the Engineer.

Communications

7.7 Communications between the Owner or the Design Engineer and the Contractor shall be through the Engineer. Communications between the Contractor and the Design Engineer shall be through the Engineer, and communications between the Contractor and the Design Engineer's consultants shall be through the Engineer and the Design Engineer. Communications between the Engineer and the

subcontractors shall be through the Contractor.

Requests for Information and Responses

7.8 The Engineer will endeavor to issue Responses to Requests for Information within 30 days of the date a Request for Information is received by the Engineer unless the Engineer requests more information from the Contractor in which case the Response will be issued 20 days after receipt of the additional information. The Contractor shall use the Request for Information form, attached as Exhibit GC-1. The Engineer's Response to a Request for Information shall not authorize a change in Contract Time or Price. If the Contractor disagrees with the Engineer's interpretation of the Contract Documents, it shall notify the Engineer in writing in accordance with Article 9. The Engineer shall not be required to answer Requests for Information when the information is contained in the Contract Documents or when the Request for Information form is incomplete or not used.

ARTICLE 8 - SUBMITTALS

Definitions

- 8.1 Definition of Terms:
- .1 "Shop Drawings" are drawings, diagrams, schedules and other data custom prepared by the Contractor or one of its subcontractors or suppliers to illustrate some portion of the Work.
 - .2 "Product Data" are catalogue pages, brochures, schedules, performance charts, diagrams, instructions and other information which have been highlighted or marked and certified (if required in the Technical Specifications) by the Contractor to indicate the specific items, including options, that are being submitted for some portion of the work.
- .3 "Submittal for Informational Purpose Only" is an item required for the Owner's permanent records relating, in part, to future

- maintenance, repair, modification, replacement of work or as otherwise required. Submittals for Informational Purpose Only will only be received and logged to document that the required submittals have been made. Neither the Owner nor Engineer will respond to a Submittal for Informational Purpose Only.
- .4 A "Proposed Equivalent" is an item proposed for use by the Contractor in lieu of the first specified item and warranted by the Contractor as being at least equal in quality, utility, function and appearance to the first specified item. The Contractor shall assume all costs and be fully and solely responsible for the Proposed Equivalent.
- .5 "Favorable Review" by the Engineer means that based on information submitted by the Contractor and in consideration of the Contractor's warranty required by General Conditions paragraph 8.8 the Contractor may provide the Favorably Reviewed item or work subject to the limitations in General Conditions Article 8, the General Requirements of Division 1, and the Engineer's review comments.
 - .6 The term "first specified item" or "first named maker" refers to the first product identified in the Specifications by a model number or trade name and/or by a maker's name for a specified item.

Specified Items, Proposed Equivalents ("Or Equal")

8.2 When the first specified item is followed by a second maker's name and "or equal," the Contractor may submit Proposed Equivalent items for the Engineer's review. Proposed Equivalent items that are in the Engineer's judgment equal to the first specified item in quality, utility, and appearance, will be Favorably Reviewed. Where a product description and

first maker's name is followed by "or equal" with no second maker's name, it means the specifier knows of no equivalent product and the Contractor may submit Proposed Equivalent products by other makers for review. Where the term "or equal" is omitted, it means that the named item is required to meet the Owner's needs; no products or makers other than those specified will be considered.

- 8.3 Proposed Equivalent items must be submitted as required for Product Data submittals on the form attached as Exhibit GC-3 and shall include adequate technical information to fully describe the function and quality of the item. Submittals of Proposed Equivalent items that are not made within 35 days of the Notice to Proceed will be rejected unless the Engineer has agreed in writing to a later submittal date and the Contractor agrees to comply with all conditions of the Engineer for the late submittal. If the Contractor's second attempt to obtain Favorable Review of a Proposed Equivalent item is unsuccessful, the Contractor shall submit the first specified item.
- 8.4 Inclusion of a second maker's name indicates the maker is acceptable but does not necessarily indicate the maker offers a standard product equal to the first specified item.
- .1 Items by the second named maker are subject to the same conditions of review and compatibility as other Proposed Equivalent items.
- .2 Inclusion of a maker's name and/or model number after a specification description is not a representation that the maker will furnish an item meeting the Contract requirements at bid time or at time of need. It is the Contractor's sole responsibility to furnish items meeting the Contract requirements.
- 8.5 Where items are specified with a description followed by a maker's name and trade name or model number, the item shall be provided with all of the custom modifications, special features, accessories

- and options described even though such things may not normally be included by the maker or provider as part of the model specified. Where there is a conflict between the written description of an item and maker's trade name and/or model number, the written description shall take precedence.
- 8.6 The design is based on first specified items including all described custom modifications, special features, accessories and options as made by the first named maker. The Contractor shall be responsible for all cost including redesign required to accommodate a Proposed Equivalent item including items by the second named maker.
- 8.7 The Engineer's review of Proposed Equivalent items is based solely on information provided by the Contractor and on the Contractor's warranty that the proposed item is at least equal in quality, utility, function and appearance to the first specified item. Favorable Review of a Proposed Equivalent item has the same meaning and is subject to the same limitations that apply to the Favorable Review of Product Data and Shop Drawings described in this Article.

Shop Drawings, Product Data, Samples and Proposed Equivalents

Intent of Contractor's Review

8.8 The Contractor shall make required submittals including Shop Drawings, Product Data, Samples and Proposed Equivalent items in time to allow for the Engineer's review and resubmittal, if required, without causing delay to the Work. The Contractor and appropriate subcontractor shall review, stamp, date and sign submittals before sending them to the Engineer. By making such a submittal, the Contractor makes the following warranty and shall include that warranty statement on its letter of transmittal.

"The Contractor warrants:

- 1. Work or items submitted are complete, accurate and meet the requirements of the Contract Documents, or else any deviations are identified and described in a separate letter accompanying the submittal form, Exhibit GC-2.
- 2. Work or items submitted have been coordinated with and meet the requirements of other submittals, field conditions and the Work as a whole and quantities and dimensions are correct.
- 3. Proposed Equivalent items are at least equal in quality, utility and appearance to the first specified item, or else any deviations are identified in a separate letter accompanying the submittal form, Exhibit GC-3.
- 4. Adjustments to other work required to accommodate Proposed Equivalent items including second named items have been delineated on the submittal and will be made at the Contractor's expense.
- 5. This submittal includes all items needed for a particular specification section or assembly for which submittals are required.
- 6. And represents that all material, equipment, hardware, software and firmware product provided to the Project will perform without error, loss of data or loss of functionality arising from any failure to process, calculate, compare or sequence date data accurately.

Intent and Limitations on Engineer's Review

- 8.9 The Engineer's review of the Contractor's submittals is done solely for the Engineer's and Owner's benefit. The Contractor agrees that the Engineer has no duty to the Contractor or any of its subcontractors or suppliers for the accuracy, completeness or adequacy of the Engineer's review of its submittals.
- 8.10 The Engineer's review of submittals is for compliance with the design intent and requirements of the Contract Documents and is based solely on information provided by the Contractor and on the Contractor's warranty

- that the work or items submitted meet the requirements of the Contract Documents, and the Work as a whole. If later information reveals that work or items submitted or furnished do not meet the requirements of the Contract Documents or the Work as a whole, the Engineer's Favorable Review shall be void and the items or work shall be considered Defective. The Engineer's Favorable Review shall not include an examination of methods or means of construction or required safety precautions. The Engineer's Favorable Review: (1) shall not include a review of quantities or dimensions, (2) shall not relieve the Contractor from responsibility for errors or omissions in submittals, (3) shall not relieve the Contractor from responsibility for complying with the requirements of the Contract Documents, (4) shall not constitute a Change Order, and (5) shall not constitute final acceptance of a product, item or portion of the Work.
- 8.11 The Engineer's Favorable Review of submittals shall not relieve the Contractor from responsibility for deviations from the requirements of the Contract Documents unless the deviations are specifically called to the Engineer's attention in a separate letter accompanying the submittal form, Exhibit GC-2, and the Engineer favorably reviews the specific deviations in writing.
- 8.12 The Engineer's Favorable Review of a re-submittal does not include a review of changes made by the Contractor to a previous submittal that were not requested by the Engineer unless the Contractor specifically calls the Engineer's attention to the non-requested changes, in a separate letter accompanying the resubmittal of form Exhibit GC-2.
- 8.13 Where performance type specifications are used or where preengineered or Contractor designed systems, elements, equipment or components are called for, the Owner, the Design Engineer and the Engineer shall have the right to rely on the Contractor's

design. Favorable Review of the Contractor's design submittal shall be limited to acknowledgment that the design was prepared with the intent of meeting the specified performance criteria, but the Engineer's review shall not constitute a review of the design itself, of the designer's calculations, or of the effectiveness of the design in actually satisfying the specified criteria.

- 8.14 The Contractor shall allow 30 days for the Engineer's review of each submittal and 30 days for each resubmittal unless a different period is specified by the Engineer in writing. If the Engineer requests additional information or clarification of a submittal, the 30 days shall be measured from the date the additional information or clarification is received. If the Contractor requires more than two submittals to obtain the Engineer's Favorable Review, the Contractor shall compensate the Owner for the cost of the Engineer's additional review time. The Contractor shall not perform work for which reviewed submittals are required without obtaining Favorable Review of submittals.
- 8.15 Submittals required for the Owner's or Engineer's information and on which the Engineer shall not be expected to take responsive action are identified in the Contract Documents.

ARTICLE 9 - CHANGES IN THE WORK

Changes

- 9.1 The Owner may order changes in the Work after executing the Agreement by issuing a written Change Order or Work Directive Change.
- 9.2 The Contractor expressly agrees that it shall not consider any order, instruction, Clarification, Response to a Request for Information or any other communication either written or oral given intentionally or unintentionally by the Engineer, Owner or any other person as authorization or direction to do work that would cause a change in

Contract Time or Price unless it is a Change Order or Work Directive Change signed by the Owner.

Requests for Quotation

9.3 If a change involving Contract Price or Time is being considered, the Engineer will issue a Request for Quotation describing the proposed change. The Contractor shall submit a quotation promptly so not to delay or interfere with the progress of the Work, in accordance with the requirements for determining the cost of changes described in this Article.

Change Orders

If the Owner and the Contractor 9.4 agree on the change in Price and Time for a proposed change, a Change Order will be issued and signed by the Engineer, Contractor and the Owner. An executed Change Order shall be conclusive and final settlement of the change in Contract Time and Price for the work covered by the Change Order including the effect of the change on all other portions of the work completed or not and shall include compensation for all related claims for disruption, impact, delay or extended overhead, if any, that may result from the change. Implied in every Change Order, unless expressly reserved by the Owner or Contractor, is a waiver of all known and unknown claims arising out of the Change Order, including a waiver of Section 1542 of the California Civil Code as well as under any other state or federal statute or common law principle of similar effect which provides as follows:

"GENERAL RELEASE CLAIMS EXTINGUISHED.

A general release does not extend to claims which the creditor does not know or suspect to exist in his favor at the time of executing the release, which, if known by him, must have materially affected his settlement with the debtor."

9.5 The Owner reserves the right to have changed work performed by a

separate contractor or its own workers if the Contractor and the Owner cannot agree on the change in Price and Time required.

Work Directive Change

- 9.6 If the Owner and the Contractor have not agreed on the change in Price or Time required for a proposed change, or if time does not permit preparation of a quotation, the Owner may direct the Contractor to proceed with the work on a cost accounting basis by issuing a Work Directive Change.
- 9.7 All Work Directive Changes must be signed by the Owner and will state the maximum sum the Owner is obligated to pay.
- .1 If the Contractor has agreed to do the work on a cost accounting basis and to complete the work for an amount not to exceed the stated maximum sum, the Contractor shall sign the Work Directive Change.
- .2 If the Contractor cannot agree to a maximum sum to complete the work, the Contractor shall not sign the Work Directive Change. In that case the maximum sum shall limit the amount the Owner is obligated to pay to the Contractor but shall not obligate the Contractor to complete the work for that sum.
- 9.8 When the Owner and the Contractor agree on the change in Price and Time for a Work Directive Change, the Work Directive Change shall be converted into a Change Order.

Information, Interpretations and Minor Changes

- 9.9 The Engineer has the authority to order minor changes in the Work including interpretations which are consistent with the intent of the Contract Documents. The Engineer does not have authority to order any changes which involve:
 - .1 a change in Contract Price, or
 - .2 a change in the Contract Time, or
- .3 means, methods, techniques or sequence of Work, or
- .4 safety in, on or about the site.

 If the Contractor considers that any minor changes so ordered causes a change

- in Contract Price or Time, the Contractor shall notify the Engineer in writing within 15 days of receipt of the order and shall not proceed with the work except in the case of an emergency endangering persons or property.
- 9.10 If, after reviewing the Contractor's objection to a minor change, the Engineer determines the work is required by the Contract Documents and does not involve a change in Price or Time, the Owner may direct the Contractor, in writing, to proceed with the work. If so directed, the Contractor may (1) accept the Engineer's determination and proceed with the work or (2) give the Engineer written notice 5 days in advance of beginning work stating that it intends to make a claim under Article 10 and will document costs in accordance with paragraphs 9.11 through 9.14.

Determining Cost of Changes

- 9.11 The Contractor's quotations of cost on proposed changes and cost reported for work performed on a cost accounting basis shall be determined as the sum of the following:
- .1 costs of labor including foremen engaged on the work but not of the Superintendent, field engineer, project manager, and other supervisory or support personnel except as provided in paragraph 9.11.5. Labor costs shall include the cost of social security, old age and unemployment insurance, fringe benefits required by labor agreements and workers' or workmen's compensation insurance;
- .2 costs of materials, supplies and equipment, including cost of transportation, incorporated in the Work;
- .3 rental costs of machinery and equipment, exclusive of portable power or hand tools, supplied by the Contractor or rented from others;
- .4 costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes related to the change;
- .5 the increased or decreased cost of the Contractor's supervision and field office

personnel but only if the change affects the "critical path" of construction activities and requires a change in Contract Time;

- .6 the reasonable cost of any tier of subcontractors' work computed as required for the Contractor's work. The mark-up charged by a subcontractor for overhead and profit shall be the lesser of: i) subject to negotiation, ii) as included in the original bid for the Work, or iii) not to exceed 10% for work performed directly by the subcontractor and 5% for work performed by a subcontractor one tier below it, and
- .7 for the reasonable work performed by the Contractor, the mark-up for overhead, profit and all other costs shall be the lesser of: i) subject to negotiation, as included in the original bid for the Work and contained in escrowed bid documents, or iii) not to exceed 10% for work performed directly by the Contractor and 5% for work performed by a subcontractor.
- .8 Limitations on Markup for Changes. Where multiple tiers of Subcontractors are involved in a change in the Work, the maximum total amount of adjustment to the Contract Price and for markup for all tiers of Subcontractors and for Contractor self-performed Work shall not exceed twenty percent (20%) of the direct costs incurred by Contractor and the Subcontractors and Material Suppliers actually performing the Work.

Work shall be done making the most effective use of labor; materials shall be purchased at the lowest available price and all discounts shall be passed on to the Owner; equipment shall be rented at the most favorable rate available for the term of use required.

9.12 When both additions and deletions are related and pertain to the same work item and are included in the same Change Order, the mark-up for overhead and profit shall be computed on the net increase, if any. No deductions for overhead and profit will be made on deductive changes except for deductive changes that materially change the scope of the work or deductive changes

- issued pursuant to the Owner's right to correct defective work, the Owner's right to remedy the Contractor's default or neglect or the Owner's right to terminate the Contract for cause.
- 9.13 The Contractor shall keep the Engineer informed as to when and where work is being performed on a cost accounting basis and shall submit complete auditable records of the cost of such work including daily time sheets signed daily by the Engineer.
- 9.13.1 Contractor Maintenance of Daily Records for Changes. In the event that Contractor is directed to perform any changes to the Work, or should Contractor encounter conditions which the Contractor believes would obligate the Owner to adjust the Contract Price and/or the Contract Time. Contractor shall maintain detailed records of the cost of such changes on a daily basis and a summary in a daily report supplemented by back-up records. Such records shall include without limitation hourly records for labor and construction equipment, itemized records of materials, including delivery tickets, and equipment used each day in connection with the performance of any change to the Work. In the event that more than one change to the Work is performed by Contractor in a calendar day, Contractor shall maintain separate records of labor, construction equipment, materials, and equipment for each such change. In the event that any Subcontractor of any tier shall provide or perform any portion of any change to the Work, Contractor shall require that each such Subcontractor maintain records in accordance with this Article. Each daily record maintained hereunder shall be signed by the Contractor; such signature shall be deemed Contractor's representation and warranty that all information contained therein is true. accurate, complete, and relates only to the change referenced therein. All records maintained by Subcontractors of any tier, relating to the costs of a change in the Work

shall be signed by such Subcontractor's authorized Project Manager or Superintendent as a representation and warranty that all information contained therein is true, accurate, complete, and relates only to the change referenced therein. All such records shall be delivered to Engineer not later than on the day the Work is performed (same day) for independent verification. The Engineer shall attempt to review and reconcile costs of changes on a daily basis. The Engineer's signature on the report shall indicate agreement with the information reflected therein, not that the Contractor is entitled to payment of the costs in the report. If the Engineer disagrees with the response, the Engineer shall note the areas of disagreement on the report. In the event that the Contractor shall fail or refuse, for any reason, to maintain or make available for inspection, review and/or reproduction such records, adjustments to the Contract Price or Contract Time, if any, on account of any change to the Work may be deemed waived for that day. Contractor's obligation to maintain back-up records hereunder is a material inducement to and in addition to. and not in lieu of, any other Contractor obligation under the Contract Documents with respect to changes to the Work.

- 9.13.2 Labor. The daily report shall show the names, trade, labor, classifications, and hours worked, for the workers.
- 9.13.3 Material. The daily report shall describe and list quantities of materials used, attaching delivery tickets.
- 9.13.4 Equipment. The daily report shall show type of equipment, size, identification number, and hours of operation, including loading and transportation, if applicable.
- 9.13.5 Other Services and Expenditures. Other services and expenditures shall be described in such detail in the daily report as the Owner or Engineer may require.
- 9.13.6 Cost. The report shall provide dollar values for each category of cost.

9.14 Any work for which the Contractor may wish to make a claim shall be done in accordance with these requirements for work done on a cost accounting basis.

Change in Contract Time Due to Changes in the Work

9.15 If the work required by a Change Order affects the "Critical Path" of construction tasks and is the sole, unavoidable cause for changing the length of time required to complete the Work, the Contract Time will be adjusted accordingly.

ARTICLE 10 - CLAIMS AND DISPUTES

Claims

- 10.1 A Claim is a written demand by one of the parties to the Contract for an interpretation of Contract terms or an adjustment in Contract conditions including Price or Time and may involve questions of performance under the Contract including acceptability of work, progress of work, the extent to which work has been completed, whether work is included in the Contract, and other matters in question between the Owner and the Contractor.
- 10.2 Content of Claim. Claims shall be made in writing and shall include complete documentation including:
- .1 The Contractor's certification, by its owner or an officer, under penalty of perjury, that (a) the claim is made in good faith, (b) supporting data are accurate and complete to the best of the Contractor's and subcontractor's knowledge and belief, and (c) the amount requested accurately reflects the Contract adjustment for which the Contractor believes the Owner is liable.
- .2 Full disclosure of facts and detailed reasons supporting the Claim and citing relevant provisions in the Contract Documents.
- .3 Complete documented cost of doing the work for which it is making a Claim and such cost and documentation shall be

submitted in accordance with General Conditions paragraphs 9.11 through 9.14.

Engineer's Decisions

The Engineer, as an arbiter of 10.3 disputes, will make an initial decision on all Claims made prior to the date the final payment is due including Claims alleging an error or omission by the Engineer. The Engineer's decision will be in writing, will be consistent with the intent of the Contract Documents and will cite the basis on which it is made. The Engineer will endeavor to make decisions that are impartial and will not be liable for results of decisions made in good faith. The Engineer's decision is a condition precedent to a demand by either party that a Claim be settled by litigation, or if agreed to in advance by both parties or if required by law, be settled by mediation or arbitration.

Time Limits for Submitting and Deciding Claims

- The Contractor shall give written 10.4 notice 5 days prior to beginning any work for which it intends to make a Claim for an increase in Contract Time or Price and expressly waives any right to make a Claim if the required notice is not given. All other Claims must be made within 14 days of the time the condition giving rise to the Claim becomes known to the claimant. The Engineer, as an arbiter of disputes, will issue a written decision on the Claim within 30 days after receipt of the Claim unless additional information is requested from the claimant or the claimant amends the Claim and then a decision will be issued within 30 days after receipt of additional information, or an amended Claim. Should a Claim be presented that is in part timely and in part untimely, the Engineer shall reject the untimely Claim and decide the timely claim. All Claims must strictly follow the notice requirements of this agreement.
- 10.5 A demand to appeal the Engineer's decision and settle a Claim by litigation, mediation or arbitration can only be made after the Engineer has made a written

- determination, or in the absence of a determination, 7 days after the Engineer's determination became due. If no demand to settle a Claim by litigation, mediation or arbitration is made within 15 days after the Engineer's written decision was issued, the Engineer's decision shall become final and binding on the Owner and the Contractor and if a change in Contract Time or Price is involved, a Change Order shall be signed by both parties.
- 10.6 Provisions of law notwithstanding, the Owner and Contractor hereby agree that neither the Engineer, the Design Engineer, nor any other third party shall, without its specific written consent, be required to participate as a party in any litigation, arbitration or mediation proceedings between the Contractor and the Owner initiated to resolve disputes under the Contract Documents.

Mediation

10.7 If any dispute, controversy, or Claim (hereinafter referred to as a dispute) arises out of or relates to this Contract, or breach thereof, and if the dispute cannot be settled through direct discussions, then the parties first agree to try to settle the dispute by mediation before resorting to litigation or some other dispute resolution procedure. The mediator shall be an attorney experienced in mediating construction disputes and shall be chosen by agreement of the parties, but if no agreement then appointed by the Presiding Judge of the Superior Court in the jurisdiction of the site. Each party shall bear its own costs and expenses of the mediation, including attorney's fees. The fees and costs of the mediator shall be borne equally by the parties.

Work Continued During Disputes

10.8 The Contractor shall continue to work in conformance with the requirements of the Contract Documents and the progress schedule during any dispute and when waiting for decisions on Claims by the

Engineer or for resolution of Claims by litigation, mediation or arbitration, unless otherwise directed in writing by the Engineer or Owner.

ARTICLE 11 - CONTRACT TIME AND DELAYS

Definitions

- 11.1 Definitions of Terms:
- 1 "Contract Time" is the period of time including authorized adjustments allowed for completion of the Work and is measured from the date of commencement in the Notice to Proceed to the date of Final Completion.
- .2 "Day" is a calendar day beginning and ending at midnight.
- .3 "Unusual Weather" is defined as when either the number of Wet Days or the number of Freezing Days exceeds the most recent published mean number of Wet or Freezing Days for the period of record, for the same month and for the weather observing station closest to the project site as reported in "Comparative Climatic Data" published by the National Oceanic and Atmospheric Administration, Ashville, NC 28801. "Wet Days" are defined as days that have at least 0.01 inch of rainfall unless modified in the Supplementary Conditions. "Freezing Days" are defined as days with a minimum temperature of 32 degrees F or lower.

Computation of Time

11.2 Any period of time referred to in the Contract Documents measured in days shall mean consecutive calendar days and shall exclude the first and include the last day. If the last day falls on a Saturday, Sunday or legal holiday, it shall be omitted from the calculation

Contract Time

11.3 Time limits stated in the Agreement are the essence of the Contract. The Contractor confirms that the Contract Time is a reasonable period for performing the Work and includes enough float time to allow for

normal unfavorable weather and other reasonably anticipated delays.

Damages for Late Completion

11.4 Liquidated damages if applicable are stipulated in the Agreement. If liquidated damages are not stipulated, the Contractor will be assessed actual damages suffered by the Owner as a result of completion after the Contract Time.

Commencing Work

11.5 The Contractor shall not commence work (1) prior to the date in the Notice to Proceed, (2) prior to giving the Engineer 5 days written notice and (3) prior to the effective date of insurance coverage required under Article 4.

Accelerated Work If Required to Meet Schedule

11.6 The Contractor shall proceed expeditiously with adequate forces and shall achieve Final Completion within the Contract Time. If the Contractor's performance falls behind schedule, the Contractor shall accelerate the work as required to get back on schedule at no additional cost to the Owner. Accelerated work shall include air or express delivery of materials and equipment, increasing the number of workers, working overtime. working Saturdays, Sundays, and holidays and working additional shifts. The Contractor shall pay the Owner for any extra cost of inspection made necessary by accelerated work required under this provision.

Excusable Noncompensable Delay

11.7 "Excusable Delay" means unforeseeable delay beyond the Contractor's or Owner's control and not resulting from the Contractor's fault or negligence. Excusable Delay includes labor disputes, fire, Unusual Weather, unavoidable casualties and unusual delays in transportation. The Contractor may make a Claim under Article 10 for an extension of Contract Time due to an Excusable Delay if

it can show that the Excusable Delay is the sole and unavoidable cause increasing the time actually needed to complete the Work. The Contractor shall not be entitled to an increase in Contract Price due to an Excusable Delay.

Compensable Delays

- The Contractor may make a Claim 11.8 under Article 10 for extension of Contract Time due to delays that are not due to the fault or neglect of the Contractor and which could not have been reasonably anticipated, including delays: (1) caused by the Owner or Engineer or by the Owner's separate contractors or workers, (2) resulting from the Owner's failure to provide access to lands or rights-of-way on which the Work is to be performed, or (3) due to suspension of the Work ordered by the Owner. In making such a Claim, the Contractor must demonstrate that the delay was the sole and unavoidable cause for increasing the length of time required to complete the Work on the critical path. In the case of a delay which was caused in part by the Contractor and in part by the Owner (Concurrent Delay), Contractor shall only be entitled to an extension of the Contract Time or Milestone(s) and Contractor shall not be liable for Liquidated Damages during the period of Concurrent Delay, but Contractor shall not be entitled to any additional compensation whatsoever during the period of Concurrent Delay. For purposes of settlement of Claims under this paragraph, the Contractor's cost shall be determined in accordance with paragraph 9.11 except that no mark-up for profit will be allowed and therefore, the maximum percentage mark-ups allowed under subparagraphs 9.11.6 and 9.11.7 shall be reduced by one-third.
- 11.9 Changes in Contract Time associated with changes ordered by the Owner are covered under Article 9.
- 11.10 An executed Change Order covering changes ordered by the Owner under Article 9 or the resolution of Claims made under Article 10 shall be the final and conclusive

- settlement of the change in Contract Time and Price for the work or Claim covered by the Change Order including all related costs in accordance with Article 9.4.
- 10.11 Early Completion Delay Damages. While the Contractor may schedule completion of all the Work, or portions thereof, earlier than the Contract Time established in the Agreement, the Owner and Engineer are exempt from liability for and the Contractor shall not be entitled to an adjustment of the Contract Price or to any additional costs, damages, or compensation whatsoever, for use of Float or for Contractor's inability to complete the Work earlier than the Contract Time established in the Agreement, for any reason whatsoever, including but not limited to, delay caused by Owner, Engineer or other compensable delay.

ARTICLE 12 - INSPECTION, DEFECTIVE WORK, GUARANTEE

Defective Work

12.1 Defective Work is work that (1) is unsatisfactory, faulty, deficient, or leaks, breaks, fails or does not conform to the Contract Documents; or (2) does not meet the requirements of reference standards, tests or approvals specifically referred to in the Contract Documents; or (3) has been damaged prior to final acceptance; or (4) does not meet applicable industry or trade standards; or (5) a submittal is required and Favorable Review has not been obtained.

Access to Work and Notice

12.2 The Contractor shall provide the Owner, the Engineer and each of their representatives safe access to every part of the Work at all times work is in progress for observation, inspecting and testing. The Contractor shall give 2 days notice of work being ready for required inspection, test or approval or of intent to cover work up.

Tests and Inspections

Unless otherwise specified, the 12.3 Contractor shall arrange and pay for tests, inspections and approvals required by laws, ordinances, rules, regulations, orders of public authorities having jurisdiction or by the Contract Documents. All such tests, inspections and approvals shall be performed by an independent testing laboratory or inspection agency acceptable to the Engineer or to the appropriate public authority. Samples to be tested and items of work to be inspected will be selected by the Engineer or the public authority requiring the test or inspection. Test reports, inspection reports and certificates shall be submitted directly to the Engineer by the performing laboratory or agency. The Contractor shall notify the Engineer at least 2 days prior to all tests and inspections to permit observation by the Engineer.

Reinspection

12.4 If the Engineer determines that portions of the Work require additional testing or retesting, the Contractor shall provide material to be tested, safe access to test locations, power, light and other services. The cost of retesting shall be paid for by the Owner, but if the additional tests or retesting indicate that said portion of the Work is Defective, the Contractor shall pay the Owner all costs associated with additional testing or retesting including the cost of the Engineer's additional service.

Uncovering Work

- 12.5 If work is covered or concealed without giving the Engineer 2 days notice to permit observation, it shall be uncovered or exposed at the Contractor's expense to permit observation if so requested.
- 12.6 If the Engineer wishes to have work uncovered for observation after having been given the required notice to observe it, the Contractor shall uncover the work on a cost accounting basis. If the work is found to be in accordance with the Contract Documents, the Owner shall pay the cost of uncovering and

replacing the work. If the work is found to be Defective, the Contractor shall pay the cost of uncovering and correcting the work and the cost of required additional engineering and testing service.

Correction of Defective Work

12.7 The Contractor shall promptly correct or replace: (1) work rejected by the Engineer as being Defective, and (2) work that is Defective whether or not rejected by the Engineer. The Contractor shall correct Defective Work prior to installing subsequent related or connected Work. The Contractor's obligation to correct Defective Work applies to latent as well as patent defects and whether or not the work is fabricated, installed or completed and whether observed before or after Substantial Completion. The Contractor shall bear the cost of correcting Defective Work including consequential costs, engineering services and attorneys' fees made necessary thereby.

Acceptance or Use of Defective Work

- 12.8 The Owner may elect to accept Defective Work in which case a deductive Change Order shall be signed by the Contractor reflecting the decreased value of the Work. If final payment has been made, the Contractor shall pay to the Owner a sum reflecting the decreased value of the Work.
- 12.9 The Owner may use Defective Work without negating its rejection or decreasing the Guarantee Period which shall commence when the work is finally corrected or replaced and accepted. When all or part of the Work is being used by the Owner, the Contractor shall schedule correction or replacement of Defective Work at the Owner's convenience.

Tests and Inspections Do Not Reduce Contractor's Responsibility for Performance

12.10 Observations by the Engineer or tests, inspections or approvals by others shall not relieve the Contractor from its

obligation to perform the Work in accordance with the Contract Documents.

Guarantee Period

12.11 Within 7 days of receipt of written notice from the Owner, the Contractor shall correct or replace work found Defective within one year after the date of Final Completion of the Work and Acceptance by the Owner or such longer period as covered by any Special Guarantee required by the Contract Documents or by law. For work first performed or first made acceptable after the date of Final Completion, the one-year or longer Guarantee Period shall commence to run at the time the Work is completed or made acceptable.

Owner's Right to Correct Defective Work During Guarantee Period

- 12.12 If the Contractor fails to correct Defective Work within 7 days of receiving notice to do so, the Owner may correct the Work and recover the cost of correction from the Contractor. If the Defective Work creates an emergency where delay would cause unsafe conditions or serious risk of loss or damage, the Owner may proceed to correct the Defective Work without giving the Contractor notice.
- 12.13 If the Owner corrects Defective Work under this paragraph, the Contractor shall pay the Owner all direct, indirect and consequential cost and all required engineering services and attorney's fees.
- 12.14 The Contractor shall be responsible for the cost of removing and replacing work provided by the Owner when such removal and/or replacement is necessary to permit correction of Defective Work for which the Contractor is responsible.

Contractor's Liability for Defective Work Not Limited by Guarantee

12.15 Nothing contained in this Article 12 nor in any Special Guarantee required under Division 1 General Requirements shall be construed to limit the period of the Contractor's obligations under the Contract

Documents or under law. Establishment of a time period for the Contractor's specific obligation to correct work places no limit on the time within which the Contractor's obligation to comply with the Contract Documents may be enforced nor on the period during which the Contractor may be held liable for the effect of Defective Work.

12.16 Nothing contained in this Article 12 nor in any Special Guarantee required under Division 1 General Requirements shall be construed to limit the Contractor's. subcontractor's, material or equipment supplier's liability for damages sustained as a result of latent or patent defects in equipment or materials furnished or caused by the negligence of the Contractor or his subcontractors or suppliers. The guarantees contained in this Article 12 shall not be a waiver of nor shall they reduce any guarantee or warrantee offered by the suppliers of materials or equipment furnished under this Contract nor shall they reduce any responsibilities imposed on manufacturers or suppliers of such equipment under law.

ARTICLE 13 - PAYMENT AND COMPLETION

Schedule of Values

At least 20 days prior to the first 13.1 Application for Payment Date, the Contractor shall submit a Schedule of Values, in a form acceptable to the Engineer, allocating the Contract Price to various trades, types of work, pieces of equipment, and major tasks to assist the Engineer in evaluating the percentage completion for each part of the Work. The Contractor's overhead and profit shall be uniformly pro-rated over all items in the Schedule of Values. The Schedule of Values shall represent the actual cost of each segment of the work and shall not allocate higher costs, overhead or profit to work items scheduled for early completion. If the Engineer objects to the allocation of

cost or the level of detail provided, the Contractor shall revise and resubmit the Schedule of Values.

Application for Payment

- The period covered by each Application for Payment shall be one calendar month. Payment shall be based on work completed as of the Application for Payment Date which shall be the last day of the month unless otherwise stated in the Agreement. Within 7 days after each Application for Payment Date, the Contractor shall meet with the Engineer to review the line item amounts proposed by the Contractor for payment. When the amounts proposed are acceptable to the Engineer, the Contractor shall prepare and submit within 3 days, the Application for Payment form, attached as Exhibit GC-4, and Conditional Lien Releases from the Contractor, each subcontractor, supplier and materialman whose work is included in the Application. The Contractor shall sign and certify on the Application for Payment, subject to penalty of perjury, the following: "The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief, the Work covered by this Application for Payment has been completed in accordance with the Contract Documents and that all Work for which previous payments have been received is free and clear of liens, claims, security interests or encumbrances of any kind. The Contractor further warrants that title to all Work covered by this Application for Payment will pass to the Owner no later than the time of payment."
- 13.2.1 Taxes. The Contractor shall pay all applicable sales, consumer, use, and similar taxes for the Work provided by the Contractor and such taxes shall be included in the Contract Price.
- 13.2.2 Liability for Employee Payments. Contractor accepts full liability for the payment of any and all contributions, deductions, or taxes for social security, unemployment insurance, old age and survivor's benefits, medical and health

benefits, or for any other purpose now or hereafter imposed under any applicable law measured by the wages, salary or other remuneration paid to persons employed by or on behalf of Contractor for the Work. Contractor covenants and agrees to observe and fully comply with all applicable law, including procurement of any necessary occupational licenses, permits and inspection certificates.

Payment for Items Delivered But Not Installed

If recommended by the Engineer, 13.3 Applications for Payment may include the percentage of value stipulated in the Agreement for major equipment and custom fabricated items that have been delivered. stored and protected at the site providing proof is furnished that title will pass to the Owner upon payment. Payment will not be made for material stored at the site that is not custom fabricated. Payment will not be made for items stored off the site. Payment will not be made for stored or installed items that are not protected from physical, environmental or other damage. Payment for successful submittal of Shop Drawings or Product Data will be made only when specifically provided for in Division 1.

Engineer's Recommendation for Payment

13.4 Within 7 days after receipt of the Contractor's Application for Payment, the Engineer will either issue a Recommendation for Payment for such amount as the Engineer determines is due or will notify the Contractor and the Owner of reasons for withholding recommendation. The Engineer's recommendation will not be an evaluation or interpretation based upon legal theories or principles but will be based upon sound engineering judgment. The Owner will seek independent legal services, if necessary to assist it in determining if withholds are appropriate. Retainage to be withheld by the Owner is stipulated in the Agreement.

- 13.5 The Engineer's Recommendation for Payment will constitute a representation that to the Engineer's best knowledge, information and belief the Work has progressed to the point indicated and is generally in conformance with the Contract Documents but is subject to re-evaluation during subsequent site visits and upon final completion. The Engineer's Recommendation for Payment shall not be taken as a representation that the Engineer has (1) made exhaustive or continuous onsite inspections to check the quality of the Work, (2) reviewed construction means, methods. techniques, sequences or procedures, (3) reviewed copies of requisitions received from subcontractors and material suppliers and other data requested by the Owner to substantiate the Contractor's right to payment, (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of
- 13.6 If, in the Engineer's opinion, the representations in paragraph 13.5 cannot be made or if the Engineer has knowledge of any of the faults listed below, then the Engineer may decline to issue a Recommendation for Payment or may recommend a reduced amount of payment or may rescind previously issued Recommendation for Payment. Faults for which payment may be withheld, reduced or rescinded include:

the Contract Price, or (5) offered its legal

opinion in any respect.

- .1 Defective Work not corrected;
- .2 Third party claims filed or reasonable evidence indicating probable filing of such claims;
- .3 Failure of the Contractor to make payments properly to subcontractors or suppliers for labor, materials or equipment;
- .4 Reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Price;
- .5 Damage to property, the Work, the Owner, another contractor or a third party;
- .6 Reasonable evidence that the Work will not be completed within the Contract

Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay:

- .7 Work performed for which submittals are required prior to obtaining Favorable Review of submittals:
- .8 Persistent failure to carry out the Work in accordance with the Contract Documents:
- .9 Failure to submit a construction schedule or to update the construction schedule in accordance with General Conditions paragraph 5.18;
- .10 Failure to update Record Drawings weekly;
- .11 Failure to reinstate required insurance that has been allowed to lapse; or
- .12 Non-payment of money owed to the Owner for the extra cost of inspection or engineering services provided for in the General Conditions.

Completion and Acceptance

- 13.7 Definitions
- .1 "Substantial Completion" means the Work has progressed to the point that:
 (1) the Work is ready for beneficial use and occupancy by the Owner for the intended purpose, (2) all fire and life safety work has been completed, inspected and accepted, (3) all mechanical and process systems and equipment are complete and have been put in automatic operation, (4) the total value of uncompleted work is less than one-half of one percent of the Contract Price and (5) completing the Work will not significantly interfere with the Owner's convenience, use or cost of operation.
- .2 "Semi-Final Inspection" determines if the Work is Substantially Complete.
- .3 "Final Inspection" determines if the Work has reached Final Completion.
- .4 "Final Completion" indicates that the Work has been fully completed in accordance with the Contract Documents and is ready for acceptance and final payment by the Owner.
- .5 "The Final Punch List" contains items that remain uncompleted after

Substantial Completion but that must be completed prior to Final Completion.

Owner's Right to Partial Use

When provided for in the Contract Documents or agreed to in writing by the Owner and the Contractor, the Owner may notify the Contractor and begin using a portion of the Work even though it is not Substantially Complete. The Contractor, the Owner and the Engineer shall agree on and document responsibilities for security, operation, safety, maintenance, utilities, insurance, warranties and guarantees for that portion of the Work being used by the Owner. The Owner, the Contractor and the Engineer shall inspect such portion of the Work and shall prepare a list of work to be completed or corrected before final acceptance. The Owner's use of any portion of the Work shall not constitute final acceptance of that portion of the Work prior to Final Completion and acceptance of the Work as a whole. The Owner shall allow the Contractor reasonable access to complete or correct work in areas being used by the Owner. Partial beneficial occupancy shall not relieve the Contractor of Liquidated Damages unless the Contract Documents expressly provide for and identify the portion of Work that may be considered Substantially Complete before the remaining portions of the Work.

Contractor's List of Deficiencies

13.9 When the Contractor considers the Work nearly complete, the Contractor shall review the Contract Documents, inspect the Work and prepare a list of deficiencies (Punch List). The Contractor shall complete or correct the items on the Punch List until, in the Contractor's opinion, the Work is Substantially Complete and ready for occupancy and use by the Owner. The Contractor shall then deliver the Punch List to the Engineer and notify the Engineer in writing that the Contractor believes the Work is Substantially Complete and ready for a Semi-Final Inspection.

Semi-Final Inspection, Substantial Completion

13.10 When the Work is ready and the Contractor so notifies the Engineer in writing, the Engineer will make a Semi-Final Inspection and may add additional items to the Contractor's Punch List. As a result of this inspection, the Engineer may determine that (1) the Work is not sufficiently complete to warrant a Semi-Final Inspection, additions to the Contractor's Punch List, or the preparation of a Final Punch List, (2) the Work is sufficiently complete for the Engineer to prepare a Final Punch List but certain incomplete or Defective Work prohibits use of the Work for its intended purpose and therefore, the Work is not Substantially Complete, or (3) that the Work is Substantially Complete and usable for its intended purpose and the Engineer can prepare a Final Punch list. In preceding cases 1 and 2, the Contractor shall continue the Work and call for a second Semi-Final Inspection when the Work is ready. In case (3), the Engineer will prepare a Final Punch List and a notice of Substantial Completion which shall establish the date of Substantial Completion and shall state the time agreed to by the Owner and the Contractor (not to exceed 30 days) in which the Contractor shall complete all work ready for Final Inspection. The date of Substantial Completion shall be revised if necessary such that it is no more than 30 days prior to the actual date of Final Completion. The Engineer shall attach a copy of the Final Punch List to the notice of Substantial Completion. If the Contractor does not achieve Substantial Completion on the second attempt, it shall reimburse the Owner the cost of the Engineer's services for additional inspections.

Final Inspection, Final Completion

13.11 When the Contractor has completed or corrected all the items on the Engineer's Final Punch List and has made all required final submittals, the Contractor shall give the Engineer written notice that the Work is ready for Final Inspection and acceptance

and upon receipt of a final Application for Payment, the Engineer shall make a Final Inspection. If the Engineer finds the Work is not fully complete, it shall notify the Contractor of items still requiring completion or correction. The Contractor shall immediately correct these deficiencies and call for a reinspection. When the Engineer finds to the best of the Engineer's knowledge, information and belief, and on the basis of the Engineer's observations and inspections, the Work is acceptable and fully complete in accordance with the Contract Documents. and when all final submittals have been made, the Engineer will recommend that the Owner issue and file a Notice of Completion, designating Final Completion, make Final Payment and Accept the Work in accordance with the terms and conditions of the Contract Documents.

13.12 Neither the Engineer's failure to include an item on the Final Punch List, nor making of the Semi-Final or the Final Inspection, nor recommendation of final acceptance shall alter the Contractor's responsibility to complete all Work in accordance with the Contract Documents.

Final Payment

13.13 Within 10 days after the Contractor has delivered to the Owner a complete release of all liens arising out of this Contract or receipts in full covering all labor, materials and equipment for which a lien could be filed, or a bond satisfactory to the Owner to defend and indemnify the Owner against such liens, the Owner shall accept the Work and file a Notice of Completion. Final Payment shall not become due until 60 days after the Owner files a Notice of Completion and there being no liens or stop notices filed. If any lien or stop notice remains unsatisfied, the Contractor shall immediately take all steps necessary to remove all liens or stop notices before Final Payment is made. If any liens are filed or exist after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to

pay in discharging such liens, including all costs and reasonable attorneys' fees.

Waiver of Claims

- 13.14 The making of Final Payment shall constitute a waiver of claims by the Owner except those arising from:
- .1 Liens, claims, security interests or encumbrances arising out of the Contract and unsettled;
- .2 Failure of the Work to comply with the requirements of the Contract Documents; or
- .3 Terms of the one-year guarantee period and special warranties required by the Contract Documents.
- .4 Any of the Contractor's continuing obligations under the Contract Documents.
- 13.15 Acceptance of Final Payment by the Contractor, a subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 14 - TERMINATION

Termination by the Owner for Cause

- 14.1 The Owner may terminate all or part of the Contract if the Contractor:
- .1 Persistently fails to provide enough workers or materials to properly pursue the Work as required to complete the Work within the Contract Time;
- .2 Persistently fails to perform the Work in accordance with the Contract Documents including, but not limited to providing monthly updates to the schedule of Work and monthly updates to Record Drawings, or to correct or replace Defective Work when directed to do so:
- .3 Fails to make payment to subcontractors or material suppliers;
- .4 Becomes insolvent, commences any form of voluntary bankruptcy proceedings, has any petition or action filed against it under any bankruptcy code or law, makes a general assignment for the benefit of

- creditors, or if a trustee, receiver or agent is appointed under law to take charge of Contractor's property or operations for the benefit of creditors;
- .5 Persistently disregards laws, regulations, rules or orders of public bodies having jurisdiction or persistently disregards the authority of the Engineer or Owner;
- .6 Fails to retain a valid Contractor's license of the required class in the applicable jurisdiction; or
- .7 Otherwise commits a material breach of the Contract.
- 14.2 When any of the above reasons exist and without prejudice to any other rights or remedies the Owner may have, and after giving the Contractor and the Contractor's Surety 7 days written notice, the Owner may terminate the employment of the Contractor and, subject to any prior rights of the Surety, the Owner may:
- .1 Take possession of the site and of all material, tools and construction equipment on the site owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to paragraph 5.9; and
- .3 Complete the Work by any reasonable method the Owner may select.
- 14.3 When the Owner terminates the Contract for cause, the Contractor shall not be entitled to further payment until the Work has been completed.
- 14.4 If the cost of completing the Work, including additional engineering services, attorney's fees and administrative expenses made necessary thereby, exceeds the unpaid Contract Price, the Contractor shall pay the difference to the Owner. This obligation for payment shall be binding after termination of the Contract. If the cost of completing the Work including costs for engineering, legal, and administrative services minus the Contractor's unearned overhead and profit computed in accordance with paragraphs 9.11.6 and 9.11.7, is less than the unpaid Contract Price, the difference and other consequential costs shall be paid to the Contractor.

14.5 If it has been adjudicated or otherwise determined that the Owner has erroneously or negligently terminated the Contractor for cause, then the termination shall automatically convert to a Termination by Owner for Convenience as set forth in Article 14.7

Suspension by the Owner for Convenience

- 14.6 The Owner, without cause, may issue written order giving the Contractor 7 days notice to suspend, delay or interrupt the Work in whole or in part. The order shall fix the dates on which the work shall cease and resume.
- 14.7 If a suspension, delay, or interruption of the Work ordered by the Owner for convenience causes an increase or decrease in the cost of performing the Contract, the Contract Price shall be adjusted as agreed by the Owner and the Contractor or in accordance with the method for determining the cost of changes in Article 9. The Contract Price shall not be adjusted if the Contractor's performance would otherwise have been suspended, delayed or interrupted due to causes for which the Contractor is responsible.

Termination by the Owner for Convenience

14.8 The Owner may terminate all or part of the Contract without cause by giving the Contractor 7 days written notice. Such termination shall not prejudice any other right or remedy the Owner may have under the Contract. If the Contract is terminated without cause, the Contractor shall be paid for all work executed as of the date of termination plus reasonable termination expenses including direct, indirect and consequential costs but the Contractor shall not be paid for anticipated profit on work not performed.

Contractor May Stop Work or Terminate

14.9 If, through no act or fault of Contractor, the Work is suspended for a period of more than 90 days by the Owner or under an order of court or other public authority, or the Engineer fails to act on any Application for Payment within 30 days after it is submitted, or the Owner fails for 60 days to pay the Contractor any sum finally determined to be due, the Contractor may, upon 7 days' written notice to the Owner and the Engineer, terminate the Agreement and recover from the Owner payment for all Work performed and any expense sustained plus reasonable termination expenses. In addition and in lieu of terminating the Agreement, if the Engineer has failed to act on an Application for Payment or the Owner has failed to make any payment as aforesaid, the Contractor may, upon 7 days' written notice to the Owner and the Engineer, stop the Work until payment of all amounts then due is received. The provisions of this paragraph shall not relieve the Contractor of the obligations to carry on the Work in accordance with the progress schedule and without delay during disputes and disagreements with the Owner.

ARTICLE 15 - MISCELLANEOUS

Method for Giving Notices

15.1 Written notice shall only be considered to have been given if delivered in person to the individual, partner of the partnership or joint venture, or officer of the corporation for whom intended or if sent by registered or certified mail to the address given in the Agreement unless amended by written notice. Notice to the Contractor's superintendent shall be considered notice to the Contractor. Notice to the Resident Engineer shall be considered notice to the Engineer. Notice to the Owner's Project Representative or Manager shall be considered notice to the Owner.

Rights and Remedies

15.2 Duties, obligations, rights and remedies prescribed by the Contract Documents shall be in addition to and not a limitation of duties, obligations, rights and remedies otherwise imposed by or available under law.

Failure to Act Not a Waiver of Rights

15.3 Except as expressly provided in the Contract Documents, no action or failure to act by the Owner, Engineer, Design Engineer or Contractor shall constitute a waiver of a right afforded or duty imposed under the Contract. No such action or failure to act shall constitute approval of or acquiescence in failure to perform in accordance with the Contract Documents or any other breach of contract.

Severability of Provisions

15.4 The finding under law that any one or more provisions or any portion of a provision in the Contract Documents is invalid, unenforceable, or illegal shall not impair the validity or enforceability of any other provision or of the Contract Documents as a whole. In the case of invalidity or enforceability of any provision or portion thereof, the provision shall be rewritten and enforced to the maximum extent permitted by law to accomplish as near as possible the intent of the original provision.

Right to Audit

15.5 Maintenance, Inspection, and Audit of Records. All books, account, reports, files, correspondence, data and other records relating to this contract shall be maintained by the Contractor, its subcontractors and material suppliers and shall be subject to all reasonable times to review, inspection, and audit by the Owner, Engineer and their agents at all times during performance of the Work and for a period of five (5) years after Final Completion of the Work. Such records shall be produced by the Contractor and/or the subcontractor or Material Supplier within a reasonable time

at a place designated by the Owner or Engineer, upon written notice to the Contractor.

15.5.1 Accounting System. Contactor shall exercise such controls as may be necessary for proper financial management of the Work. Such accounting and control systems shall comply with prevailing custom and practice for similar projects, be satisfactory to Owner and shall include preservation of records for a period of four (4) years after Final Completion, or for such longer period as may be required by Applicable Law.

15.5.2 Books and Records. Contractor shall keep, and shall require provisions to be included in all contracts entered into by subcontractors and suppliers requiring the subcontractors and suppliers to keep, full and detailed books, records, information, materials and data, of every kind and character (hard copy, as well as computer readable data if it exists), that have any bearing on or pertain to any matters, rights, duties or obligations relating to the Project, Work or Contract, including, without limitation, agreements, purchase orders, leases, contracts, commitments, arrangements, notes, change orders, change order requests, estimates, field orders, schedules, diaries, logs, reports, shop drawings, samples. exemplars, drawings, specifications, invoices, delivery tickets, receipts, vouchers, canceled checks, memoranda; accounting records; job cost reports; job cost files (including complete documentation of negotiated settlements); backcharges; general ledgers; documentation of cash and trade discounts earned: insurance rebates and dividends and other documents relating in any way to any claims, charges or time extensions asserted by Contractor of any of the subcontractors.

15.5.3 Inspection and Copying. Contractor shall allow, and shall require provisions to be included in all contracts entered into by subcontractors allowing, Owner, Engineer and their authorized representative(s), auditors, attorneys and accountants, upon twenty-four (24) hour notice to Contractor, full

access to inspect and copy all its aforestated books and records at a location designated by Owner or Engineer and within 200 miles of the Project.

15.5.4 Noncompliance by Contractor. Contractor's compliance with this Article 15.5 et seg, shall be a condition precedent to maintenance of any judicial or extrajudicial action by Contractor against Owner or Engineer. In addition to and without limitation upon Owner's or Engineer's other rights and remedies for breach, including any other provisions for withholding set forth in the Contract documents. Owner shall have the right, exercised in its sole discretion, to withhold from any payment to Contractor due under a current application for payment an additional sum of up to ten percent (10%) of the total amount set forth in such application for payment, until Contractor and the subcontractors have complied with any outstanding and unsatisfied request by Owner under this Article 15.5. Upon compliance with this Article 15.5, any such monies withheld shall be released to Contractor.

15.5.5 Special Enforcement by Owner or Engineer. Contractor agrees that any failure by Contractor or any subcontractor to provide access to books and records as required by this Article 15.5 et seq. shall be specifically enforceable, by issuance of a preliminary and/or permanent mandatory injunction by a court of competent iurisdiction based on affidavits submitted to such curt and without the necessity of oral testimony, to compel Contractor to permit access, inspection, audit and/or reproduction of such books and records or the require delivery of such books and records to Owner and Engineer for inspection, audit and/or reproduction.

Governing Law

15.6 The Contract shall be governed by the law of the place where the project is located.

15.7 Survival of Terms. Any indemnity, warranty or guarantee given by Contractor to Owner or Engineer under this Agreement shall survive the expiration or termination of the Agreement and shall be binding upon Contractor and their subcontractors and suppliers until any action is barred according

to terms in the Agreement or by the applicable statute of limitations or statute of repose. All obligations of Contractor under this Contract shall survive the expiration or termination of this Contract.

END OF GENERAL CONDITIONS

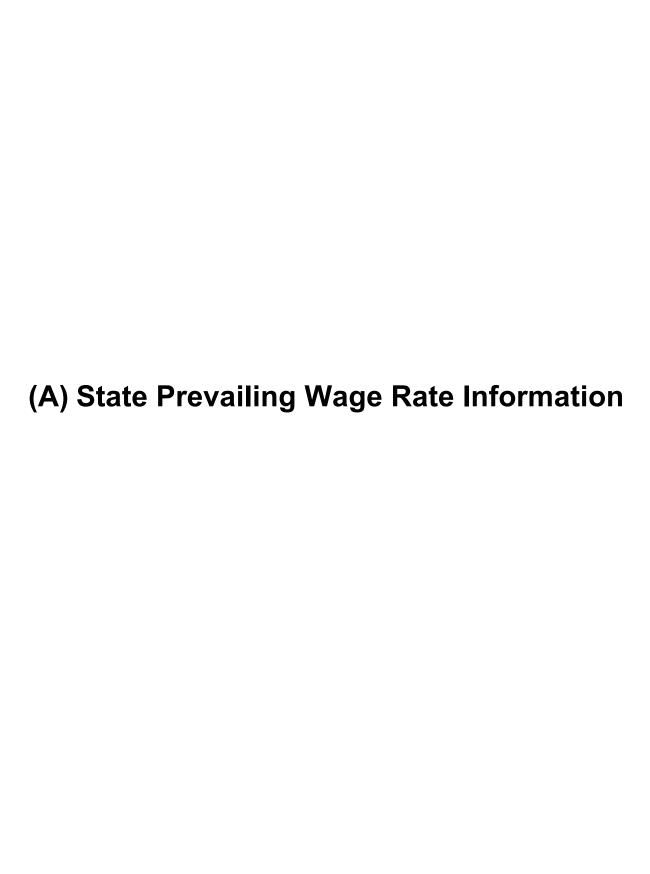
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PART IV - ADDITIONAL REQUIREMENTS

- (A) State Prevailing Wage Rate Information
- (B) Sandy Equal Opportunity Policy for Contractors

During project construction and closeout, additional forms related to contract administration will be required. These forms will be provided to the Contractor by the Project Manager.

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STATE PREVAILING WAGE RATE INFORMATION

The Oregon Bureau of Labor and Industries (BOLI) is responsible for administering Oregon's Prevailing Wage Rate (PWR) laws. General information about PWR can be found at the following webpage:

https://www.oregon.gov/boli/employers/Pages/prevailing-wage-rates.aspx

The Contractor shall comply, and shall require subcontractors to comply, with ORS 279C.800 to 279C.870, Oregon's Prevailing Wage Law. Workers shall be paid not less than the specified minimum hourly rate of wage as provided in the Oregon Bureau of Labor and Industries (BOLI) publication titled "Prevailing Wage Rates for Public Works Contracts in Oregon."

The existing prevailing wage rates applicable to this project are incorporated into the specifications of this Contract Document by reference.

Current Prevailing Wage Rates for Public Works Contracts in Oregon are dated:	July 1, 2022 as amended on October 1, 2022
Current Apprenticeship Rates for Public Works Contracts in Oregon are dated:	October 1, 2022
The above rates can be found at the following webpage: https://www.oregon.gov/boli/employers/Pages/prevailing-wage-rates.aspx	

PWR forms can be found at the following BOLI Web page:

https://www.oregon.gov/boli/employers/pages/prevailing-wage.aspx

Bidders may also request a copy of the Prevailing Wage Rates and rules by calling the Bureau of Labor and Industries at (971) 673-0761.

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(B) Sandy Equal Opportunity Policy for Contractors

CITY OF SANDY

EQUAL OPPORTUNITY POLICY FOR CONTRACTORS

1. GENERAL POLICY OF NON-DISCRIMINATION

It is the policy of the City of Sandy to promote equal opportunity to all persons regardless of race, religion, color, national origin, sex, age, marital status, handicap, or political affiliation, in respect to employment, public services, facilities and accommodations. This policy is reinforced by obligations assumed by the City as a condition of receipt of federal and state funds. This policy thus becomes an obligation which must be assumed by the Contractor as well. Because in some cases religion, sex, age, or disability may properly be the basis for denial or restriction of privileges with respect to employment, public services, facilities or accommodations, the following more specific obligations, terms, or conditions shall apply.

2. DISCRIMINATION BECAUSE OF RELIGIOUS BELIEF

With respect to terms and conditions of employment and hiring only, the Contractor shall be deemed to have complied with the general obligation of according equal opportunity without regard to religion if every reasonable effort has been made to accommodate the particular religious beliefs or practices of an employee or applicant for employment, but such accommodation cannot be made without undue hardship to the employer.

3. DISCRIMINATION BECAUSE OF SEX

With respect to terms and conditions of employment and hiring only, the Contractor shall be deemed to have complied with the general obligation of according equal opportunity notwithstanding any rule, standard, practice, or decision which accords an employee or applicant different treatment because of sex, if such rule, standard, practice, or decision is based upon a bona fide occupational qualification which the employer cannot, without undue hardship, modify or waive to accommodate the employee or applicant.

With respect to public services, facilities, and accommodations the Contractor shall be deemed to have complied with the general obligation of according equal opportunity notwithstanding any rule, standard, practice, or decision which restricts or limits access to such on a basis of sex where:

- A. Physical facilities such as restrooms, bathing facilities, dressing rooms, etc. must be segregated on the basis of sex to accord personal privacy or comply with local, state, or federal law, or ordinance, or administrative regulation; or
- B. The content or subject matter of a program or service is clearly of benefit to persons of a particular sex only because it deals with medical, psychological, or sociological factors inherently linked to the characteristics of one sex only, or its effectiveness in providing benefit to persons of one sex would be unreasonably and adversely affected by the participation of persons of the opposite sex.

4. DISCRIMINATION BECAUSE OF DISABILITY

With respect to terms and conditions of employment and hiring only, the Contractor shall be deemed to have complied with the general obligation of according equal opportunity to persons who are physically or mentally disabled if every reasonable effort has been made to

CONTRACT NO. PROJECT: 2023 Manhole Grouting Project PAGE: 45 accommodate any physical or mental disabilities of an employee or applicant, but such accommodations cannot be made without undue hardship to the employer; or where, because of such disability, the employee or applicant cannot meet a bona fide occupational qualification that cannot be waived or modified without undue hardship to the employer.

With respect to public services, facilities and accommodations only, the Contractor shall be deemed to have complied with the general obligation of according equal opportunity to persons who are physically or mentally disabled where:

- A. Architectural barriers limiting access to facilities owned or occupied by the Contractor cannot be eliminated without structural alterations, and are permitted to remain under the provisions of the Oregon State Structural Specialty Code; or
- B. A program or activity, viewed in its entirety, is readily accessible to and usable by persons who are physically or mentally disabled.
- C. The purpose of the program, service, or facility is to provide a special benefit to persons characterized by a particular handicap in some respect specially related to the educational, medical, psychological, mobility, social or economic needs of persons so disabled.

5. DISCRIMINATION BECAUSE OF AGE

With respect to terms and conditions of employment and hiring only, the Contractor shall be deemed to have complied with the general obligation of according equal opportunity regardless of age where:

- A. Certain positions include duties which must, by law or ordinance, be performed by persons over a certain age, and the employer cannot accommodate the employment of a person under that minimum age without undue hardship;
- B. The employee or applicant has passed any applicable age established by the Congress of the United States beyond which an employer may reject an employment application or mandate an employee's retirement.

With respect to public services, facilities, and accommodations only, the Contractor shall be deemed to have complied with the general obligation of according equal opportunity without regard to age where:

- A. The purpose of the service, facility, or accommodation is to benefit or serve persons under 18 years of age or their adult custodians in some respect specially related to the needs of such persons; or
- B. The purpose of the service, facility, or accommodation is to benefit or serve persons 65 years of age or older in some respect specially related to the educational, medical. psychological, mobility, social, or economic needs common to persons of that age group.

6. DEFINITIONS

As used in this Policy, there are several terms specifically defined in various federal, state, and local laws, ordinances, and administrative regulations applicable either because of the

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City's receipt of federal or state funds, or because they are general laws and ordinances prohibiting discrimination. In addition, judicial and administrative decisions have created an additional body of law further defining these terms in their application. Because of the magnitude and complexity of these various legal definitions and interpretations, it is not possible to provide exhaustive definitions herein. The Contractor should be guided by the following general rules:

- A. Where two separate legal definitions or interpretations may apply in a given situation, the one according the greatest degree of protection to the person entitled to their protection shall govern.
- B. "Disability" and "handicap" are intended to be synonymous.
- C. The Contractor is entitled to advisory opinions as to the specific application of this policy from the designated representative of the City's Human Resources Department. The Contractor is entitled to rely on such advice only to the extent of the completeness and accuracy of the facts presented by the Contractor in requesting such advice. The City expressly disclaims any responsibility for the Contractor's reliance on advice which later proves erroneous or inapplicable because of facts not known to the City's representative who gave the advice.
- D. The Contractor is cautioned that restrictions in deeds, leases, collective bargaining agreements, and other contracts may not in every case justify an otherwise discriminatory act, policy, or practice. The Contractor must, at his own risk and expense, comply with this Policy regardless of contractual restrictions which do not justify Contractor's acts, policies, or practices.

7. ADVERTISING AND PROMOTIONAL MATERIAL

Α.	In all advertising, postings, and promotional material relating to hiring, the Contractor shall include the following statement:
	"
	EXCEPTION: In "classified" advertising the Contractor need only include the statement "An Equal Opportunity Employer".
B.	In all advertising, postings, and promotional material relating to programs and services funded in whole or in part under a contract with the City of Sandy, the Contractor shall include the following statement:
	"This (program or service as applicable) is open to all persons without regard to race, religion, color, national origin, sex, age, marital status, handicap or political affiliation. For further information about this equal opportunity policy, contact (name of contractor's representative) at (phone number)

8. RETALIATION

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The Contractor shall not, in any manner, accord different or unequal treatment to or in any way discriminate against any person because of such person's filing of or participation in any grievance or complaint of discrimination contrary to its policy, whether such grievance or complaint is logged with the City of Sandy, or any state or federal court or agency.

9. GRIEVANCE PROCEDURE

During the term of this Contract, and for at least six months thereafter, the Contractor shall conspicuously display the attached "Notice: Your Rights to Have Discrimination Complaints Heard" in locations accessible to the public at its principal office and all other premises within the City of Sandy where it conducts any operations. Likewise the Contractor shall fully cooperate with the designated representative of the City of Sandy and state and federal civil rights compliance agencies in investigating, mediating, and otherwise handling complaints or grievances concerning this Policy.

10. VIOLATIONS

Violation by the Contractor of any provision of this Policy may, in addition to any remedy accorded an aggrieved person, be cause for termination of the Contract, debarment from participation in future City of Sandy contracts, or both.

11. CONTRACTS DIRECTLY FUNDED BY FEDERAL OR STATE AGENCIES

If this Contract is funded in whole or in part by federal or state grants, there may be imposed on the Contractor the additional obligation of "affirmative action" to ensure equal opportunity, and specific standards and reporting requirements to be met. "Affirmative action", in general, means taking positive and affirmative steps to involve historically disadvantaged classes of persons in the performance of the work or participation in the benefits of this Contract. These steps may include special recruitment efforts, specific goals as to percentages of such persons employed in certain jobs, specific goals as to percentages of such persons employed in certain jobs, specific standards for the amount of work to be subcontracted to minority-owned businesses, etc.

If there are such additional requirements beyond this policy, the invitation to Bidders or Request for Proposals will state:

"This project is funded in whole or in part through <u>(name of agency)</u>. Special equal opportunity requirements imposed by that agency are contained in the bid documents, and bidders are cautioned to examine them carefully in preparing their bids."

12. COUNCIL RESOLUTION

This policy was adopted by City Council in Resolution No. 1194 on November 20, 1984.

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(C) Additional ARPA Contract Clauses

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Clauses for All Contracts:

Creating a contract that complies with ARPA requirements must include the below sections as verbatim:	
□ Contractor must be registered in SAM.gov The Contractor shall register in the System for Award Management (SAM), which is the primary registrant database for the U.S. Federal Government and shall update the information at least annually after the initial registration and maintain its status in the SAM through the Term of this Agreement. Information regarding the process to register in the SAM can be obtained at Sam.gov	
☐ Whistleblower - Contractor receiving ARPA funds shall under or through this contract post notice of the rights and remedies provided to whistleblowers under No Fear Act Pub. L. 107-174. 29 CFR § 1614.703 (d).	
 Inspections; Information - Contractor shall permit, and cause its subcontractors to allow the State of Oregon, the federal government and any party designated by them to: Examine, visit and inspect, at any and all reasonable times, the property, if any, constituting the Project. Inspect and make copies of any accounts, books and records, including, without limitation, its records regarding receipts, disbursement, contracts, and any other matters relating to the Project, and to its financial standing, and shall supply such reports and information as reasonably requested. Interview any officer or employee of the Contractor, or its subcontractors, regarding the Project. 	
□ Equal Opportunity - Contractor shall comply with Executive Order 11246 of September 24, 1965, entitled "Equal Employment Opportunity," as amended by Executive Order 11375 of October 13, 1967, and as supplemented in Department of Labor regulations (41 CFR chapter 60).	
□ Copeland "Anti-Kickback" Act - Contractor shall comply with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.	
□ Debarment and Suspension (Executive Orders 12549 and 12689) - A contract award (see 2 CFR 180.220) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.	
☐ Prohibition on purchasing telecommunications or surveillance equipment, services, or systems. As required by 2 CFR 200.216, federal grant or loan recipients and subrecipients are CONTRACT NO Capital Improvement Project Contract PROJECT: 2023 Manhole Grouting Project PAGE: 51	

prohibited from obligating or expending loan or grant funds to procure or obtain; extend or renew a contract to procure or obtain; or enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that use covered telecommunications equipment, video surveillance services or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities). Prohibitions extend to the use of Federal funds by recipients and subrecipients to enter into a contract with an entity that "uses any equipment, system, or service that uses covered telecommunications equipment or services" as a substantial or essential component of any system, or as critical technology as part of any system. Certain equipment, systems, or services, including equipment, systems, or services produced or provided by entities subject to the prohibition are recorded in the System for Award Management exclusion list.

- □ **Preference to United States made goods.** As appropriate and to the extent consistent with law, the contractor should, to the greatest extent practicable under a Federal award, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). The requirements of this section must be included in all subawards including all contracts and purchase orders for work or products under this award. For purposes of this section:
- (1) "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.
- (2) "Manufactured products" means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

Additional Clauses for Contracts Over \$10,000:

Creating a contract over \$10,000 that complies with ARPA requirements must include the additional below sections as verbatim:

□ Procurement of recovered materials over \$10,000. - The Contractor must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

☐ **Termination for cause and for convenience** - Contractor shall address termination for cause and for convenience, including the manner by which it will be affected and the basis for settlement.

The Contract Owner shall have the option, in its sole discretion, to terminate this Agreement, at any time during the term hereof, for convenience and without cause. The Contract Owner shall exercise this option by giving Contractor written notice of termination. The notice shall specify the date on which termination shall become effective.

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Additional Clauses for Contracts Over \$100,000:

Creating a contract over \$100,000 that complies with ARPA requirements must include the additional below section(s) as verbatim:		
□ Certification form located in Appendix I. Byrd Anti-Lobbying Amendment (31 U.S.C. 1352) - Contractors that apply or bid for an award exceeding \$100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.		
□ Note: Only include for contracts that involve the employment of mechanics or laborers. The Contract Work Hours and Safety Standards Act requires all contractors—prime and sub—to pay laborers and mechanics performing on a federal service contract and federal and federally assisted construction contract over \$100,000, 1.5 times their basic rate of pay for all hours worked over 40 in a workweek. Employers are liable to employees for these unpaid wages. The failure of a contractor to comply with this Act may also result in liability under the False Claims Act. Employees who are due unpaid wages under the Contract Work Hours and Safety Standards Act may file a complaint with the Wage and Hour Division within the U.S. Department of Labor. The DOL may then enforce the provisions of the Act against violators.		
Additional Clauses for Contracts Over \$150,000:		
Creating a contract over \$150,000 that complies with ARPA requirements must include the additional below section(s) as verbatim:		
□ Contractor shall comply with all applicable standards, orders, or requirements issued under section 306 of the Clean Air Act (42 U.S.C. 1857(h)), section 508 of the Clean Water Act (33 U.S.C. 1368), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR part 15).		
Additional Clauses for Contracts Over \$250,000 (the simplified acquisition threshold as of 2022):		
Creating a contract over \$250,000 that complies with ARPA requirements must include the additional below section(s) as verbatim:		
□ Contracts for more than the simplified acquisition threshold, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, CONTRACT NO. Capital Improvement Project Contract PROJECT: 2023 Manhole Grouting Project PAGE: 53		

contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate.

Upon any breach of this Agreement by Contractor, the Contract Owner shall have all remedies available to it both in equity and/or at law.

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PART V - SPECIAL SPECIFICATIONS; PERMIT APPLICATIONS AND APPROVAL CONDITIONS; CONSTRUCTION PLANS AND DRAWINGS

Special Specifications are in addition to the requirements of the Public Works Standards, except as otherwise noted.

Special Specifications take precedence over any conflicting provision in the Public Works Standards, except as otherwise noted.

Project Manager to check all that are applicable:

	There are no Special Specifications.
\boxtimes	Special Specifications follow.
	Special Specification are bound separately.
	Construction Plans and Drawings follow.
\boxtimes	Construction Plans and Drawings are bound separately.
	Permit Applications and Approval Conditions follow. Contractor shall comply with all permit requirements pertaining to the construction of this project. Contractor shall secure all other Municipal, County, State, Federal or other permits or licenses, necessary or incidental to performance of the work under the Contract Documents.
Comm	ents:

SS-1 Manhole entry equipment

The contractor shall comply with all OSHA requirements for each manhole entry. This includes, but is not limited to: use of entry and retrieval equipment, proper harnesses, air quality testing, ventilation as required.

SS-2 SEWAGE DIVERSION

General

- A. The Contractor shall submit a Sewer Diversion Plan to the Engineer prior to the start of construction. The Sewer Diversion Plan shall outline the Contractor's proposed method of handling all sewage flow during all elements of construction. The plan shall contain, at a minimum, a plan view of each proposed diversion on a site map and the individual components of the diversion including but not limited to: pump types size and placement; diversion pipe size, type, and placement; power supplies; method of damming the flow; and facilities for redundancy.
- B. When necessary, the flow shall be diverted by use of pumps to the next downstream manhole. The Contractor shall have adequate pumps and piping to divert flow to downstream sewer lines. Sewage diversion piping shall be buried to that extent that the piping is protected from traffic loads, traffic is maintained at driveways and roadways, and sidewalks are free of obstruction unless otherwise approved by the City. The Contractor shall also bury the sewage diversion as necessary to meet any permit requirements. All sewage diversion piping shall be leak proof. Surface restoration that is required for installing sewage diversion piping and other appurtenances is incidental to the sewage by-pass pay item and shall meet the Contract requirements.
- C. Sound baffles and temporary sound walls shall be installed to deflect sound from generators and bypass-pumps away from residential areas or as directed by the City. If necessary, the Contractor shall use critically silenced generators and pump units with hospital style mufflers to meet or exceed local noise ordinances. Such approved generators and accompanying pumps shall be continuously monitored while in operation and shall be placed to minimize disturbances to residential areas. If required, the Contractor shall secure a noise variance at no additional expense to the Owner.
- D. Diversion of all sewage flow shall be maintained at all times. A qualified operator who is capable of emergency repairs or able to mobilize forces to handle power, pump, or other problems shall be on site immediately near the pumping system at all times. The Contractor shall be responsible for continuity of sewer service to each facility connected to the section of sewer during the execution of the work. Flow diversion equipment shall be in place and tested prior to disrupting the existing sewage flow patterns.
- E. Each sewage diversion pump shall be powered by a dedicated power generator and shall operate as a single pumping unit. Every primary pumping unit shall be accompanied by a back-up unit. Back-up (redundant) sewage pumping unit(s) shall be of the same capacity as the largest primary pumping unit(s). Redundant pumps shall be used for replacement of failed pumps and for pumping peak instantaneous flows that exceed the peak hourly flow. Redundant pumps shall be on-line and connected to sewage diversion transmission piping prior to their required use and shall respond immediately in the event of a failed pump or an increase in sewage flows beyond the capacity of the pumps in full time service. The Contractor shall test

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each pump at least once every day that flow diversion activities are performed. The number of required primary and redundant pumps is addressed further in the Sewer Diversion Activities Narrative.

- F. Flow diversion pipe and pumps shall be free of leaks. Leaking pipes and pumps shall be replaced immediately. Sewage spills shall be cleaned up immediately. If a sewage release occurs during any sewer diversion activity, the Contractor is responsible for taking immediate action to cease, contain, and cleanup the release, and to notify the authorities. The Contractor shall have sufficient equipment and materials at the work site to cease, contain and cleanup any sewage release that occurs during diversion operations. The Contractor will be responsible for all costs associated with sewage spill cleanup including applicable fines.
- G. If sewage backup occurs and enters buildings; the Contractor shall be responsible for cleanup, repair, property damage costs, and claims.
- H. No sewer diversion operation may proceed unless the Contractor has, at the work site, the following items:
- 1. Dry granular lime, of sufficient quantities, to be spread on any release for purposes of disinfectant. A 10% bleach solution may also be used as a disinfectant. Disinfectants may not be directly applied to any surface waters, streams, creeks, etc.
- 2. Equipment to secure the area of sewage release and isolate the public from accessing the release site. At a minimum, this shall include barricades and caution tape.
- 3. The equipment and materials on hand to stop the release and repair the failed item.
- 4. Equipment and materials to clean the site, rake up solid debris, and to dispose of material properly.
- I. In case of sewage release during diversion operations, the Contractor shall immediately contact the following authorities notifying them of the release:
- 1. City of Sandy Public Works Department
- 2. City of Sandy Sewer Operations Department.
- 3. Oregon Emergency Response System (OERS) if the spill is directly into any water body of the State at 1-800-452-0311.
- J. The Contractor shall be responsible for providing the following information to the authorities:
- Release site
- 2. Date and time release found or started and time stopped
- 3. Release flow rate
- 4. Receiving stream
- 5. Action taken to stop release
- 6. Cause of release
- 7. Clean-up actions

Sewer Diversion Activities Narrative

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The following Sewer Diversion Activities Narrative is presented to assist the Contractor in developing a detailed Sewer Diversion Plan. This narrative presents mandatory diversion guidelines, diversion alternatives to reduce sewage flows required to be bypass pumped during construction, and estimated remaining sewage flows that are not diverted to be bypass pumped near the pipe installation. At a minimum, the Contractor shall abide by all mandatory guidelines stated herein. Proposed alternatives are for contractor information only and are not intended to be the only options available. As part of the sewer diversion plan, the Contractor may submit an alternative method while adhering to the mandatory guidelines stated herein. At a minimum, the Contractor's Sewer Diversion Plan shall address adequate diversion of all peak hourly sewage flows.

If the Contractor determines that it is necessary to divert the sewer system, the Contractor shall plug any and all manholes upstream of the manholes in question, and pump it to a downstream manhole.

General Requirements:

All temporary piping and other diversion equipment shall be removed from the site.
 All temporary buried piping under street right-of-way shall be removed. All site
 conditions shall be restored to preconstruction state and as stated in all permit
 provisions. Each existing service must be bypassed during the time when the
 service is disconnected until it is reconnected.

MEASUREMENT AND PAYMENT

Payment for sewage diversion will be considered incidental work for which no separate payment will be made.

SS-2 CHEMICAL GROUTING OF MANHOLES

Part - 1 GENERAL

SCOPE OF WORK

The intent of this section is the elimination of infiltration/inflow into manholes that are otherwise structurally sound, using various products and methods either singularly or in combination. The selected manholes may or may not be actively leaking. The purpose of this project is to install a grout curtain around the manhole. The Contractor shall warranty that these manhole will not leak for one year after the final completion of this project.

DESCRIPTION

The Contractor shall be responsible for furnishing all labor, materials, equipment, and testing required for the completion of chemical grouting of manhole defects in Accordance with the Contract Documents.

MANUFACTURER'S RECOMMENDATIONS

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All Materials, additives, mix ratios, and procedures needed for the grouting process shall be in accordance with manufacturer's recommendations. Manufacture must provide proof of Product liability insurance, material data sheets and M.S.D.S sheets.

MANHOLES

Manholes to be grouted are of concrete construction.

Part 2 - PRODUCTS

GROUTING MATERIALS

Chemical Grout Sealing shall be in accordance with ASTM F2414-04 Standard Practice for Sealing Sewer MANHOLES Using Chemical Grouting with the understanding that no preliminary repairs will be required. This contract is just for the injection of a chemical grout around all selected manholes.

Chemical grout shall be injected into the soil surrounding the manhole as specified for complete sealing. The grout used shall be a hydrophilic material

The chemical grout selected by the Contractor shall have the following characteristics;

- 1. Documented service of satisfactory performance in similar usage.
- 2. Controllable reaction times and shrinkage through the use additives supplied by the same manufacturer. The minimum set time shall be established so that adequate grout travel is achieved.
- 3. Resistance to chemicals; to most organic solvents, mild acids and alkali.
- 4. The chemical shall be essentially non-toxic in a cured form.
- 5. The material shall be able to withstand freeze/thaw and moving load conditions.

ADDITIVES

Additives may be utilized for catalyzing the reaction, lowering the freezing temperature of the chemical, and minimizing dehydration of the materials.

MATERIAL IDENTIFICATION

The Contractor shall completely identify the types of grout, mortar, and sealant used and provide case histories of successful use or defend the choice of grouting materials based on chemical and physical properties, ease of application, and expected performance, to the satisfaction of the Engineer.

MIXING AND HANDLING

Mixing and handling of chemical grout, which may be toxic under certain conditions shall be in accordance with the recommendations of the manufacturer and in such a manner to minimize hazard to personnel. It is the responsibility of the Contractor to provide appropriate protective measures to ensure that chemicals or gels are handled by authorized personnel in the proper manner. All equipment shall be subjected to the approval of the Engineer. Only personnel thoroughly familiar with the handling of the grout material and additives shall perform the grouting operations.

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PART 3 - EXECUTION

PRELIMINARY REPAIRS

If those instances where the amount of inflow is excessive, it may be necessary for the Contractor to soak oakum in an appropriate material and force the Oakum plug into opening until it sets.

TEMPERATURE

Normal grouting operations shall be performed in accordance with manufacturers' Recommendations.

GROUTING MATERIAL USAGE

For this project, manholes will be sealed. To stop leaks. Contractor shall reinspect each manhole one day after initial grouting to confirm more leaks have not presented as groundwater table rises. Any additional leaks will be sealed.

DRILLING AND INJECTION

- 1. Injection holes shall be drilled through the manhole wall at locations recommended by the manufacturer.
- Grout shall be injected through the holes under pressure with suitable injection packers and or wall spears. Injection pressure shall not cause damage to the manhole structure or surrounding surface. Grout shall be injected through the lowest holes first. The procedure shall be repeated until the manhole is externally sealed with grout.
- 3. Grouting from the ground surface shall not be allowed.
- 4. Grout travel shall be verified by observation of grout to defects or adjacent injection holes. Provide additional injection holes, if necessary to ensure grout travel.
- 5. Injection holes shall be cleaned with a drill and patched with a waterproof quick setting mortar.

WARRANTY INSPECTION

- Twelve months after completion of all chemical grouting work, and at the discretion of the owner or owner's representative, inspections of specific sections that were repaired should be conducted by the owner, owner's representative or engineer.
- 2. The owner is to notify the grouter within one week of any leak detected or failed inspection during the first twelve months after completion of the chemical grouting work.
- 3. Previously grouted defects, which leak or fail inspection within the first twelve months after the sealing work was completed, shall be resealed at no additional cost to owner.
- 4. Inspection of previously grouted defects can consist of observation for leaks as well as any specified tests as required by the Inspector.

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MEASUREMENT AND PAYMENT

Measurement of pressurized chemical grouting shall be on a per manhole basis. Measurement will be for each manhole.

Payment shall include full compensation for work required to drill and install injection ports, the actual pressurized chemical grouting injection, materials, labor, and equipment required to perform the pressurized chemical grouting, complete-in-place. Payment for the pressurized chemical grouting shall be paid under the item "Chemical Grouting Injection of Manhole"

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